

# THE ECONOMIC HISTORY SOCIETY

## Annual Conference

University of Warwick

3 – 5 April 2009

*Programme including*

*New Researchers' Papers*

*&*

*Abstracts of the other Academic Papers*



# **THE ECONOMIC HISTORY SOCIETY**

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## Welcome to the University of Warwick

Welcome to the University of Warwick. The University was founded in the early 1960s with a small intake of graduate students in 1964 and took its first 450 undergraduates in October 1965. Since then the University has grown steadily in scale and scope and in 2007, the student population was over 16,000 of which 7,000 are postgraduates. Twenty per cent of the student body comes from overseas and over 125 countries are represented on the campus. The University has 29 academic departments and over 50 research centres and institutes, in four Faculties: Arts, Medicine, Science and Social Studies.

The Departments of Economics and History are among the top ranked departments in the UK. Warwick also has an active group of economic and social historians across several departments. The Economics Department has a strong group of economic historians and the teaching of economic history is an important part of the curriculum. The History Department hosts the Global History and Culture Centre, which has played an active role in organizing conferences and seminars in the field and has hosted renowned scholars in World History.

The conference will be held on the central campus of the University, which is situated in an attractive rural setting outside the historic city of Coventry and bordering the beautiful county of Warwickshire. The area is steeped in history from the medieval grandeur of Warwick Castle and the ruins of Kenilworth Castle, built in the eleventh and twelfth centuries, and the well-known town Stratford-upon-Avon. Close by is the nineteenth-century spa town of Leamington.

Coventry as an industrial centre has gone through the ups and downs of structural change. From the early days of ribbon-weaving and watch-making, the city became the centre of the automobile industry and was greatly affected by the decline of this industry. The history of the car in Coventry is well displayed at the Coventry Road Transport Museum. The display covers a range of products from public transport vehicles to what were once the world's fastest cars. Today the service sector dominates economic activity in this region.

The campus has woodland and lake walks, excellent sports facilities and the Warwick Arts Centre. There are several cafes and bars. The conference venues will be centred around a relatively small area of the Social Studies Building, the Rootes Social Building and the Warwick Arts Centre. We do hope you will enjoy the conference and your visit to this University.

*Bishnupriya Gupta* (Local Organizer)

*Maureen Galbraith* (Administrative Secretary, Economic History Society)

## Summary Conference Programme

(See Contents for details of each session)

### Friday 3<sup>rd</sup> April

0915-1045	EHS Publications Committee Meeting	Chancellors 1, Rootes
1100-1400	EHS Council Meeting	Chancellors 2, Rootes
1200-1800	Registration	Foyer, Social Studies Building (SS)

1400-1530	<b>New Researchers' Session I</b>	
I/A	<i>Eighteenth Century Britain and France</i>	SS0.11
I/B	<i>The Long Nineteenth Century</i>	SS0.13
I/C	<i>Poverty 1840-1940</i>	SS0.18
I/D	<i>Post-1945 Political Economy</i>	SS0.19
I/E	<i>Coal and Railways in the Twentieth Century</i>	SS0.20
I/F	<i>Financial Centres and Bubbles</i>	SS0.21

1530-1600	Tea	Warwick Arts Centre (WAC)
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1600-1730	<b>New Researchers' Session II</b>	
II/A	<i>Pre-Modern</i>	SS0.11
II/B	<i>Commerce and Consumption, 1660-1800</i>	SS0.13
II/C	<i>Growth, Agriculture and Trade since 1920</i>	SS0.18
II/D	<i>First and Second World Wars</i>	SS0.19
II/E	<i>International Business</i>	SS0.20
II/F	<i>Rents, Loans and Cooperatives</i>	SS0.21

1730-1830	Open meeting for women in economic history	SS0.19
1815-1900	Council reception for new researchers and 1st time delegates	SS0.17
1900-2015	Dinner	Chancellors
2030-2130	Plenary Lecture: Professor Nicholas FR Crafts	WAC

Bar available until late	Chancellors
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### Saturday 4<sup>th</sup> April

0800-0900	Breakfast	Rootes
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0900-1045	<b>Academic Session I</b>	
I/A	<i>Historical Roots of Poverty</i>	SS0.21
I/B	<i>Long Run Economic Change in Asia</i>	SS0.11
I/C	<i>Second Serfdom: Macro Perspectives</i>	SS0.13
I/D	<i>Finance</i>	SS0.18
I/E	<i>International Trade</i>	SS0.19
I/F	<i>Health</i>	SS0.20

1045-1115	Coffee	WAC
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1115-1300	<b>Academic Session II</b>	
II/A	<i>Women and Academic Careers</i>	SS0.21
II/B	<i>Social Networks</i>	SS0.11
II/C	<i>Second Serfdom: Micro Perspectives</i>	SS0.13
II/D	<i>Macroeconomic History</i>	SS0.18
II/E	<i>Labour</i>	SS0.19
II/F	<i>Empire</i>	SS0.20

1300-1400	Lunch	Rootes
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1415-1545	Meeting of Schools and Colleges Committee	SS0.17
1415-1600	<b>Academic Session III</b>	
III/A	<i>Learning by Doing in the First Financial Crisis</i>	SS0.11
III/B	<i>Business Networks</i>	SS0.13
III/C	<i>Medieval</i>	SS0.18
III/D	<i>Economic Growth</i>	SS0.19
III/E	<i>Early Modern</i>	SS0.20
III/F	<i>Industry</i>	SS0.21
1600-1630	Tea	WAC
1630-1730	<i>Douglas Farnie in Memoriam</i>	SS0.21
1730-1830	Economic History Society AGM	SS0.20
1930-2000	Conference Reception (Hosted by Department of Economics, University of Warwick)	Panorama Suite, Rootes
1930-2000	Book launch (supported by CUP)	Panorama Suite, Rootes
2000	Conference Dinner	Panorama Suite, Rootes
	Bar available until late	Panorama Suite, Rootes
<b>Sunday 5<sup>th</sup> April</b>		
0800-0900	Breakfast	Rootes
0915-1015	<b>Academic Session IV</b>	
IV/A	<i>Government and Markets</i>	SS0.21
IV/B	<i>Children</i>	SS0.11
IV/C	<i>Agricultural Trade</i>	SS0.18
IV/D	<i>Institutions</i>	SS0.19
IV/E	<i>Twentieth-Century Europe</i>	SS0.20
1015-1045	Coffee	WAC
1045-1145	<b>Academic Session V</b>	
V/A	<i>Inequality</i>	SS0.11
V/B	<i>Poverty and Affluence</i>	SS0.13
V/C	<i>The Ties that Bind</i>	SS0.21
V/D	<i>Postwar Britain</i>	SS0.18
V/E	<i>Human Capital, Institutions and Growth</i>	SS0.19
V/F	<i>Economics of Investment</i>	SS0.20
1145-1300	Tawney Lecture: Professor Robert C Allen	WAC Lecture Theatre
1300-1400	Lunch	Rootes
1400	Conference ends	

## Brief guide to conference arrangements

The conference will take place in the Social Studies Building on the Central Campus of the University of Warwick. The University is located in the heart of England, adjacent to the city of Coventry – 3 miles (5 kilometres) from the city centre – and on the border with Warwickshire.

### Conference accommodation on campus

Ensuite accommodation will be in Arthur Vick or Jack Martin (Nos. 4 and 29 respectively on the campus map) and standard accommodation in Rootes Residences (No. 48), which are located a short distance from the Social Studies Building (No. 53). A campus map can be found at: [www2.warwick.ac.uk/about/visiting/maps/campusmap/](http://www2.warwick.ac.uk/about/visiting/maps/campusmap/)

*On arrival, residential delegates should check in at Rootes Social Building (No. 49), where keys will be available from 3.00 p.m. onwards; a luggage storage facility is available for those arriving before 3.00 p.m. Rootes Reception is open 7.00 a.m. – 11.00 p.m. daily. If you plan to arrive after 11.00 p.m. you should report to Security at the main gate on arrival. Alternatively, use the telephone located at the entrance to Rootes Building and call Security, who will escort you to your bedroom. A phone is located outside the main doors of the building; the Security number from your mobile is +44 (0)2476 522083. Please advise Maureen Galbraith if you plan to arrive after 11.00 p.m.*

### Registration

Registration will take place between 12.00 and 18.00 in the Foyer of the Social Studies Building. The registration desk will be staffed for the duration of the conference.

### Alternative Accommodation

Information about hotel accommodation (off site) can be found at:  
[www.ehs.org.uk/ehs/conference2009/Assets/LocalHotels.pdf](http://www.ehs.org.uk/ehs/conference2009/Assets/LocalHotels.pdf)

The Economic History Society does not necessarily endorse any of the hotels listed.

### Car parking

Delegates may park in the car parks numbered: 7, 15, 8 and 6 on the campus map. No permit is required. Please be advised 7 and 15 are barrier car parks, therefore an exit code will need to be collected from Rootes reception.

### Book displays

Publishers' and booksellers' displays will be in the Studio of the Warwick Arts Centre (No. 61).

### Meals and Morning Tea/Afternoon Coffee

All meals will be served in Rootes Social Building. Breakfast and lunch in the dining room (Rootes Restaurant, 1<sup>st</sup> floor), the Friday dinner in Chancellors Suite and the Saturday dinner in the Panorama Suite. Teas and coffees will be served in the Warwick Arts Centre.

### Receptions and Bar

The Council Reception for new researchers and first-time conference delegates (Friday, 1815-1900 hours) will take place in room SS0.17 of the Social Studies Building and the Saturday evening Conference Reception will take place in the Panorama Suite, Rootes Social Building.

### Meeting rooms for New Researchers, Academic Sessions etc

All meeting rooms for academic and new researcher sessions will be located in the Social Studies Building; the plenary sessions will be held in the Lecture Theatre in the Warwick Arts Centre.

### Internet Access

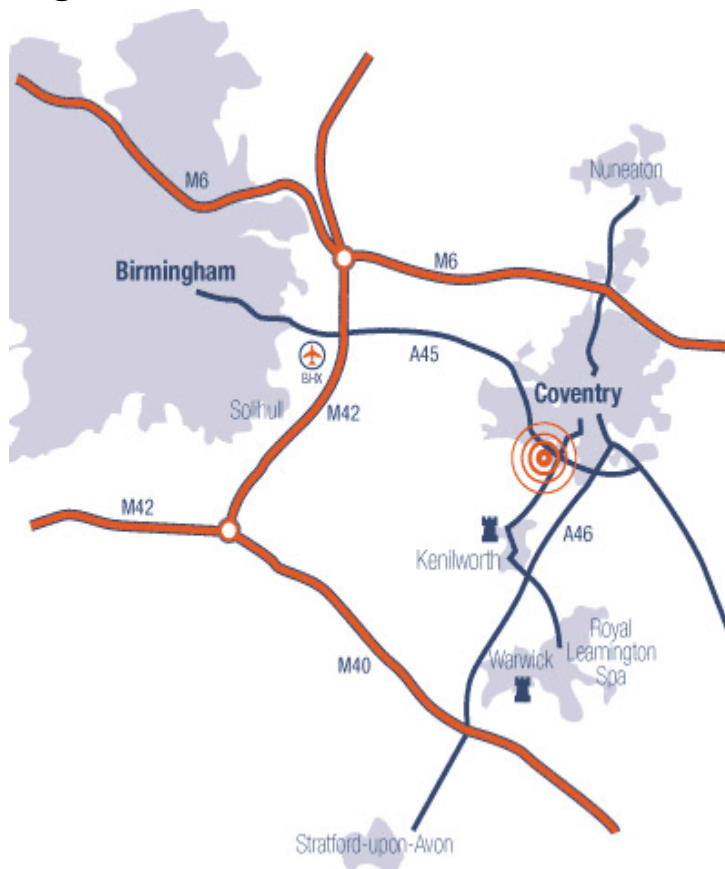
There are computers available in the Rootes Social Building as well as wi-fi. Alternatively, residential delegates, with laptops and modems, may access the internet from their bedroom; you must provide your own data/ethernet cable, these can also be purchased from Rootes reception or the adjacent Cost Cutter. A user name and password is available via Rootes reception.

### Useful Contacts

Warwick	Tel: +44 (0)2476 523 222	Email: <a href="mailto:conferences@warwick.ac.uk">conferences@warwick.ac.uk</a>
Sharon Smith	Tel: +44 (0)2476 574 323	Email: <a href="mailto:sharon.savins@warwick.ac.uk">sharon.savins@warwick.ac.uk</a>
Maureen Galbraith	Tel: +44 (0)141 330 4662	Email: <a href="mailto:ehsocsec@arts.gla.ac.uk">ehsocsec@arts.gla.ac.uk</a>

## How to reach the University of Warwick

### Regional Location



Typical Travel Times to Coventry	
From	Minutes
Birmingham	40
Kenilworth	10
Leamington Spa	20
Leicester	45
London	2hr
Oxford	1hr 15
Warwick	20

(A copy of this map can be found at: [www2.warwick.ac.uk/about/visiting/maps/access/](http://www2.warwick.ac.uk/about/visiting/maps/access/))

### By Road

([www2.warwick.ac.uk/about/visiting/directions](http://www2.warwick.ac.uk/about/visiting/directions))

#### From the North

From the M69/M6 interchange (M6 junction 2) take A46 towards Warwick and Coventry S & E. After approximately 3.5 miles you will reach Tollbar End roundabout (junction with A45). At the roundabout, follow signs for A45 Birmingham. After approximately 3 miles you will cross the A429 (Kenilworth Road). Half a mile after this junction take the left-hand turn signposted 'University of Warwick'. Follow signs for University of Warwick (and Warwick Arts Centre) across two roundabouts. You are now approaching the University of Warwick from Kirby Corner Road.

#### From the South East

From M45 junction 1 take A45 towards Coventry. After approximately 7 miles you will reach Tollbar End roundabout (junction with A46) follow signs for A45 Birmingham. Now follow directions as for arriving from the North.

#### From the South

From M40 junction 15 take A46 towards Coventry. After approximately 8 miles leave A46 at junction signposted 'University of Warwick and Stoneleigh'. After a further 1.5 miles you will cross the A429 (Kenilworth Road). You are now approaching the University of Warwick from Gibbet Hill Road.

### From the West

From M42 junction 6 take A45 towards Coventry. After approximately 9 miles you will pass a large Sainsbury store on your left. At the next roundabout (Fire Station on right) take the right-hand exit, signposted 'University and Canley'. Follow signs for University of Warwick (and Warwick Arts Centre) across two roundabouts. You are now approaching the University of Warwick from Kirby Corner Road.

### By Rail

The nearest rail station for the University of Warwick is **Coventry**. Coventry station is easily reached from London (Euston), Birmingham (New Street) and Leicester, all of which run regular and frequent services direct to Coventry. From Coventry station, there are frequent local bus services to the University.

The station that serves Birmingham Airport is Birmingham (International).

Detailed travel information and timetables can be found at:  
[http://nationalrail.co.uk/times\\_fares/](http://nationalrail.co.uk/times_fares/)

### By Bus

Visitors should follow the signs from the station to Warwick Road (a 2-minute walk) and from there catch the Travel Coventry services 12/12A or U1 which travel onto the main campus. The Stagecoach service U1 travels along Warwick Road and onto the Central Campus.

It is also possible to catch the Travel Coventry number 42 which goes to Cannon Park Shopping Centre which is a 5-10 minute walk from Central Campus.

### By Taxi

Taxis are available from the railway station and Birmingham airport to the campus. Local Taxi Company is: Trinity: +44 (0) 2476 999 999. Costs are approximately:

Birmingham airport-University of Warwick:	£30
Coventry railway station-University of Warwick:	£11

### By Air

The University of Warwick is 18 miles from Birmingham Airport. To get to the University from Birmingham airport either (cheapest): take the train to Coventry (£3.30, 10 minutes) and then local bus (£1.30, 25 minutes; exact fare must be paid to driver) or: taxi from the station (about £11, 15 minutes) to the University of Warwick.

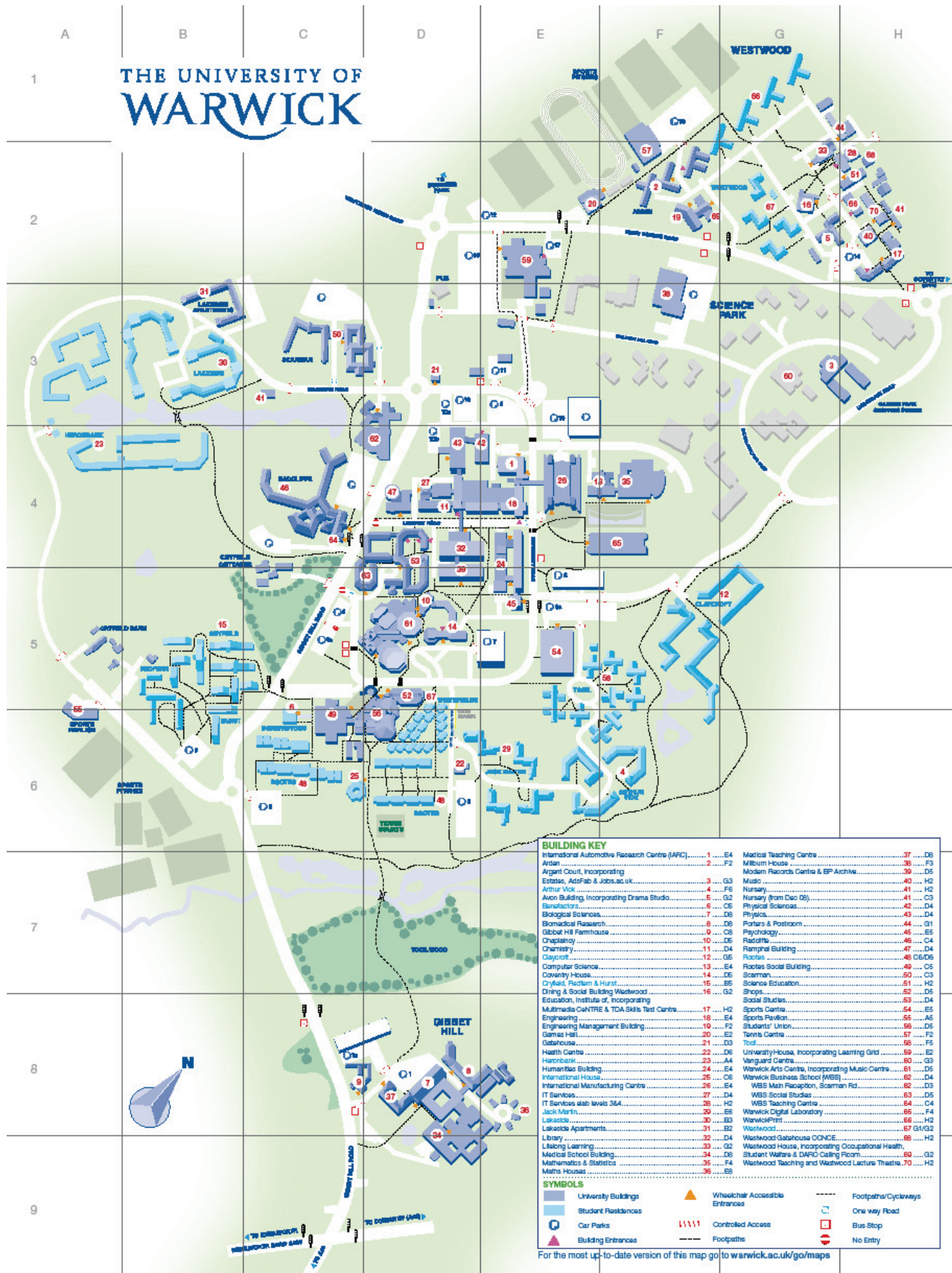
London Heathrow has many more flights, and is about two hours from Coventry either by bus (National Express: [www.nationalexpress.com/](http://www.nationalexpress.com/)) or by rail (via London Euston) – the bus option is simpler, and cheaper.

London Luton also has various international flights, and is under two hours from Coventry by bus (National Express).

East Midlands (near Nottingham) has some international flights, and has an infrequent National Express service to Coventry.



# Campus Plan – University of Warwick



(A copy of this map can be found at: [www2.warwick.ac.uk/about/visiting/maps/campusmap/](http://www2.warwick.ac.uk/about/visiting/maps/campusmap/))

# NEW RESEARCHER PAPERS



# Credit networks and trust in the late eighteenth century French Atlantic trade

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According to the New Institutional Economics, networks provided a solution to the problem of exchange in early long-distance trade, in which merchants were particularly exposed to problems of information asymmetry, opportunism and moral hazard.<sup>1</sup> Networks are seen as providing a screening device by which trust between agents and commercial partners can be established.<sup>2</sup> Personal solidarities stem from belonging to a common kinship, religious or ethnic group, which imposes moral obligations and normative modes of behaviour on its members. Reputational mechanisms and long-term association also provide merchants with incentives to remain honest, as integration into a network allows them access to capital, information and future transactions.<sup>3</sup>

The concept of networks is now being widely applied to the study of the eighteenth century Atlantic trade.<sup>4</sup> It enables scholars interested in Atlantic exchange to rethink their historiographical unit of analysis and move beyond the national and imperial perspectives that traditionally dominated the field. It also refocuses the debate on mercantile practices and the role of institutions in the Northian sense.<sup>5</sup> This study examines the case of a French commission firm, the Chaurand, trading with Saint-Domingue.<sup>6</sup> The Chaurand were active from the 1770s to the early 1790s, when the French sugar trade was at its peak, as shown by figure 1. This paper examines the processes by which merchants could carry out long-distance commerce. Did traders rely on relatives, coreligionaries and friends for their trade? What constraints did this put on their ability to expand their businesses? Networks in the French Atlantic had one characteristic that needs to be highlighted at the outset. Firms had external options for enforcing contracts, as the trade operated within a national legal framework: commercial relationships between planters and their metropolitan factors were defined by contracts or *liaisons d'habitations* and disputes could be resolved in French courts. In this context, it is important to understand how networks were formed and managed, and for what purposes. This study thus examines the formation of the Chaurand network in France and in the West Indies. It argues that, especially for a newly-established firm, networks were important as a source of capital, information and business opportunities, and provided them with means of contract enforcement. Although kin played a vital role in constructing networks, their operation was closer to the analysis of Granovetter than Greif.<sup>7</sup>

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<sup>1</sup> Greif (2001).

<sup>2</sup> For recent works on networks, see Mathias (2002), Zahedieh (1998), Stobart (2004), Glaisyer (2004) and Smail (2005).

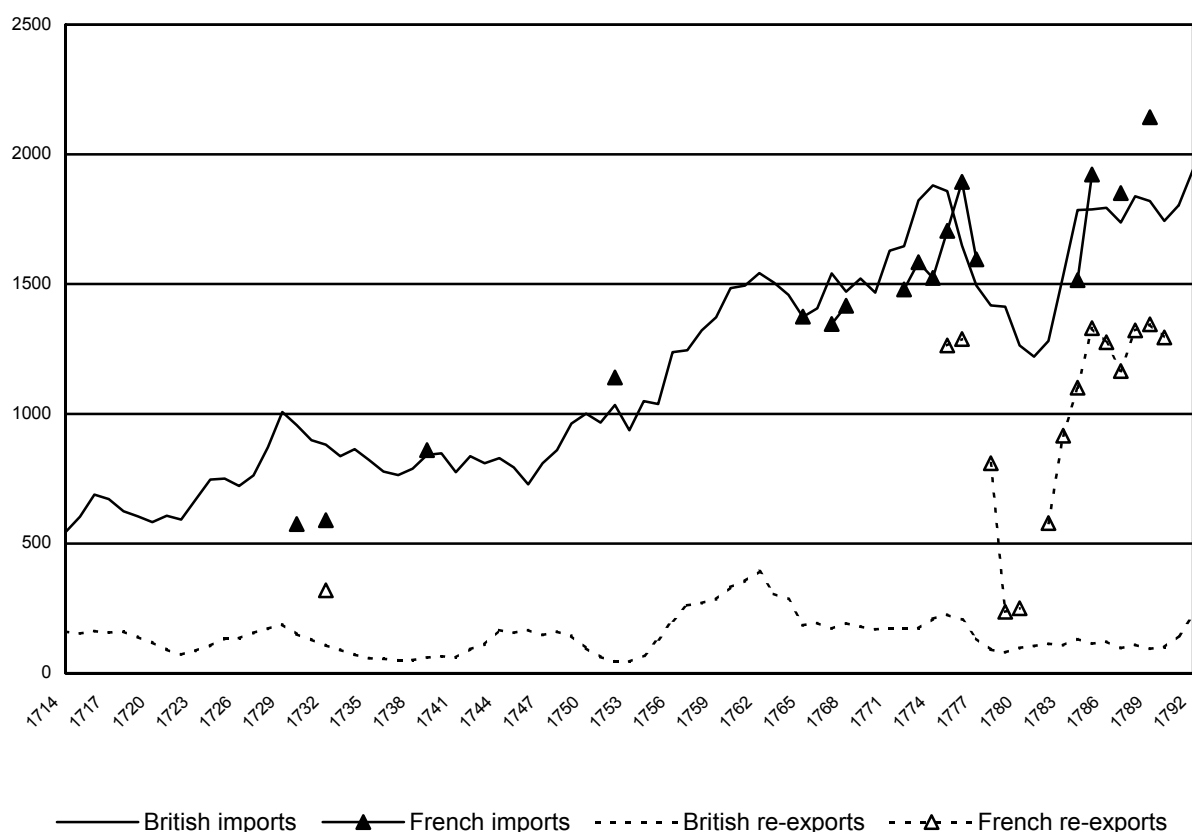
<sup>3</sup> Gervais (2008).

<sup>4</sup> See recent articles by Hancock (2001), Marzagalli (2005), and Gervais (2008).

<sup>5</sup> North (1990).

<sup>6</sup> The sugar commission trade consisted of West Indian planters remitting their commodities directly to metropolitan firms or “factors,” who then sold them for a commission fee. These firms also supplied estates with provisions and provided planters with financial services and advances. In the late eighteenth century, some planters were heavily indebted to their factor.

<sup>7</sup> These analyses can be found in Granovetter (1973), and Greif (2001).

Figure 1: *Sugar imports and re-exports, France-Britain, 1714-92 (in thousand cwt)*

Sources: Stein (1980), p. 6; Tarrade, (1972), p. 747; Schumpeter (1960), pp 52-6.

By the 1780s, the Chaurand were one of the ten leading trading families in Nantes.<sup>8</sup> The surviving sources reflect the scale and diversity of their activities. Twenty-five volumes of correspondence survive for the years 1775-93, alongside the firm's accounting books for the same period. This allows us to look at their main areas of business. The Chaurand focused on two fields. First, the Chaurand invested in maritime ventures: of the 64 voyages in the firm's name between 1771 and 1792, 78 per cent were direct ventures to the West Indies, 17 per cent were slave ventures and 5 per cent were for coastal navigation.<sup>9</sup> They outfitted more ships between 1780-5, in the last years and in the aftermath of the War of American Independence, than during the whole of the previous decade. The wartime boom can in part be explained by the fact that a fourth of the ships outfitted during this period were chartered by the King.<sup>10</sup> Of all the ships going to the West Indies, 85.33 per cent went to Saint-Domingue.<sup>11</sup> Most ships went to four ports, Le Cap, Port-au-Prince, St Marc and Léogane, but it is worth noting that Port-au-Prince grew in importance in the 1780s.<sup>12</sup> Second, the Chaurand successfully sought to develop a commission trade, through the *liaisons d'habitation*. Over the entire period, about seventy planters belonged to the Chaurand credit network, making this a large firm in contemporary terms. Most of this expansion in the West Indies occurred in the 1780s, since the firm only had two contractual connections there in the 1770s.

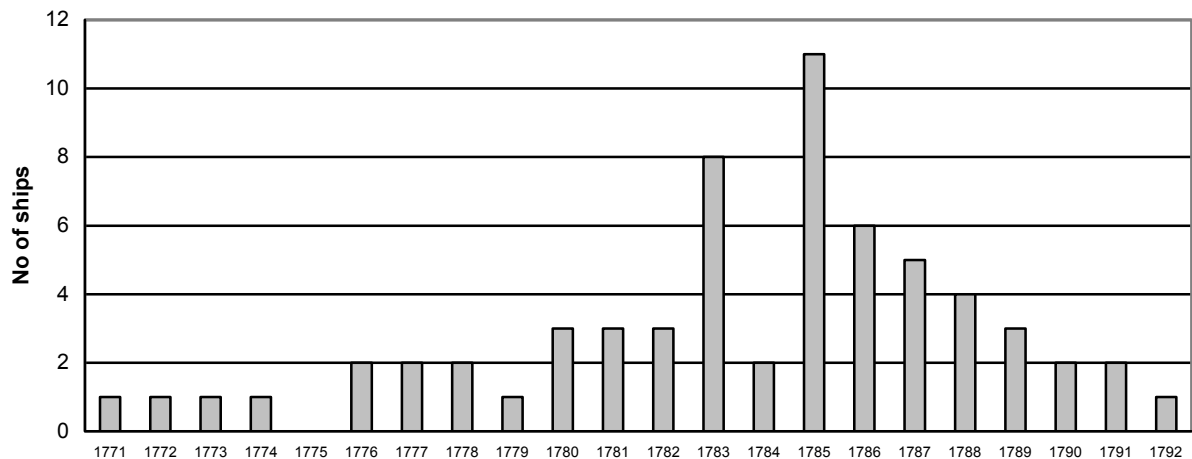
<sup>8</sup> Meyer (1999), p.186.

<sup>9</sup> Pineau-Defois (2003).

<sup>10</sup> Pineau-Defois (2003), p.219.

<sup>11</sup> Saint-Domingue produced between two-thirds and three-quarters of all French sugar in the late eighteenth century.

<sup>12</sup> Pineau-Defois (2003), p.222.

Figure 2: *The Chaurand's ventures*

Sources: Archives départementales de Loire-Atlantique (thereafter ADLA), 120 J Marine.

How did they manage to develop such a large network and sustain trade on this scale with the West Indies? The historiography emphasizes the importance of kin-based and/or religious connections in the West Indies, and focuses on the role of relatives sent to the Caribbean to establish local branches of metropolitan firms, which then acted as intermediaries between planters and factors.<sup>13</sup> This is not a major feature of the Chaurand's network. The founder of the firm, Honoré Chaurand Senior, had emigrated from Valensole in Provence to Nantes in the 1740s and had no first-hand experience of the West Indies, having neither resided nor travelled there. He had four sons, who all could have established one or several branches in Saint-Domingue, but did not. Instead, the Chaurand first sought to establish personal connections with other metropolitan firms at the local and regional levels, before the firm began to operate on full-scale at the international one, using the kinship ties and friendships developed in France.

Marriage was central to the Chaurand's French network. In 1748, Honoré Chaurand Senior established his position within the Nantes commercial elite through his marriage to Marie Portier de Lantimo, the daughter of a leading Nantes trader. His sons, who inherited the commission firm in 1774, also married into prominent Nantes trading families, the Libault and the Deurbroucq. The 1774 marriage between Honoré Chaurand, the eldest son, and Jeanne-Anne Deurbroucq, was particularly important. The Deurbroucq were substantial traders, who had come to Nantes from the Netherlands in the early eighteenth century. A division of labour operated in the large commercial centres of the Atlantic facade: firms like the Chaurand specialized in the commission trade with the West Indies, whereas others such as the Deurbroucq concentrated on the sale and re-export of colonial commodities and instead developed networks with Northern Europe. The Dutch origins of the Deurbroucq gave them better access to the Baltic markets and the alliance between the two families allowed them to control the entire chain of the sugar trade. At least in this case, traders did not discriminate against their agents and business partners by religion, as unlike the Chaurand, the Deurbroucq were Protestants. Religious affinities existed in the French Atlantic, but did not always prevail: rather, traders of all faiths used these personal solidarities to expand their activities.

The level of cooperation between ports of the Atlantic interface has been overlooked in favour of one of regional competition. The view of the French Atlantic in the Anglo-Saxon historiography is that: "France in the Old Regime was a confused and often contradictory patchwork of jurisdictions and customs, with regional interests conflicting both with one

<sup>13</sup> Nash (2005).



another and with the national one”.<sup>14</sup> In practice, inter-regional mercantile networks were very important. In these, some firms functioned as gatekeepers in introducing new entrants to the network, thus allowing for a widening and deepening of resources within the Atlantic community. When not connected by kinship or matrimony, firms were tied together through investment in each others’ ventures or maritime insurance, widening the pool of investors in a capital-scarce environment. For example, their connection with the Protestant trader Carayon, based in La Rochelle, gave the Chaurand access to the large Protestant trading community there and prompted the Chaurand to start a correspondence with Daniel Garesché, Carayon’s son-in-law and the leading Rochelais trader of the time. These connections could in turn be used to establish contacts with the West Indies, providing access to the services of West Indian branches affiliated with these allied firms and usually staffed by their kin. One of their correspondents in Port-au-Prince was Garesché frères, founded by the brothers of Daniel Garesché.<sup>15</sup>

The role of the Chaurand’s regional network in facilitating their Atlantic trade can be seen clearly in the development of their West Indian business. Thirty-nine new planters became part of the Chaurand credit network in the early 1780s, and had an account with the firm, which represented a significant increase from the 1770s. Unfortunately, the correspondence of the Chaurand, which only survives from 1775 onwards, gives little information about how the Chaurand gained their first clients. Most of the firm’s investments in the 1770s went to a couple of families. The contact with the Beauharnais family, important planters of St Domingue was already established by 1770, and thus predates the start of the commercial correspondence. As early as 1773, the Chaurand had advanced £10,000 to the Beauharnais in payment for slaves and the Marquis de Beauharnais’ debt amounted to £57,024 in 1783. The second large connection of the 1770s was with the De Thébaudières: by 1779 they had invested £277,730 in this family. These sums were large and display the Chaurand’s willingness to take on risk in order to expand abroad: by comparison, the initial capital of the firm in June 1776 was £140,000, to which £40,000 were added in June 1777 and £20,000 in June 1778.<sup>16</sup>

More can be known about the Chaurand’s later connections, acquired after the war. Looking at new relationships with planters in the 1780s credit network shows the ways in which traders used friendships and kinship for commercial gains. Kinship ties explain the origin of two-fifths (41 per cent) of the 39 new connections.<sup>17</sup> This is an underestimate, as we know little about the beginnings of a third of these relationships. Friendships and recommendations by mutual acquaintances such as other metropolitan firms, West Indian firms and other planters is how the Chaurand came into contact with the rest of their clients.

The 15 relationships that we know were formed through kinship were established using only three channels: the Chaurand’s brother-in-law, Deurbroucq, the Chaurand’s relative Gerbier, based in Le Cap, and the Chaurand’s cousin Cottineau, also based in Le Cap. The connection with Segueineau frères, initiated by the latter on the recommendation of Deurbroucq, proved very important for the establishment of the Chaurand in the West Indies, enabling them to get acquainted with seven new planters, as shown in figure 3. For example, in 1784, the planter Deymier approached Deurbroucq for his services, on the recommendation of the firm Segueineau frères. In their letter to Deymier, the Chaurand instead offered their services, as the Deurbroucq did not trade with the West Indies, adding that the planter could check their reputation with “all the first houses in St Domingue”.<sup>18</sup> Another relative, Cottineau, their “cousin”, introduced them to the planter Merceron, who in turn recommended

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<sup>14</sup> Stein (1988), p.106.

<sup>15</sup> ADLA, 101 J 9.

<sup>16</sup> ADLA, 101 J 68.

<sup>17</sup> ADLA, 101 J 1-25.

<sup>18</sup> ADLA, 101 J 1, Letter to Deymier, 13<sup>th</sup> May 1784.

the house to his fellow planters, Turbé de Lamarre, a “relative and friend”, Gourand de Bellevue and De Motmans. Gourand de Bellevue was himself related to the Marquis de Baneville. Figure 5 illustrates a similar process, which followed from the Chaurand’s kinship ties with Gerbier, an associate in a West Indian firm.

This strong connection with Segueineau frères was a crucial breakthrough for the firm and explains the reorientation of the Chaurand commission trade to Port-au-Prince in the 1780s. We know of the location of the estate of 46 planters in the credit network at large: half of the estates they dealt with were in some ways related to either Le Cap or Port-au-Prince, with 13 planters out of the 46 (28 per cent) having estates near Le Cap, and 11 landowners near Port-au-Prince (24 per cent). This geographical diversification contrasts with the situation in the 1770s, as the estates of the first clients of the firms, the Beauharnais family and the De Thébaudières, were located in the plain surrounding Le Cap.

The Chaurand thus used direct or indirect kinship ties to develop their long-distance trade, despite the absence of sons or brothers in the West Indies. They used matrimonial alliances to increase their social capital, alongside more distant relatives, who still followed principles of reciprocity and moral obligation. They substituted for the absence of a West Indian branch of their Nantes house by having recourse to the branches set up by allied firms. These connections enabled them to have access to business opportunities and contracts abroad.

Kinship and family morals also served as devices for contract enforcement. It was generally assumed that relatives were responsible for the behaviour, and in particular for the debts incurred by members of their family. When a dispute arose in 1776 with Juginac fils, who had a firm in St Domingue and owed the Chaurand £25,000 in West Indian currency, the Chaurand applied directly to the young man’s father, an old acquaintance of Chaurand Senior, in Marseille, for payment of the debt and the informal resolution of the conflict.<sup>19</sup> A similar feud erupted with Clauvel from Martinique about the West Indian’s son-in-law, Houilles, whose debt amounted to £1687.10: “Your son-in-law, (...) there is nothing to be had from him, whom you should not have let go (...). You cannot avoid filling me with this sum yourself”.<sup>20</sup> While appeals to family were the preferred mode of enforcement, they were supplemented with legal threats, even when relatives were at fault. A letter dated November 1784 illustrates this. Dominique Deurbroucq, at the time in Lorient, had received coffee that belonged to clients of the Chaurand. The brothers warned their relative not to dispose of these commodities without the Chaurand’s approval and asked them to promise to it in writing, “otherwise we will be forced to notify you a court order; these costs can be avoided if you oblige to it and recognize the rights of our clients”.<sup>21</sup>

It is generally agreed that early modern trading networks relied on kinship, religious and personal ties for their operation. This case study has allowed us to refine this analysis by understanding how merchants could use these relationships, and develop and sustain their business over long distances. Kinship was particularly important in this case, as it helped the Chaurand establish a serious trading dynasty in Nantes. Marriage alliances within the regional French mercantile network enabled the Chaurand to expand to the West Indies in the 1780s, and substituted for their absence of blood relatives there. In this case, it was the extended and affinal family that were crucial in opening up the Chaurand’s Atlantic business: marriage acted as a sudden positive shock in mercantile networks, substituting for reputational social capital built up slowly through repeated transactions. Friendships and personal relationships provided the other channel, not addressed here, by which the Chaurand could develop and control their activities. Families and the principles of moral obligation they respected had another function, which was to ensure that contracts were enforced. But traders’ networks

<sup>19</sup> ADLA, 101 J 9, Letter to Juginac, 27<sup>th</sup> Jan. 1776.

<sup>20</sup> ADLA, 101 J 9, Letter to Clauvel, 2<sup>nd</sup> Feb. 1775.

<sup>21</sup> ADLA, 101 J 16, letter to Deurbroucq & fils, 11<sup>th</sup> Nov. 1784.



were not narrowly defined by these affiliations, especially religious ones: the Chaurand traded with Protestant as well as Catholic families and did not hesitate to threaten merchants allied by matrimony with legal proceedings. This emphasis on networks thus helped us revisit and revive the Anglo-Saxon historiography on the French Atlantic. It showed that cooperation between traders took place, not only at the local level, but also at the regional and international ones.

Figure 3: *Deurbroucq chain of connections*

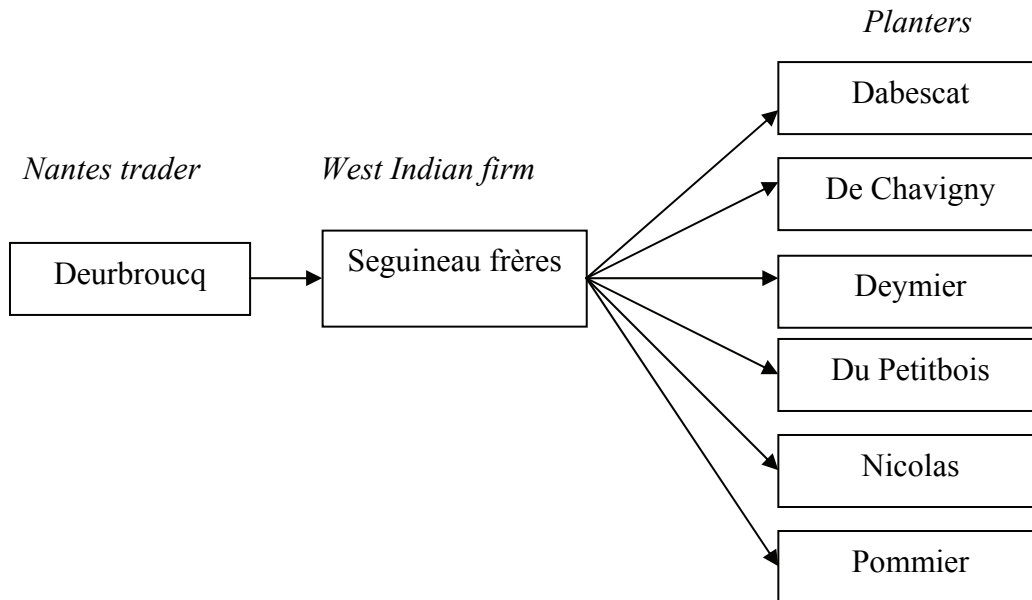


Figure 4: *Cottineau chain of connections*

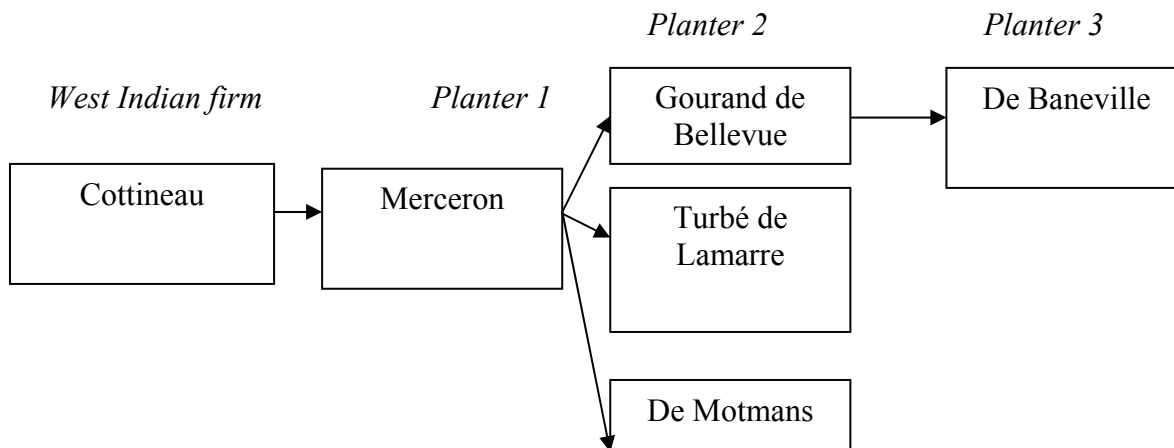
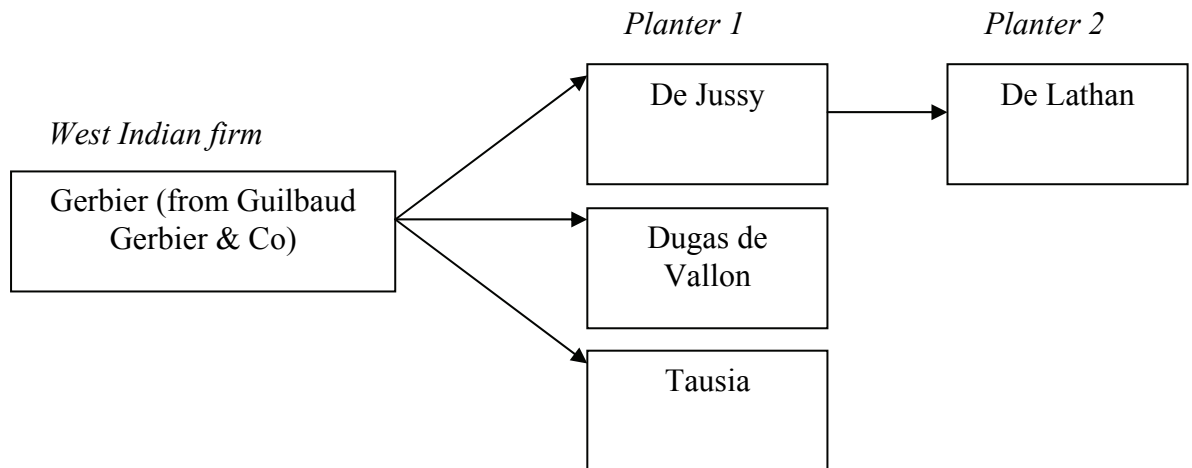


Figure 5: *Gerbier chain of connections*

## Negotiating work: resistance through absenteeism at Quarry Bank Mill, Cheshire in 1790

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Supervisor: Dr John Langton

E.P. Thompson famously argued that the onset of industrial development during the second half of the eighteenth century resulted in work becoming increasingly time-orientated, regulated by the clock rather than by the task because of a need to synchronize labour within the industrial workplace.<sup>22</sup> Corner-stone practices of ‘pre-industrial’ work schedules, such as ‘Saint Monday’, the habit of taking the first day of the week off to recover from a weekend of drinking; the weekly cycle of increasingly long hours and more intense labour towards the end of the week; or, the taking off of feast days and holy days, were eradicated by the imposition of timed rather than task-orientated labour.<sup>23</sup> This resulted in employees working longer and more regular hours during the early industrial period than before as the ability of men and women to set their own work pace was replaced by factory discipline and the strictly regulated working day.<sup>24</sup>

These arguments have been subject to criticism; the nature of work in the ‘pre-industrial’ period has been reappraised and the linear nature of the progression from task-based to clock-based work questioned.<sup>25</sup> However, although scholars have demonstrated that working conditions were most likely harsh and working hours lengthy before industrialization, and that local, regional and industrial differences should be taken into account when considering the spread of time consciousness and time management, there is still general agreement that work discipline intensified during the early industrial revolution and that time played an increasingly important role in workers’ experiences of employment. Despite academic engagement with the subject of time-discipline, relatively little work has considered how the development of time management was received by industrial workers.<sup>26</sup> In a case study of Samuel Greg’s water-powered cotton factory, Quarry Bank Mill, Styal, Cheshire (founded in 1784), I will demonstrate that early factory employees actively resisted time-discipline.

The Quarry Bank Mill wage archives in Manchester Central Library offer a detailed, but at times fragmentary, insight into the working lives of mill employees. The earliest wage book covers the period December 1789 to November 1791 and contains weekly entries for approximately 200 workers who were recorded under four categories: ‘Spinning’, ‘Carding’, ‘Reeling’ and ‘Sundries’. Employees’ agreed weekly wages are given, along with the number of hours worked or the number of hours of absence each day to the nearest half hour, out of twelve possible hours. The detailed wage records provide data for in depth analysis of the

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<sup>22</sup> Thompson, E.P., ‘Time, Work-Discipline and Industrial Capitalism’, *Past and Present*, Volume 38 (1967), p.70.

<sup>23</sup> *Ibid*, pp.60-61, 71-76.

<sup>24</sup> Thompson, ‘Time, Work-Discipline’, pp.56-97.

<sup>25</sup> For example see: Hopkins, E., ‘Working Hours and Conditions during the Industrial Revolution: A Re-appraisal’, *The Economic History Review*, Volume 35 (1982), pp.52-66; Clark, G. and Y. Van Der Werf, ‘Work in Progress? The Industrious Revolution’, *The Journal of Economic History*, Volume 58 (1998), pp.830-843, and Reid, D. A., ‘The Decline of Saint Monday 1766-1876’, *Past and Present*, Volume 71 (1976), pp.76-101. See also: Langton, J., ‘Proletarianization in the Industrial Revolution: Regionalism and Kinship in the Labour Markets of the British Coal Industry from the Seventeenth to the Nineteenth Centuries’, *Transactions of the Institute of British Geographers*, Volume 25, (2000), pp.31-49.

<sup>26</sup> One notable exception is Landes, D., *Revolution in Time: Clocks and the Making of the Modern World*, (Cambridge, MA: Belknap Press, 1983).

working hours and patterns of absenteeism experienced and initiated by the mill's 'free' employees over a 53-week period, from the week ending 2 January 1790 to 1 January 1791.<sup>27</sup>

The wage book shows that employees at Quarry Bank Mill were expected to work for at least twelve hours a day, six days a week through the entire year. No official holidays appear to have been given in 1790. Even on Christmas Day, which fell on a Saturday in 1790, the wage book records the presence and absence of each employee and deductions from wages were made for absenteeism.<sup>28</sup> Twelve-hour working days, six days a week, resulting in a total of 313 days of work per year by every individual within the mill was clearly Samuel Greg's ideal; but how closely did his employees live up to it?

By considering the total number of days in a year which were likely to be lost by individuals due to factors outside of their control, such as sickness, mechanical stoppages, time lost to disrupted water supplies and official holidays, it is possible to calculate the number of days<sup>29</sup> of voluntary absence taken by employees during the course of the year, as follows:

$$V = [T - (S + M + W + H)] - A$$

'V' is the number of days of voluntary absence taken each year, 'T' is the total possible number of days which could be worked, 'S' is the number of days of absence due to sickness, 'M' is the number of days of absence due to mechanical failure, 'W' is the number of days of absence due to disrupted water supplies, 'H' is the number of days of absence due to official holidays and 'A' is the actual number of days worked.<sup>30</sup>

I calculated that 'free' employees at Quarry Bank Mill worked an average of 90.28 per cent of possible hours per employee. Given a working year of 313 days, 90.28 per cent equates to an average of 282.6 days of work per person and 30.4 days of absence. Of this, up to 13 days per person can be viewed as enforced absence, caused by factors beyond their control, and the remaining 17.5 days can be viewed as voluntary absence. The same calculations according to gender show that on average males were voluntarily absent from Quarry Bank Mill for 18.5 days per person in 1790 and females for just over 16.5 days in 1790. Through absenting themselves from the workplace, workers resisted the intensive time management of their employer.

The 'pre-industrial' practice of taking time off from work at the beginning of the week, on 'Saint Monday', followed by increasingly long working hours towards the end of the week, is well documented.<sup>31</sup> At Quarry Bank Mill a relatively low number of hours were worked on Mondays, with a subsequent daily increase until Saturday (see figure 1).

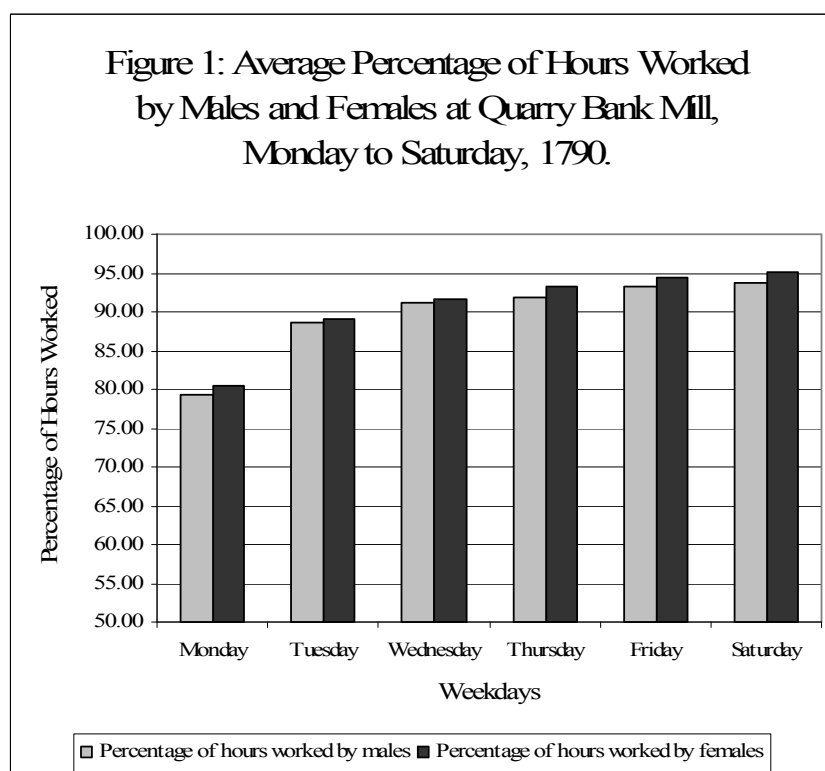
<sup>27</sup> 53 weeks were transcribed to ensure that I had data for every working day during 1790. Throughout this paper, however, whenever reference is made to 'a year' I have calculated data for 52 weeks, from week ending 2 January 1790 to week ending 25 December 1790.

<sup>28</sup> At no point throughout the year were all of the employees in all of the rooms/occupations of the mill recorded as being absent at the same time, which would suggest that no holidays were given. M.C.L. C5/1/15/1 'Wage Book', Volume 1.

<sup>29</sup> A 'day' of absenteeism was calculated on the basis of twelve hours of absence. In reality, a 'day' of absenteeism might have been composed of numerous shorter periods of absence, from half an hour upwards, which were cumulatively equivalent to one working day. (Half an hour is the smallest period of absence recorded.)

<sup>30</sup> No written evidence explicitly states how many days of absence were lost due to these factors at Quarry Bank Mill in 1790. Nevertheless, enough evidence has survived, in various sources, to provide a good estimate for each of them. I allocated six days off for illness for all employees (my results did not show a clear relationship between gender and illness), one day for mechanical failure, six days for water supply problems and no days for holidays. At all times I erred on the side of caution, giving the highest likely value for each factor, therefore, voluntary absenteeism may have been slightly higher than my findings suggest.

<sup>31</sup> For evidence see: Thompson, 'Time, Work-Discipline', *passim*.



Source: Compiled from M.C.L. C5/1/15/1 'Wage Book', Volume 1.

In the mill as a whole, on an average Monday 20.15 per cent of hours were lost by 'free' employees. In reality, Monday absenteeism was likely to have been even more disruptive than the figures suggest. Monday mornings, with very few exceptions, had a higher rate of absenteeism than Monday afternoons, and on five occasions throughout 1790 less than half of the workers of a particular room were at work on a Monday morning, while the annual percentage of hours worked by males in the Spinning Room on Monday mornings was only 70.96 per cent.<sup>32</sup>

Thompson stated that in the 'pre-industrial' period 'alternate bouts of intense labour and idleness' occurred 'wherever *men* were in control of their own working lives',<sup>33</sup> and Reid wrote that 'The prime supporters of Saint Monday were the better paid ... skilled *men*', although 'even "the lowest class" of workmen who received "the second rate wages" would try to observe the custom' [my emphasis].<sup>34</sup> However, figure 1 shows a high rate of Monday absenteeism for both males and females, with absenteeism by males at 20.74 per cent and by females at 19.60 per cent. Figure 1 therefore refutes the claim that only males observed 'Saint Monday'.

Overall, there does not appear to be a significant relationship between wages and Monday absenteeism for males at Quarry Bank Mill in 1790. Therefore, Reid's claim that 'the prime supporters of Saint Monday were the better paid ... skilled men' is not substantiated.<sup>35</sup> However, there does appear to have been a relationship between the wages of females and the observance of 'Saint Monday', with the females who took time off on Mondays being amongst the better paid women in the mill. Older workers earned more on average than younger workers, so it is probable that the most frequent Monday absentees were amongst the

<sup>32</sup> On Monday morning of the week ending 10 April 1790 only 31.3% of hours were worked in the Spinning Room; in the Reeling Room less than 50% of hours were worked on Monday mornings of the weeks ending 8 May, 4 September and 30 October, and on Monday morning of the week ending 4 September in the Carding Room just 39.5% of hours were worked.

<sup>33</sup> Thompson, 'Time, Work-Discipline', p.73.

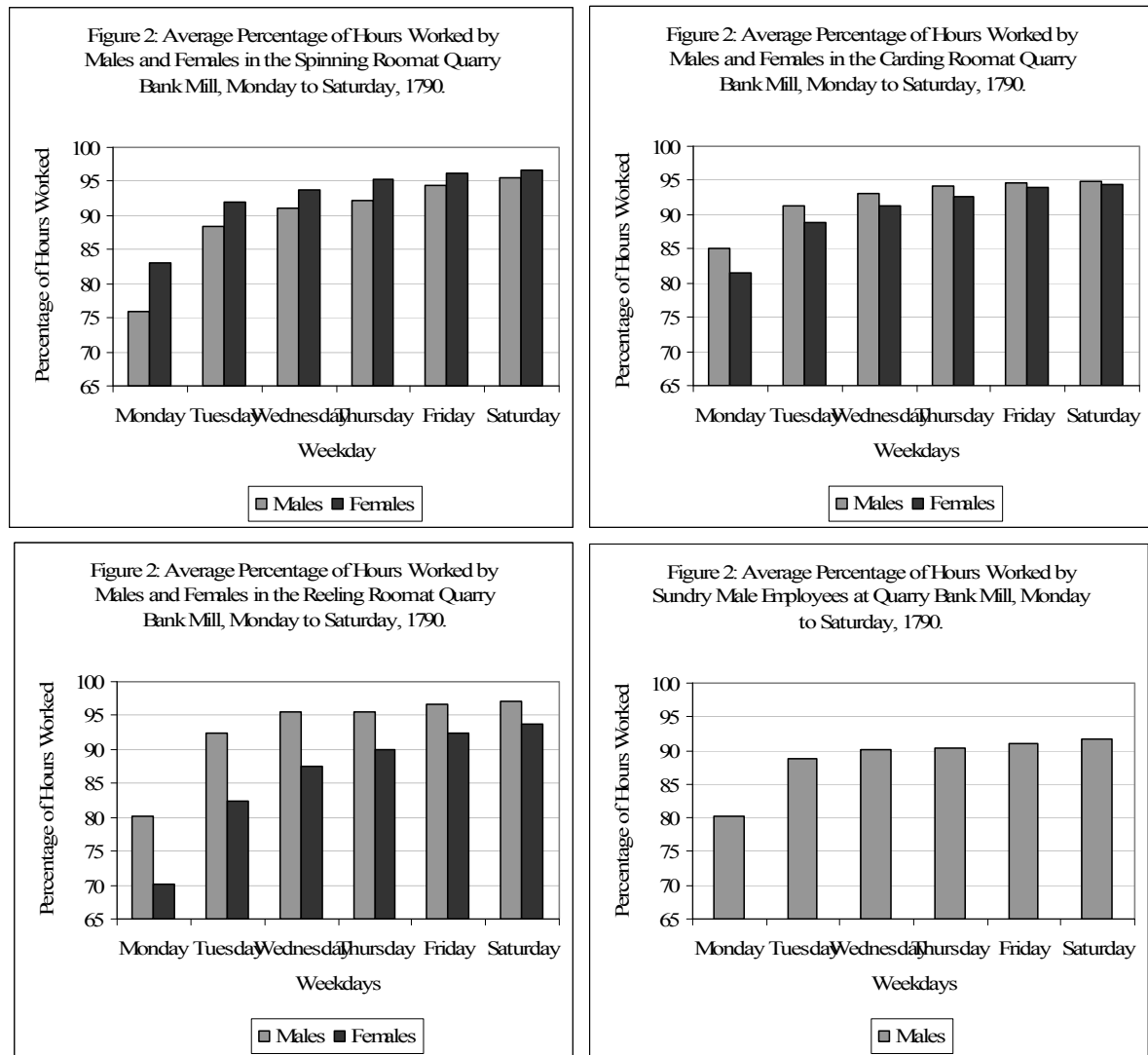
<sup>34</sup> Reid, 'Decline of Saint Monday', p.78.

<sup>35</sup> *Ibid.*

older females, who may have had greater domestic freedom from parental supervision than girls as well as more domestic duties. Long working hours from Mondays to Saturdays, followed by strict Sabbath day observance may have prevented accomplishment of domestic chores outside working hours. It is therefore possible that older females took time off on Mondays, continuing ‘pre-industrial’ work patterns, in resistance to long, invariable industrial working days which did not allow them enough time or the flexibility needed to accomplish all their domestic tasks.

Did similar patterns of absenteeism occur in all of the rooms/occupations at the mill (see figure 2)?

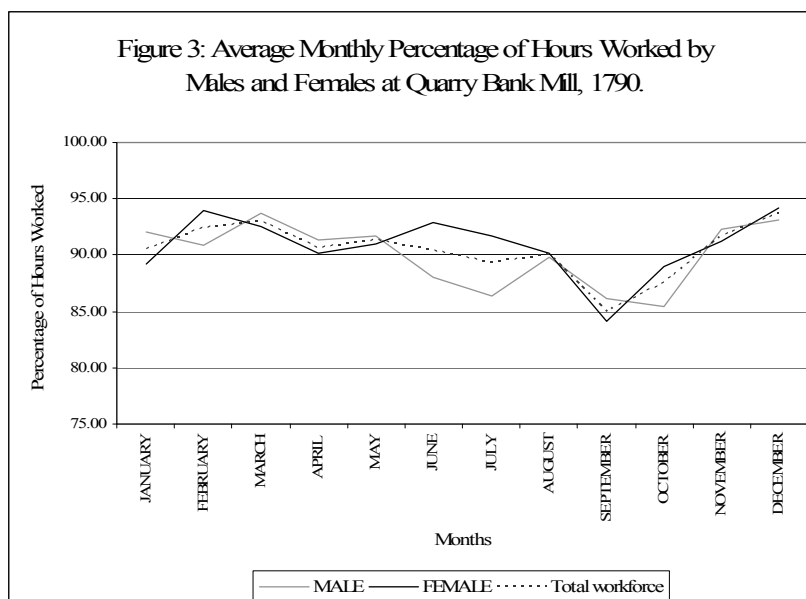
Figure 2: *Average percentage of hours worked, Monday to Saturday in the four rooms/occupations at Quarry Bank Mill, 1790*



Source: Calculated from M.C.L. C5/1/15/1 ‘Wage Book’, Volume 1.

The graphs show a high rate of Monday absenteeism in all four rooms/occupations in 1790, and that absenteeism reduced through the week amongst both male and female employees. Although always relatively low, the percentage of hours worked on a Monday varied from 70.22 per cent for females in the Reeling Room to 85.08 per cent for males in the Carding Room. The percentage of hours worked by males and females also varied within the different rooms, with females consistently working a greater number of hours than males in the spinning room, but vice versa in both the Carding and Reeling Rooms. Analysis of the age composition of the workforce in the various rooms/occupations, based on wages, suggests that older employees were more able to celebrate ‘Saint Monday’ than juvenile workers.

The average monthly percentage of hours worked at Quarry Bank Mill during 1790 shows slight seasonal fluctuations in line with the labour patterns of the agricultural year (see figure 3).<sup>36</sup>



Source: Calculated from M.C.L. C5/1/15/1 'Wage Book', Volume 1

The winter months of November to March show a relatively high average percentage of hours worked by both males and females, with the slight exception of January, which had a relatively high rate of absenteeism during the first week of the year (week ending 2 January). Overall, within the mill as a whole, 92.3 per cent of hours were worked on average during the winter months. Between April and October this fell slightly to 89.19 per cent, which might reflect the availability of alternative, part-time or seasonal agricultural employment in the vicinity of the mill.

'Lady Day' (25 March), the start of the new agricultural year, was followed by the beginning of work in earnest after winter.<sup>37</sup> The intensive period of ploughing and sowing of spring crops (barley and oats) in April continued into May when necessary. The fall in the average percentage of hours worked at Quarry Bank Mill, from 93.05 per cent in March to 90.67 per cent in April, although small, may reflect an increased need for agricultural labour. After spring the percentage of hours worked by males and females diverged: females increased the percentage of hours they worked during the summer months of June and July, but the percentage of hours worked by males fell further. Male labour was in high demand on farms during June and into July for the hay harvest.<sup>38</sup> It is possible that this occurred on and around the week ending 19 June 1790, when as the percentage of hours worked by males fell, to 74.63 per cent.<sup>39</sup> The percentage of hours worked by males and females converged during August and remained low through September and October, key months for harvesting and processing crops, picking apples, ploughing and sowing winter wheat and rye.<sup>40</sup> After

<sup>36</sup> Quarry Bank Mill contracts and indentures also show a marked similarity to the seasonal work pattern, with few made during springtime or autumn.

<sup>37</sup> Staples, A., 'The Medieval Farming Year' (1999), <http://www.witheridge-historical-archive.com/medieval-year.htm> (accessed January 2008).

<sup>38</sup> The diary of Cornelius Ashworth (1782-1783), a weaver, reflects seasonal agricultural patterns in the production of cloth, with a complete break from weaving for two weeks during July 1783 for the hay harvest. Gregory, D., *Regional Transformation and Industrial Revolution: A Geography of the Yorkshire Woollen Industry*, (London: Macmillan Press Ltd, 1982), pp.82-84.

<sup>39</sup> N.B. Wage records for the week ending 19 June are only available for the Spinning Room.

<sup>40</sup> Staples, 'The Medieval Farming Year', online. 'In harvest the manufacturers generally leave their loom and

October, the agricultural year slowed down, with a corresponding increase in the percentage of hours worked by both males and females.

The possible seasonal involvement of the early industrial labour force in agriculture may seem surprising; but surrounded by fields and farms, the mill workers lived rural lives. It is possible that many had small plots of land or allotments where they grew their own produce. Certainly, gardens and allotments were a feature of the mill community developed in Styal by Samuel and Robert Greg from the 1820s to the 1840s. Although they had entered industrial employment, workers were still immersed in rural, agricultural surroundings, which was reflected in their work patterns.

To conclude, weekly patterns of absenteeism were usual at Quarry Bank Mill throughout 1790 and entailed the rigorous observance of 'St. Monday' by both males and females, in contradiction of a widely held belief by historians that 'the prime supporters of Saint Monday were the better paid ... skilled men'.<sup>41</sup> Seasonal patterns of absenteeism also occurred during 1790, suggesting that despite strict time-discipline and a rigorous work schedule, employees engaged in temporary work in agriculture when it was available. Therefore, far from passively accepting the power of their employers and time-management, workers at Quarry Bank Mill resisted time-discipline. Willing and able to negotiate the nature of the capitalist working day early mill workers maintained some control over their working lives in the emerging industrial workplace.

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assist in reading the crop'. Robert Brown (1799) quoted in Gregory, *Regional Transformation*, pp.82-84.

<sup>41</sup> Reid, 'Decline of Saint Monday', (1976), p.78.



## **The commercialization of invention and the economy of knowledge: subscription systems and innovation in France and Britain in the eighteenth century**

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The history of consumption, particularly in the English case, allows economic history to be connected to the history of knowledge.<sup>42</sup> John Brewer and Maxine Berg have helped us understand how the marketing of inventions played an active part in the emergence of a new material culture. Alongside printed material (books, how-to leaflets, and periodicals) were new forms of social interaction that facilitated the emergence of a wider public for technology: workshop visits, for example, product exhibitions, displays in shops, and itinerant lecturers. The commercialization of new processes in turn contributed to the development of taste, judgement and knowledge.<sup>43</sup> My research project focuses on the social consequences of the spread of a 'technical culture' in the eighteenth and early nineteenth centuries. I analyse the ways in which the dissemination of useful knowledge depended upon lay support and participation, which was expressed through the rise of subscriptions for technical devices and schemes. The methodology will thus rest on a systematic review of printed material relating to the raising of public funds for new technology, between 1700 and 1820. It will allow me to list technical projects, to identify authors and to distinguish the public concerned.

One may define the subscription system as a collective investment which represented a purchase in advance, making it possible to raise funds for the realization of an enterprise. Well known for the book trade,<sup>44</sup> having been long used for luxurious editions, subscriptions have not yet been analysed with regard to technical improvements. I will try to chart the genesis and chronology of these processes: I seek to understand the specificity of these practices, which offered a great flexibility, among other channels for commercializing inventions and rewarding inventors. During the eighteenth century new kinds of objects were also produced with this kind of fundraising, and this was especially so in the field of cultural economy. Subscriptions were used to support the construction of scientific instruments, and objects related to the diversification of the market for geographical objects.<sup>45</sup> They supported the creation not only of maps, but also of new goods, concerning aristocratic and scholarly customers, like the globes, which had an aesthetic value that was just as important as their utility. In addition, the rise of curiosity for Newtonian sciences encouraged entrepreneurs and supported an extensive market for a mixed audience.<sup>46</sup> A culture of display and demonstration was at the heart of learning processes about technology. In the wake of this curiosity, subscription processes could be used for discoveries, new engines, but also societies of arts, and many other kinds of undertaking.

Subscriptions could be lucrative investments. With the help of aristocratic patronage, they supported companies or manufacturers. Through a call for participation, a subscription could have represented the quickest way 'to procure a Fund of ready money', as phrased in a *Scheme for Promoting the woollen manufacture in Scotland*, 1746. Nevertheless, these new practices stimulated new forms of public patronage, not so lucrative in character but rather aimed towards philanthropic actions.

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<sup>42</sup> For the theory of *Economy of Knowledge* see Mokyr (2002); on consumption culture see Brewer (1997), Roche (2000) Berg (2005).

<sup>43</sup> Berg and Clifford (1998), Walsch (2000), Hilaire-Perez and Thebaud-Sorger (2006).

<sup>44</sup> Raven (2007).

<sup>45</sup> Pedley (2005).

<sup>46</sup> Stewart (1992).

The project will proceed in several stages: collection of resources, treatment and analysis. The dispersal of the printed sources makes it difficult to constitute them as a single dataset. Nevertheless, I will gather a corpus of subscriptions and funding schemes from different kinds of sources related to technical projects, either in print or in manuscript. Several attempts have already been made to catalogue book subscriptions.<sup>47</sup> In a similar manner, I will conduct a detailed search of relevant collections in the Bodleian Library (*John Johnson collection of trade cards and ephemera*), at the Museum of the History of Science of Oxford (*Printed ephemera*) and the British Library, such as their collections of tracts on trade and advertisements.<sup>48</sup> I will also search in Newspapers, like the *The Universal Magazine of Knowledge and Pleasure* and the *Repository of the Arts*; also la *Gazette des beaux arts et inventions*, l'*Almanach sous-verre* ... . Other sources include inventors' applications to institutions such as the *Bureau du Commerce* in France (for example the project of the cleric, Peronnier with Du Perron, *Prospectus d'une souscription pour la reconstruction d'un nouveau moulin à soie*, for an improvement of a silk mill in 1770)<sup>49</sup> and the projects associated with the *Society of Arts* in England.

Who were the constructors, the artists, the entrepreneurs, and the projectors? Through which networks did they manage to find support and funding? The presence of a local public for technology opens up the question of the dynamism of the urban milieu and allows us to study differences.<sup>50</sup> We can use printed lists, with subscribers names when they exist. These make it possible to define precisely the composition of the audience and the conditions of consensus. They will allow us to understand the constitution of networks and practices through the localization of urban spaces and places concerned (manufactories, lecture halls, clubs and societies).<sup>51</sup> Indeed, the success of the use of this system depended on the cultural context which allowed funds to be raised in this way, as well as on administrative frameworks, especially regarding rules and protections for inventors. I will develop a comparative study of markets for inventions in France and in England. In France, before the law of 1791, the difficulty of obtaining exclusive rights forced inventors to seek aristocratic support, even if retail markets for new consumer goods were also developing. Subscriptions could present an alternative means by which entrepreneurs could give their inventions, yet simultaneously protect their ideas: indeed the leaflet containing all the details was given only to subscribers. England possessed a more liberal, although quite complex, system of patents, which has been well studied in recent years. Compared to France, the professionalization of invention happened earlier in the century in England, in the wake of intensive speculation at the beginning of the eighteenth century.<sup>52</sup>

In printed advertisements, improvements would be justified in the name of the 'Public Good'. Patriotic issues and philanthropic ideas were thus [sometimes] mixed with business benefits. The authors described their projects (machine, processes, school ... ) and detailed the expected effects of the device in question. They needed to plan the expenses of the project, but they usually produced more of an estimate than a quotation.

Hot air and gas balloons provide interesting cases, even though they formed a particular articulation between technical innovation, rhetoric of progress, and the public good. The flights were firstly more experimental than spectacular sciences. Indeed, they provided an opportunity for testing tissues, varnish, lamps, and new gases. In France in 1784, more than

<sup>47</sup> See for instance the enquiry of Robinson and Wallis (1975).

<sup>48</sup> *Prospectus d'une souscription; pour former dans différens endroits du royaume quinze établissemens pour la filature des cotons fins, destinés à la fabrication des mousselines à l'imitation des Indes; au myen de la mécanique de M. de Barneville*. Paris, 1787, Database, *The Making of the Modern World*.

<sup>49</sup> National Archives of France, serie F12, file 2201.

<sup>50</sup> On the link between economy, technology and innovation see Allen (1983), Rosenberg (1985), Antonelli, Foray (2005).

<sup>51</sup> Among others, Inkster (1997).

<sup>52</sup> MacLeod (1988), Hilaire-Perez (2000a)(2000b).

20 human flights were led by French amateurs, in Lyon, in Marseille, Dijon, Bordeaux, Nantes, Strasbourg, promoting the same model. After opening a subscription, disseminated by leaflets and local newspapers, entrepreneurs tried to convince local councillors and aristocratic patrons, but also a wider audience, to take part in the enterprise. The arguments were based on improvements of the art, as a gift of each for the public good. In Strasbourg the subscription opened by Degabriel and Pierre used a bilingual leaflet, *Description de la machine aérostatique construite par les sieurs de Gabriel et Pierre, mécaniciens à Strasbourg, avec une planche en taille douce*. Strasbourg, Kürsner, 1784, in- 4°, 16p.<sup>53</sup> This included a drawing of the hot air balloon, and an estimation of the cost based on the calculation of the price of materials. The subscription gathered 350 names, especially from the upper levels of society, but also from a heterogeneous milieu of *bourgeoisie*.

In general which kind of benefits would a subscriber gain from his investment in technical projects? Firstly, as I have underlined, it could happen that he received no material goods in exchange for their participation. This was unlike other subscriptions, such as those for books, globes. Instead, there were other forms of gain. For instance, the subscription often gave some rights, such as a priority for ordering the engine invented, like the *moulin à soie* of Peronnier. This latter promise to reserve the firsts manufactured mills to the subscribers who wanted to buy it. It could also be a right for use – in the case of societies, such as use of museums, gardens or instruments. For balloons, the subscribers could follow the construction of the balloon by visiting the workshops in the heart of the town. They could then have the benefit of the best vantage points from which to view the balloon's flight. Their subscriptions were equivalent to having purchased a ticket in advance. Second, being a subscriber meant that one was involved in the secret of the invention, and one was allowed access to specific information – and to have rights of admission to a public demonstration, for example. Finally, being a subscriber provided individuals with a type of symbolic capital, for their names were printed in a list as benefactors of progress. This was a form of patriotic activity and as such can be compared with participation in creating monuments or statues, understood as an incarnation of progress for the community and citizens.<sup>54</sup> But for close collaborators involved in the project, it could even become an advertisement. For instance the Ballon of Nantes used a green tissue varnish made at the manufacture of Diot, whose name is mentioned in the legend of the engraver of the flight.

When the fashion for flights crossed the channel in the autumn of 1784, amateurs of the sciences were encouraged to follow the same process. Thomas Baldwin of Chester, opened one such enterprise and printed his *Proposals at large, for the construction of a grand naval air-balloon, furnished with an apparatus, corresponding to that of sails oars and rudder, to be occasionally applied*; Chester, 1784. As he argues in its proposal he had received visits from gentlemen and neighbours, had shown them a drawing, and conducted small experiments, but this was insufficient to complete the project: 'as an extended patronage becomes essential to the accomplishment of so great an undertaking', if people approve the proposals and 'the public utility, they may be induced to support and recommended it those undertaking'. Some conditions were stipulated to secure the subscribers; first 'The name of subscribers will be alphabetically arranged with their respective title and residence, also the subscription advanced'. The list would be also available in the local area, such as in library reading rooms, bookshops, and societies. Second, if 'from the date of the proposal the subscription provide inadequate to the undertaking, the money shall be return to each subscribers'. People were assured that they would have their money back. But the project failed Even though the city wasn't opposed to the flight (Chester welcomed the aeronaut Lunardi one year later and Baldwin accomplished the flight with his balloon and wrote a beautiful *Relation* of its aerial travel). The reason why the project did not succeed can be

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<sup>53</sup> Strasbourg City Archives, serie AA. 2053.

<sup>54</sup> MacLeod (2007).

found in the lack of detail provided by the proposal. Compared to Degabriel and Pierre who gave the dimension of the tissues and corresponding costs, Baldwin mentions just a 'Metallic cylinder' and 'rarefied air', and reaffirms that the estimation might change and 'cannot be with any precision ascertained', and the cost could increase from £700 to £1500.<sup>55</sup> However, the entrepreneurs need to construct confidence by exposing concrete measures.

In Dijon three fellows of the local Society of Science, undertook the construction of a gas machine called l'*Académie de Dijon*. Guyton de Morveau, the chemist who led the project, published a call for subscriptions in the local newspaper, the *Affiches locales*. The subscribers were invited to follow many experiments, first to find a new kind of varnish, second to produce a chemical artificial gas called 'potato gas'. The gap between the proposal and the result of the enterprise appears evident. Driven by impatient subscribers they assembled the fabrics together too early, as the varnish wasn't dry enough. They had to adjust the enterprise. They decided finally to produce hydrogenous gas (very expensive) with sulfuric acid on iron instead of the potato gas: after having exhausted the stock of sulfuric acid bottles in the town, they had to order other bottles from Paris, which incurred a new expensive cost. All these expenses had not been integrated into the initial estimate. Moreover they were obliged to explain each of their choices. We possess the accounts for the whole enterprise, precisely exposed at the Society in January 1785, allowing us to reconstruct the distribution of the costs, the network of subcontractors, and so on. The total cost of the machine amounts to 39 358, 9 *livres*.<sup>56</sup> The subscription, which was insufficient, supplied more than one third of the income (13,538 *livres*). Most of the rest was given by the patronage of the Duc de Condé in the name of the States of Bourgogne (16,000 *livres*), and another part with the tickets sold for the entry (2,325 *livres*). The total incoming money amounts to 31,863 *livres*, 2 *sol*, hence the accounts were not in balance. Guyton de Morveau expected to earn money from the publication he wrote about the Experiment, and also from the sale of materials used to reimburse what the Society had lent. Thus we can see that the enterprise was not profitable in itself. It only becomes so if we include the gains made from symbolic capital in our overall calculation of its benefits.

Wide calls to the public to support discoveries helped projectors to emancipate themselves from aristocratic patronage, whilst freeing them from immediate market pressures because the risk was shared if they failed.<sup>57</sup> Supported by public opinion, entrepreneurs could easily convince the administration. But to complete those projects, entrepreneurs needed to fight against several constraints, not only of material problems, but also the pressure of the public. The logics of confidence are multiplied because of these different patronages. But in many cases subscription devices permitted them to conduct innovative enterprises, raising money quickly, and provided a kind of intellectual property. Moreover to involve the public before the production will permit them to gain new customers. This economics of technical knowledge based on the notion of progress could be a powerful resource for such markets.

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<sup>55</sup> Dijon, City Library, Registre de l'Académie, 20th January 1785, tome XIV, p.17, folio 284- 288.

<sup>56</sup> To compare the cost of the second Hot air balloon of Montgolfier amounts to 2418 *livres*, see Archives of Air Museum, Le Bourget, Fonds Montgolfier, IV-1b.

<sup>57</sup> Roche (1988).

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# Social statistics and social policy in Hanoverian Britain

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## 1. Introduction

Eighteenth-century Britain, we are often told, was a fiscal-military state, in which mercantilist economic theory dictated that priorities of governing lay in foreign affairs and colonial expansion.<sup>58</sup> Nineteenth-century Britain, by contrast, witnessed the triumph of Smithian economic liberalism, albeit accompanied by an increasingly interventionist approach to social regulation. The closing years of the Hanoverian regime witnessed a flurry of social legislation, much of it drafted on the back of royal commissions of inquiry, such as the Poor Law (1832-4) and Factory (1833) Commissions. The early Victorian 'revolution in government', as one historian has described these (and later) social policy developments, was built upon the accumulation of 'a vast mass of information and statistics' by select committees and royal commissions after 1830, which served to expose 'the bare facts of the extent of suffering, waste, dirt or disease'.<sup>59</sup> More recently, Boyd Hilton has noted that while this revolution was not sustained, the parliaments of the 1830s nevertheless broke decisively with eighteenth-century approaches to social welfare and began to 'legislate for the whole country on a one-size-fits-all basis'.<sup>60</sup> Implicitly or explicitly, these accounts, and others, emphasize the extent to which statistical evidence drove legislative activism.<sup>61</sup> In other words, the relationship between social statistics and social policy was forged by the politicians and bureaucrats of the 1830s, seemingly without precedent.

This paper offers an alternative account of the development of social policy during the reign of George III. Using evidence from a dataset of poor law statutes passed between 1760 and 1820 I argue that Hanoverian parliaments were increasingly prepared to legislate on a national basis, while still providing local communities with the option of pursuing their own course in the provision of welfare. In addition, I link the emergence of a 'national' policy to the accumulation of national data, in the form of large-scale parliamentary inquiries into poor law expenditure and population growth. Parliament ordered overseers of the poor to submit returns of expenditure for 1775-6, 1782-5, 1802-3, 1812-15, and entrusted the task of counting the entire population to these same officers in 1801 when the first census was taken.

## 2. Trends in poor law legislation

In their seminal history of the old poor law, Sidney and Beatrice Webb identified six administrative epochs from the dark ages to the passage of the Poor Law Amendment Act in 1834. The fifth and sixth of these, dating from around 1775 were characterized by a series of expedients designed to cope with, on the one hand, the arrival of the 'Factory system and machine industry', and on the other, problems arising from chronic underemployment in the agricultural sector.<sup>62</sup> While we might now reject the Webbs' chronology of industrial development, their opinion that 'the statute law as to the Relief of the Poor became, from

<sup>58</sup> J. Brewer, *The sinews of power: war and the English state, 1688-1783* (London, 1989).

<sup>59</sup> O. MacDonagh, *Early Victorian government 1830-1870* (London, 1977), pp.5-6.

<sup>60</sup> B. Hilton, *A mad, bad, & dangerous people? England, 1783-1846* (Oxford, 2006), pp.588, 602.

<sup>61</sup> See also M.J. Cullen, *The statistical movement in early Victorian Britain* (Hassocks, 1975); L. Goldman, 'Statistics and the science of society in early Victorian Britain: an intellectual context for the General Register Office', *Social History of Medicine*, 4 (1991), pp. 415-34; M. Poovey, *A history of the modern fact* (Chicago, 1998).

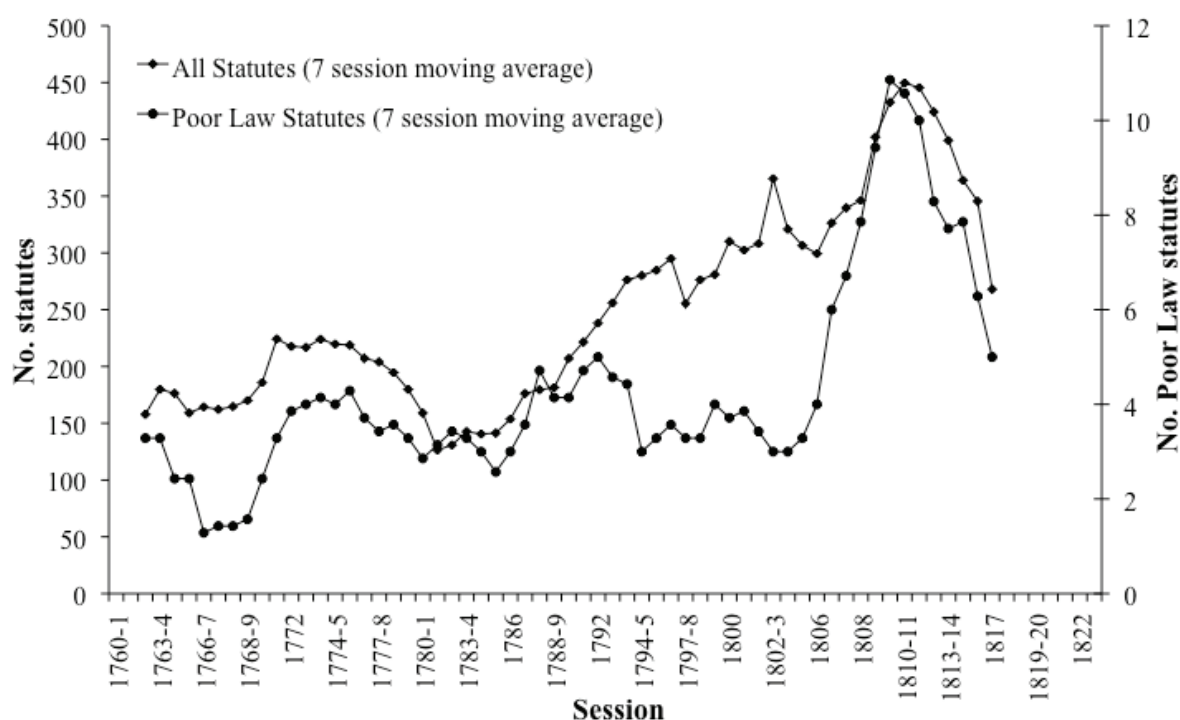
<sup>62</sup> S. Webb and B. Webb, *English poor law history: 1. The old poor law* (London, 1927), pp.400, 422.

decade to decade, more exclusively generous and humane in character and intention' continues to provoke significant debate among historians.<sup>63</sup>

Yet much of the argument is preoccupied with the generosity, or otherwise, of poor relief *in practice*, rather than the original intent of legislators.<sup>64</sup> I have not classified the statutes passed between 1760 and 1820 according to their humanity, but I would suggest that before historians become bogged down in the diversity of local practice, it is worth spending some time reflecting upon the scope and scale of poor law legislation passed during the late eighteenth and early nineteenth centuries. While historians such as Joanna Innes and David Eastwood have noted the extent to which Hanoverian parliaments took charge of social policy in this period, in part due to the effective transmission of local knowledge from periphery to centre, relatively little effort has been made to quantify this process.<sup>65</sup>

During the reign of George III, some 273 statutes relating to the relief of the poor in England and Wales were passed, representing just under two per cent of parliament's legislative output. Some statutes related to individual manors, others to groups of several parishes (particularly the hundreds of rural Norfolk and Suffolk), and some dealt with England and Wales as a whole. Such variations in legislative scale illustrate how misleading it can be to speak about the 'old poor law' as if it were a rational and coherent body of jurisprudence.

Figure 1: *Poor law statute-making relative to overall legislative output*



Sources: *Statutes at large*, viii-xviii; *Statutes of the United Kingdom*, i-viii.

Figure 1 suggests that changes in the frequency of poor law statutes were broadly consistent with overall patterns of legislative activity. There was some divergence in the second half of the 1790s, which may reflect the extra legislative burden imposed by the French Revolutionary wars, but it is striking that during the Napoleonic wars of the early nineteenth

<sup>63</sup> Ibid., p.422.

<sup>64</sup> S. King, *Poverty and welfare in England 1700-1850* (Manchester, 2000), ch. 3.

<sup>65</sup> D. Eastwood, 'Amplifying the province of the legislature: the flow of information and the English state in the early nineteenth century', *Historical Research*, 62:149 (1989), pp. 276-94; J. Innes, 'Parliament and the shaping of eighteenth-century English social policy', *Transactions of the Royal Historical Society*, 5<sup>th</sup> series, 40 (1990), pp.63-92.

century, when the threat of foreign invasion remained high, poor law statute-making continued to track overall legislative output. In other words, the fiscal-military state was more than capable of juggling the demands of revenue-raising for wars abroad, while still maintaining a watchful eye on the welfare of the poor at home.

Although the ratio of poor law statutes to all acts of parliament remains relatively stable during this period, if we turn to look at the spatial focus of welfare legislation, a rather different pattern emerges.

Table 1: *Spatial focus of welfare legislation*

Sessional period	Spatial focus of welfare legislation										Total no. of Poor Law Acts	Poor Law Acts as % of all Acts passed
	Urban		Rural		County		National		Others			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
1760-68	10	43.5	10	43.5	0	0.0	0	0.0	3	13.0	23	1.76
1768-75	16	69.6	2	8.7	4	17.4	0	0.0	1	4.3	23	1.52
1775-83	20	66.7	5	16.7	0	0.0	4	13.3	1	3.3	30	1.95
1783-90	13	61.9	5	23.8	0	0.0	3	14.3	0	0.0	21	1.76
1790-98	16	45.7	8	22.9	0	0.0	8	22.9	3	8.6	35	1.65
1798-1805	9	31.0	2	6.9	0	0.0	17	58.6	1	3.4	29	1.17
1806-12	30	52.6	5	8.8	3	5.3	16	28.1	3	5.3	57	1.95
1812-20	24	43.6	4	7.3	3	5.5	24	43.6	0	0.0	55	2.15
TOTAL	138	50.5	41	15.0	10	3.7	72	26.4	12	4.4	273	1.75

Sources: same as figure 1.



Table 2: *Welfare legislation by county, 1760-1820*

	Spatial focus of welfare legislation					TOTAL	Expenditure per capita, 1821	
	Urban	Rural	County	National	Other			
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	%	£
England and Wales				72		72	26.4	0.58
Middlesex	65					65	23.8	0.54
Suffolk		18				18	6.6	0.90
Surrey	15					15	5.5	0.70
Kent	10	1	3			14	5.1	0.92
Norfolk	2	10				12	4.4	0.78
Devon	6		2			8	2.9	0.53
Staffordshire	5	1				6	2.2	0.44
Gloucestershire	4	1				5	1.8	0.49
Wiltshire	5					5	1.8	0.78
Bedfordshire	2	2				4	1.5	0.83
Shropshire	2	2				4	1.5	0.49
Cheshire	3					3	1.1	0.42
Derbyshire	1	2				3	1.1	0.46
Durham	2				1	3	1.1	0.47
Hampshire			1		2	3	1.1	0.74
Lancashire	3					3	1.1	0.27
Essex	2					2	0.7	1.00
Lincolnshire	2					2	0.7	0.61
Middlesex and Surrey	2					2	0.7	0.58
Oxfordshire	1		1			2	0.7	0.96
Shropshire and Montgomery		2				2	0.7	0.52
Sussex	1	1				2	0.7	1.19
Warwickshire	2					2	0.7	0.60
Worcester	1	1				2	0.7	0.53
Buckingham			1			1	0.4	0.96
Cumberland			1			1	0.4	0.36
Herefordshire	1					1	0.4	0.70
Huntingdonshire			1			1	0.4	0.80
Somerset	1					1	0.4	0.50
Other					9	9	3.3	
<b>TOTAL</b>	<b>138</b>	<b>41</b>	<b>10</b>	<b>72</b>	<b>12</b>	<b>273</b>	<b>100</b>	

Sources: same as figure 1; expenditure *per capita* derived from *1821 Census* (P.P. 1822, XV) and *S.C. on Poor Rate Returns* (P.P. 1822, V).

Tables 1 and 2 capture the tension between the dual functions of the late eighteenth-century legislature as an arena for the pursuit of local interests, and a national policy-making forum.<sup>66</sup> By dividing the reign of George III into eight sub-periods, each consisting of eight parliamentary sessions, it becomes possible to identify the changing spatial focus of welfare legislation.

All statutes in the dataset were coded according to whether they related to urban or rural parishes (or groups of parishes), whole counties, or England and Wales in general. In addition, acts relating to sub-national administrative units were coded according to the county in which they were located. For the period as a whole, urban legislation dominates, with just

<sup>66</sup> J. Hoppit, 'Parliamentary legislation, 1660-1800', *Historical Journal*, 39 (1996), pp.116-18.

over 50 per cent of all statutes relating to the regulation of the town poor. In only one sub-period, 1798-1805, does the proportion of urban legislation fall below two-fifths. Moreover, of these urban statutes, 82 of them (59 per cent) relate to urban metropolitan parishes in Middlesex and Surrey.

Rural legislation, meanwhile, fluctuates between a maximum of 43.5 per cent in the first eight sessions (1760-68), and a minimum of 6.9 per cent between 1798 and 1805. The overall average of 15 per cent implies that legislators were not overly concerned with improving the efficacy of the poor laws' operation in rural areas. This is hardly surprising given that one of the most distinctive features of the Elizabethan poor law, compared to its European equivalents, was its rural coverage. Indeed of the 41 rural statutes, 28, or slightly over two-thirds, relate to just two rural counties, Norfolk and Suffolk. Without exception, these statutes created supra-parochial units of administration (usually organized around one or two hundreds), presumably reflecting the fact that parishes in these particular counties were, in Peter Solar's words, 'too small to be an effective risk pool'.<sup>67</sup>

Arguably the most striking feature of these tables, however, is the increasing prominence of national welfare legislation from 1775 onwards. In the first sixteen sessions of George III's reign there were no poor law statutes that applied to the relief of the poor in England and Wales as a whole. Yet for the entire period, over a quarter (26.4 per cent) of statutes had a 'national' remit. As table 1 indicates, in two eight-session periods, namely 1798-1805 and 1812-20, national legislation was the largest, or joint largest, sub-category. In addition, as table 2 shows, national-level legislation is the largest distinct spatial category (72 acts), closely followed by Middlesex (65 acts). Taken together, half of all poor law statutes passed between 1760 and 1820 were directed towards either the relief of the poor in the country at large, or the relief of the metropolitan poor.

Such a finding is comparatively surprising given much of the past and present historiography's focus on southern agrarian counties. While counties like Kent, Wiltshire, Bedfordshire, Hampshire, Essex, Oxfordshire, Sussex, Buckinghamshire and Huntingdonshire were generally high-spending (as measured by *per capita* expenditure; see table 2), MPs do not seem to have regarded them as 'problem areas', demanding their own peculiar legislative remedies. Indeed, parishes or places in these counties secured only 34 local acts, or 17 per cent, of all sub-national legislation.

### 3. The statistical component of Hanoverian welfare policy

The chief reason that we know that southern agrarian counties were consistently above the national average in *per capita* expenditure terms is due to successive parliaments' interest in collecting national expenditure statistics. The first 'national' poor law act of George III's reign was 'An Act for obliging the overseers of the Poor ... to make Returns, upon Oath, to certain Questions' (16 Geo. III c. 40), passed in May 1776 at the instigation of Thomas Gilbert and Sir Walden Hanmer. While Hanmer was not a notable poor law reformer, Gilbert certainly was, and is remembered by welfare historians for giving his name to so-called 'Gilbert Unions': groups of parishes which joined together to fund and maintain a common workhouse.

Yet Gilbert's 1782 'Act for the better relief and employment of the poor' (22 Geo. III c. 83) was only passed *after* statistics relating to poor relief practices in each and every parish had been collected for the year ending Easter 1776. While it could be argued that there is no necessary connection between large-scale data gathering of the kind ordered in 1776, and changes implemented six years later, it should be noted that Gilbert had tried to pass a 'Bill for the better relief and employment of the poor' as early as 1765, but was thwarted by

<sup>67</sup> P.M. Solar, 'Poor relief and English economic development before the industrial revolution', *Economic History Review*, 48 (1995), p.18.

opposition in the House of Lords.<sup>68</sup> Thanks to the work of Julian Hoppit, we know that there were 15 ‘national’ poor law bills, all of which failed in the period 1760-75.<sup>69</sup> It is therefore all the more significant that the first successful national bill – obliging overseers to make returns – made no changes to the existing body of law. In other words, legislators appear to have recognized, in theory at least, the importance of basing future poor law reform on empirical evidence.

If we examine the subjects of national poor law acts, the prominence of legislation which either required returns to be made, or implemented systems of registration, is immediately apparent:

Table 3: *National welfare legislation by subject*

Sessional period	Subject of legislation								TOTAL
	Settlement & parochial officers	Data gathering	Gilbert Unions	Apprenticeship	Friendly Societies, Savings & Charity	Medical	Bastardy	Vagrant & idle poor	
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
1760-68	0	0	0	0	0	0	0	0	0
1768-75	0	0	0	0	0	0	0	0	0
1775-83	0	1	1	2	0	0	0	0	4
1783-90	1	2	0	0	0	0	0	0	3
1790-98	2	0	1	1	2	0	0	2	8
1798-1805	6	3	3	3	1	0	1	0	17
1806-12	3	3	2	1	3	2	2	0	16
1812-20	11	3	2	2	3	2	0	1	24
<b>TOTAL</b>	<b>23</b>	<b>12</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>72</b>

Sources: same as figure 1

Table 3 indicates that 1 in 6 (12 out of 72) statutes with a national remit were passed with the explicit intention of eliciting or recording information. In addition to the 1775-6 poor law returns, similar acts were passed in 1786 (26 Geo. III c. 56; covering 1782-5), 1803 (43 Geo. III c. 144; covering 1802-3) and 1815 (55 Geo. III c. 47; covering 1812-15). Thereafter, returns of expenditure were made annually by order of the House of Commons, thus obviating the need for specific legislation.<sup>70</sup> Also included in this data gathering column, are the first two census acts of 1800 and 1811 (41 Geo. III c. 15; 51 Geo. III c. 6), since the taking of the census was wholly dependent, in England and Wales, upon the administrative machinery of the old poor law, both in terms of units of observation (parishes and townships) and personnel (overseers of the poor). Moreover, the act authorizing the first census was part of a coordinated legislative response to the welfare consequences of high grain prices.<sup>71</sup> With population data already available when the 1802-3 poor law inquiry was conducted, the compilers of the Abstract of Returns were in a position to calculate *per capita* expenditure, a notable departure from eighteenth-century investigations.

What is also clear from the returns themselves is the extent to which particular policy ideas dictated the questions that were asked. In 1775-6, three questions related to workhouse accommodation, reflecting Gilbert’s commitment to indoor relief for certain categories of pauper, while for 1782-5 (after the passage of ‘Gilbert’s Act’) these questions were omitted and replaced by one on the costs of setting the poor to work. In 1802-3 the workhouse

<sup>68</sup> Webb and Webb, *English local government*, p. 170. Reprinted in S. Lambert (ed.), *House of Commons Sessional Papers of the Eighteenth Century*, xxi, pp.43-80.

<sup>69</sup> J. Hoppit, (ed.), *Failed legislation, 1660-1800* (London, 1997).

<sup>70</sup> S.J. Thompson, ‘Census-taking, political economy and state formation in Britain, c. 1790-1840’ (unpublished PhD dissertation, University of Cambridge, forthcoming).

<sup>71</sup> Ibid.

question was re-instated, but was re-framed to enable direct comparisons to be drawn between indoor and outdoor relief. In addition, two questions were asked about Friendly Societies. Whereas Gilbert favoured unionization, George Rose (1744-1818), the sponsor of the 1802-3 inquiry, had secured legislation in 1793 and 1795 ‘for the encouragement and relief of friendly societies’ (33 Geo. III c. 54 and 35 Geo. III c.111), with a subsequent act passed in 1809 (49 Geo. III c. 125). In addition, a question on friendly society membership was asked as part of the 1812-15 inquiry, with an act ‘for the further protection and encouragement’ of friendly societies (59 Geo. III c. 128) passed in the 1819 session, one year after the 1812-15 returns had been printed.

#### 4. Conclusion

The evidence presented here casts serious doubt on the claim that, for England and Wales at least, it was not until the 1830s that the Westminster parliament sought to implement a national welfare policy. While it is true that earlier Hanoverian legislative initiatives tended to be permissive, rather than prescriptive, it is possible to overstate the significance of this distinction.<sup>72</sup> The poor law return acts of 1776, 1786, 1803 and 1815 were obligatory, and while neither Gilbert Unions nor Friendly Societies were adopted universally, there was nevertheless a growing ambition on the part of late eighteenth-century MPs and peers to revise the Elizabethan welfare settlement from the centre outwards.

Evidence, and particularly statistical evidence, was integral to this process of revision since it provided a peculiarly powerful impetus for legislative action. The late Hanoverian approach to welfare reform arguably achieved its apotheosis in 1834 – rather than its eclipse – when over 8,000 pages of evidence ‘from every county and almost every town, and from a very large proportion of even the villages of England’ were appended to the 1834 *Poor Law Report*. For the report’s authors there was a clear causal relationship between the accumulation of evidence and legislative action: ‘the amendment of those [poor] laws is, perhaps, the most urgent and the most important measure now remaining for the consideration of Parliament; and we trust that we shall facilitate that amendment by tendering to YOUR MAJESTY the most extensive ... body of evidence that was ever brought to bear on a single subject’.<sup>73</sup>

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<sup>72</sup> King, *Poverty and welfare*, pp. 24-7 distinguishes between ‘enabling’ and ‘compulsory’ legislation.

<sup>73</sup> Report ... for inquiring into the administration and practical operation of the Poor Laws, *P.P.* 1834, XXVII.7.

# Marital fertility, wealth and inequality in transition era France, 1750-1850

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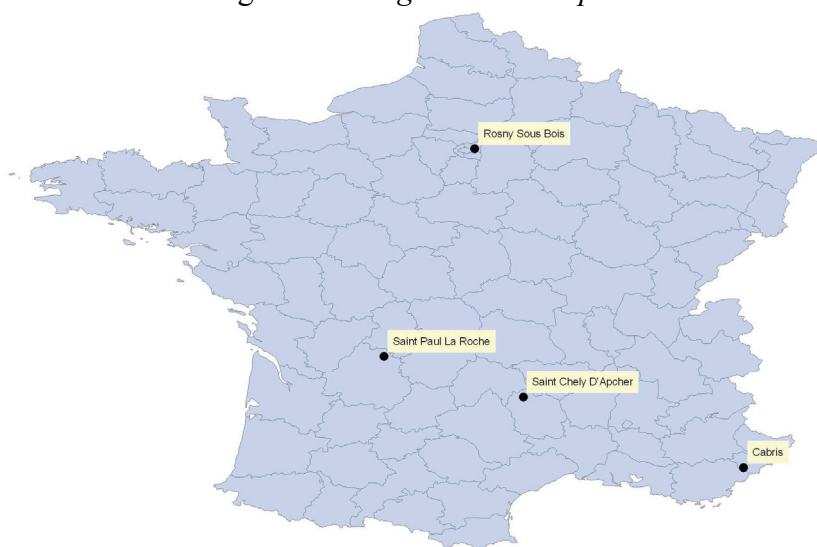
## 1. Introduction

The spectacularly early decline of French fertility is one of economic history's great puzzles. There are no convincing explanations for why France entered a fertility transition over a century before anywhere else in the world. This analysis links highly detailed individual level fertility life histories to wealth at death data for four rural villages in transition-era France, 1750-1850. For the first time, the individual level socioeconomic correlates of the French fertility decline can be studied.

The demographic transition enabled the productivity advances of the Industrial Revolution to be transformed into higher living standards and sustained economic growth. Understanding the revolution in fertility behaviour between the Malthusian and the modern eras has therefore been a central research question. Despite this interest, researchers of the transition have not approached a consensus for the causal mechanisms behind the decline of fertility in nineteenth century Europe. However, many of the literature's conclusions are based upon highly aggregated data. Using new individual level economic and demographic data, I re-evaluate the economic arguments for the fertility transition in France.

The rest of this paper is comprised of five sections. Section 2 details the data. Section 3 is a detailed examination of the wealth-fertility relationship while section 5 evaluates and proposes some explanations for the French fertility transition. Section 6 concludes.

Figure 1: *Villages in the sample*



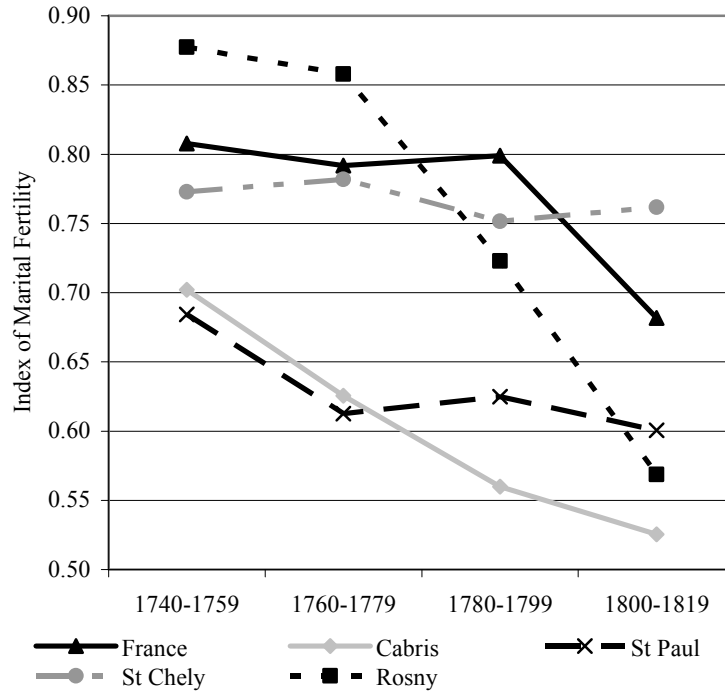
## 2. The data

The demographic data to be analysed is taken from Louis Henry's random sample of the parish registers for 41 rural villages between the late seventeenth to early nineteenth centuries. This pioneering study, which applied the newly developed techniques of family reconstitution, resulted in a goldmine of individual level information on the demographic characteristics of historical France. The source for wealth data are the *Tables des Successions et Absences* (TSAs), which are stored in the various *Archives Departementales* in France. The TSAs were originally constructed for tax purposes and recorded all deaths in a locality, and uniquely, the value of an individual's estate at death, with a distinction between cash and

property holdings. Crucially, the TSAs recorded everybody, including those with zero assets at death.

The Henry demographic dataset was linked to records from the *Tables des Successions et Absences*. The links were based upon name, profession, age at death and date of death. These criteria serve to place close to 100 per cent certainty in the accuracy of the links. Ultimately, four villages were selected on the basis that they were the best represented after linking.

Figure 2: *The index of marital fertility, by sample village, contrasted with the national trend*



The fertility pattern for France as a whole and for each of the sample villages is plotted in figure 2 (using the index of marital fertility, where 1 is an observed maximum). Examining the trend from the 1760-79 period to 1800-19, we see that fertility in Rosny falls by nearly 40 per cent and in Cabris by almost 20 per cent. In St Chely and St Paul, fertility remains relatively constant. Therefore it is possible to identify two demographic regimes amongst the sample villages, a high fertility environment and a declining fertility environment. For the analysis, the data from each village will be pooled and the varying wealth effects will be tested for by demographic regime.

### 3. Deconstructing the wealth effects

What was the relationship between wealth and fertility in transition era France? Malthusian logic would immediately propose the female age at marriage, the classic European ‘preventative’ check as the driver behind any patterns. Also, differential female mortality between the wealth groups could generate a lot of variation. The following section details regressions designed to detect the wealth effects controlling for these demographic variables and also event dummies such as the Revolution of 1789. The model to be estimated takes the following functional form:

$$CEBf.(C, D, FageM, FageD, REV, NWARs, IM, Wealth)$$

Where  $C$  represents a constant,  $D$  is a fertility regime fixed effect,  $FageM$  and  $FageD$  are female age at marriage and death respectively,  $IM$  represents a measure of infant mortality, and  $REV$  and  $NWARs$  are categorical variables representing marriage during the Revolution and the Napoleonic wars respectively.  $Wealth$  is included in the regression as a categorical variable in order to account for non-linearities in the wealth-fertility relationship. The wealth



distribution was split into even thirds, and individuals were assigned to a ‘wealth group’ based on their real wealth at death (the nominal levels of wealth reported in the *Tables* were converted to real levels using a cost of living index from Lévy-Leboyer & Bourguignon (1990)). Wealth group 1 contained the poorest individuals (0-141 francs at death), group 2 contained those with 141-2100 francs at death, and group 3 contained the richest (over 2100 francs).

To correct for possible under registration of infant deaths in the death registers, I employed a simple version of the *same name technique*. Typically, later born siblings would be given the name of a previously deceased child. I compared the number of repeated names within a family with the number of recorded child deaths. Where the number of repeated names exceeded the number of child deaths, I corrected the child deaths upwards to account for the probable omission of a death from the records. These corrected values are used in the regressions and are included as the proportion of children dead, in order to remove the structural positive correlation between the number of children born and dying. As the dependant variable is a count variable (children ever born) and because the data is ‘over dispersed’ relative to the Poisson distribution, the appropriate method is to use negative binomial regression.

Table 1: *Negative binomial regressions on children ever born*

<i>Variable</i>	<i>Coefficient (Standard Error)</i>
Age at Marriage, Female	-0.038*** (0.005)
Age at Death, Female	0.035*** (0.004)
Proportion of Children dead	0.269** (0.001)
Revolution	-0.149** (0.059)
Napoleonic Wars	-.043 (0.054)
<i>Wealth Effects</i>	
Wealth Group1 (ref.)	0
Wealth Group2	0.181* (0.049)
Wealth Group3	0.145 (0.093)
<i>Wealth-Fertility Regime Interactions</i>	
Main Decline Effect	0.085 (0.078)
Wealth Group1 (ref.)	0
Wealth Group2	-0.291** (0.102)
Wealth Group3	-0.397*** (0.104)
Constant	.945*** (0.252)
N	411
Pseudo $R^2$	0.088

\*\*\* Significant at .001% level

\*\* Significant at .01% level

\*Significant at .05% level



Table 1 details the results of a negative binomial regression on children ever born. Female age at marriage and at death are highly significant and act in the expected directions. Women who marry later should have fewer children for biological reasons, and women who die during their reproductive years should also have a smaller family size, on average. The proportion of dead children is also highly significant and its effect is large. Intended to capture the effects of infant mortality, a reduction in this value decreases the number of children born. The Revolution has a significant negative effect on fertility, but the Napoleonic wars are insignificant.

Table 2: *Net wealth effects on children ever born*

	Wealth Group		
	1	2	3
<i>Non- Decline Villages</i>	5.95	7.14	6.88
<i>Decline Villages</i>	6.48	5.81	5.04

The ‘net’ wealth effects on fertility in table 2 are calculated from the interaction coefficients in the negative binomial regressions. A constant age at marriage for females (24) and complete life course fertility (surviving to at least 50) is applied for each wealth group. These values represent the wealth effects on fertility ‘net’ of wealth differentials in age at marriage, death and the proportion of children dead. Once the net effect is calculated for each wealth group, the coefficient is exponentiated (as the beta coefficients of the negative binomial regression are given in logarithms) to give the expected numbers for each wealth group. The data clearly demonstrate significant differentials in the wealth-fertility relationship at the individual level. In relation to the richest and poorest groups, there is a positive wealth fertility relationship within the *non-decline* villages, with the richest group having 15 per cent more children than the poorest. Where fertility decline has already begun, the net wealth fertility relationship is sharply negative, with the richest groups having over 22 per cent fewer births. In summation: pre-transition villages have a positive wealth-fertility profile, whereas transition villages have a negative wealth-fertility profile. This strongly implies that it is the rich, the top third of the wealth distribution in these rural villages, who are the pioneers of the decline in French fertility.

#### 4. Why did fertility decline in France?

##### *Neo-Malthusian Explanation?*

Wrigley sees the early adoption of family limitation in France as “a variant form of the classic prudential system of maintaining an equilibrium between population and resources to which Malthus drew attention”. Essentially, the preventative check now operated through marital fertility directly and not indirectly through age at marriage. The testable implication of this hypothesis, as stated by Weir, is that there should be a strong positive relationship between real income and fertility (1984a p.31). However, this ‘neo-Malthusian’ reasoning for the early decline for French fertility fails to be supported by the individual level data collected in this analysis. If the restriction on births was a response to an economic constraint, we would expect those closest to subsistence to initiate fertility control. This is clearly not the case for the four villages in the sample. Where fertility is declining, the wealth-fertility relationship is negative. Fertility decline here is more pronounced for the richer groups; they are the first to employ this new variant of the preventative check, but this is not a ‘neo-Malthusian’ response.

##### *The Revolution?*

Many scholars have explicitly linked the Revolution to the fertility decline. An economic rationale for the decline in French fertility, associated with the Revolution has been forwarded by Weir. The Revolution enabled an element of the rural population to increase their control over the land, while others lost out and became more reliant on wage labour. For the new rural bourgeoisie, children became “superfluous as labourers and costly as consumers” (Weir

1984b p.613). The decline of fertility in France in the early to mid nineteenth century was primarily due to the decline of the demand for children by this new class, according to Weir. However, the driving factor in Weir's hypothesis is the changing cost of children, due to the substitutability of wage labour by poorer socioeconomic groups. This does not uniquely identify a particular French characteristic as this process must surely have existed in other countries. At this time, the English population was far less reliant on the agricultural sector and children must have been as expensive, if not more so, as they were in France.

### *Social mobility?*

In France, serfdom had disappeared by the eighteenth century, and most peasants owned their own land, in contrast to most of Europe. The fertility decline originated amongst the wealthiest of this property holding class. According to Chesnais, almost 63 per cent of the population was represented by landowners and their families in 1830 while the comparable figure for Britain is 14 per cent (1991 p.337). The widespread ownership of land amongst the rural population is a unique feature of the French socio-economic landscape at this time. Because of this, economic inequality was lower in France than in England during the nineteenth century. This implies that the environment for social mobility was more fluid in eighteenth and nineteenth century France than anywhere else in Europe. Arsene Dumont, writing a century after the onset of the transition, placed social mobility as the 'raison de etre' of the French fertility decline and termed "social capillarity" as the phenomenon driving the limitation of family sizes (Dumont 1890). The Revolution served "to increase the thirst for equality and stimulate the social ambition of families, both for themselves and their progeny" (Chesnais 1992 p.334). The old social stratifications under the *Ancien Regime*, where hereditary rights had determined social status, were weakened by the Revolution. All of this served to facilitate individuals' social ambition, and the limitation of family size was a tool in achieving upward social mobility.

The testable proposition of this hypothesis is that fertility should be negatively related to the opportunities for social mobility. A crude proxy for the social mobility environment is the level of economic inequality. Table 3 reports Gini coefficients based on total real wealth, by village, for the sample. The levels of inequality are very high, and typical of the pre-industrial era. For the villages where fertility is declining, the Gini coefficient is significantly lower than where it is not. This suggests that the level of inequality was associated with the onset of the fertility transition.

Table 3: *Gini coefficients by village*

	Gini Coefficient (based on deaths 1810-70)
<i>Non-decline Villages</i>	
St Paul	.861
St Chely	.818
<i>Decline Villages</i>	
Cabris	.705
Rosny	.722

Another way to test the social mobility environment is to examine the relationship between father and son's wealth at death. Where the environment for social mobility is more open, father's wealth should have less importance in the determination of son's wealth, than would be the case where social mobility is limited. For a small subsample, I was able to investigate this relationship. Table 4 reports the results of an OLS regression on son's wealth, with father's wealth as an independent variable.

Where fertility is high and not declining, father's wealth is a highly significant predictor of son's wealth. This relationship appears to be far weaker where fertility is declining. The effective coefficient on father's wealth in the determination of son's wealth in

these *decline* regimes is one quarter of that of the villages where fertility is stagnating (.864 vs. .195). When both father and son's family size are controlled for, the effective coefficient on father's wealth in the *non-decline* villages is ten times its corresponding value in the *decline* villages (.798 vs. .074). This result strongly implies that the strength of the intergenerational transmission of wealth, its 'stickiness' within families, and the social mobility environment this implies, is associated with the presence of fertility decline.

Table 4: *Father's wealth as determinant of son's wealth*

<i>Decline</i> Regime Villages	56.56*	35.42
	(24.47)	(33.89)
Fathers Wealth (Sqrt)	0.864***	0.798***
	(0.177)	(0.210)
Fathers Wealth*Decline Regime	-0.669*	-0.724*
	(0.305)	(0.349)
Son's Family Size		-3.761
		(3.854)
Father's Family size		-3.300
		(3.394)
Constant	2.13	62.38
	(20.99)	(52.38)
Observations	42	40
Adj. $R^2$	0.346	0.320

\*\*\* Significant at .001% level

\*\* Significant at .01% level

\* Significant at .05% level

## 5. Conclusion

The principal result of this study is the major shift in the wealth fertility relationship at the individual level. Where fertility is high and non-declining, this relationship is positive. Where fertility is declining, this relationship is negative. It is the richest groups who reduce their fertility first. In opposition to a purely 'ideational' explanation for the fertility 'revolution', this disaggregated analysis finds strong socioeconomic correlates for the decline of fertility in France. The second principal result of this paper is that the environment for social mobility, as proxied by the level of inequality in the villages and the perseverance of wealth within families, is strongly associated with the fertility decline. This study is a first step towards re-centering France as central to our understanding of Europe's demographic transition.

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# Poverty and women's work in interwar London

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## 1. Introduction

Poverty among the working classes was a major concern of politicians and reformers in early twentieth-century Britain, and a number of household surveys were undertaken in various urban centres during the Edwardian and interwar periods. Analysis of the poverty problem both by contemporary surveyors and by subsequent researchers has been focused on the wages and employment status of male workers and on the effects of the Liberal and interwar welfare reforms, with little if any reference to female workers.<sup>74</sup> Though female labour force participation rates remained relatively low during the interwar period, it may have been the case that many women who did work were driven to do so by household poverty and that women's work, or its absence, made a critical difference in the poverty status of some households. Using a large sample of working-class households from the 1929-31 *New Survey of London Life and Labour* (NSLLL), this paper investigates the effect of poverty on female labour supply and the extent to which female workers were able to help alleviate household poverty in interwar London.

It also assesses, for the first time using historical data, the possible validity of a relatively new model of household labour supply. Recent research, focused primarily on low-wage workers in developing countries, has posited an "S-shaped" relationship between wages and labour supply that is negative at lower wage levels – where workers may need to work longer hours at lower wages in order to meet a minimum standard of income for the household – and turns positive at higher wage levels.<sup>75</sup> The model is especially plausible in the case of secondary – often female – workers and could very well be consistent with historical findings that indicate that the effect of the wage on women's labour supply decisions was generally positive but much smaller and less significant in the early twentieth century than it is today.<sup>76</sup>

## 2. Data

The NSLLL was undertaken between 1929 and 1931 by researchers at the London School of Economics under the direction of Hubert Llewellyn Smith, and covered approximately 28,000 working-class households, about a 1-in-50 sample, in 38 boroughs of greater London.<sup>77</sup> Its main objective was to determine whether poverty among the working classes had increased or decreased in the 40 years since Charles Booth's pioneering *Life and Labour of the People of London*, and as a result the survey contains a thorough accounting of the weekly earnings of each working household member and of the amount and sources of non-labour income. Detailed information about the ages and relationships of earning and non-earning household members, as well as information about the occupations and weekly hours of work of earners, make the NSLLL an ideal source for the study of household labour supply decisions.

For this paper, a dataset of 20,962 households with complete enough information on household demographics, earnings, income, and rent paid, as well as at least one adult female present, was converted into a dataset of 29,151 individual adult females.<sup>78</sup> Table 1 summarizes

<sup>74</sup> Boyer (2004) reviews the major poverty surveys; Hatton and Bailey (1998).

<sup>75</sup> Dessing (2002), Prash (2000), Sharif (2004).

<sup>76</sup> See Goldin (1990) on the US and Hatton and Bailey (1988) on Britain.

<sup>77</sup> The contents of the surviving 29,915 household record cards were computerized and coded in a project overseen by Tim Hatton, Roy Bailey (University of Essex), Dudley Baines, Paul Johnson and Angela Raspin (LSE), and the resulting datasets were obtained from the UK Data Archive.

<sup>78</sup> This is essentially the same set of households used in Hatton and Bailey (1998). I am very grateful that they

some characteristics of the data, in aggregate and separately for female household heads, wives of household heads, and other females (mostly unmarried adult daughters still living with parents or other family members).

Table 5: *Work and household characteristics of females in the NSLLL*

	<b>All</b>	<b>Heads</b>	<b>Wives</b>	<b>Others</b>
<b>Total number</b>	29,151	3,516	16,867	8,768
<b>Participation rate</b>	33.5%	43.8%	6.8%	80.8%
<b>Household size</b>	4.11	2.33	3.92	5.19
<b>Children in household</b>	1.02	0.34	1.19	0.97
<b>Age</b>	37.1	56.4	41.2	23.3
<b>Age of workers</b>	27.0	48.3	39.6	21.3
<b>Weekly hours of workers</b>	43.3	37.4	35.3	45.7
<b>Hourly wage of workers (d.)</b>	7.58	9.88	8.87	6.91
<b>Occupied in service, laundry, cleaning</b>	27.1%*	61.2%	60.2%	14.3%
<b>Occupied in clothing industry</b>	21.2%	16.1%	12.3%	23.7%
<b>Occupied in manufacturing</b>	24.4%	10.3%	16.9%	28.7%
<b>Occupied in retail industry</b>	14.5%	7.9%	8.1%	17.0%
<b>Occupied in clerical or professional trade</b>	12.5%	3.8%	2.0%	16.1%

\* Percentage out of 9,767 occupied females (1,541 heads, 1,143 wives, and 7,083 others); 30 had a missing or unknown occupation.

Hatton and Bailey (1998) examines the extent of poverty revealed by the NSLLL and finds that, depending on the measure used, between 6-23 per cent of households fell below the minimum standard.<sup>79</sup> In general, female LFP rates were lower, at 25-26 per cent, in households below the poverty line than in households above, at 34-35 per cent, which suggests that the inability or unwillingness of some women to seek or find work outside the home might have contributed to their households' poverty. Among households that would have been poor without the earnings of the female worker concerned, female LFP rates were about double those in households that would have remained above the poverty line (50-60 per cent versus 26-28 per cent), and removing the earnings of each female worker individually would have increased household poverty rates by 50-80 per cent. These calculations can only be a crude approximation of the effect, but suggest that women's work was responsive to the poverty status of the household and could be an effective strategy for avoiding or alleviating household poverty.

### 3. Female labour force participation in the NSLLL

The participation function for females in the NSLLL is estimated using a probit model that predicts the probability that any given female participates in the labour market. The specification, detailed in table 3, loosely follows that of Hatton and Bailey (1988) and includes variables designed to capture the effects of age, family structure, the employment status of other household members, household income net of the earnings of the female concerned, and the receipt of state benefit income (including unemployment insurance, poor relief, and state pensions). The variables of greatest interest are an indicator for whether the household would have fallen below the poverty line without that female's earnings, which is

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were generous enough to share the data used for that paper, and in particular for their calculation and application of several different poverty measures, which are used in this paper.

<sup>79</sup> Hatton and Bailey (1998), 584; income and needs net of rent.



meant to capture the effect of the threat of poverty on the participation decision, a series of interaction terms that are designed to allow the effects of other factors to differ for women from poor households, and the wage.

Since the wage is observed only for labour force participants, it must be imputed for non-participants.<sup>80</sup> Again loosely following Hatton and Bailey (1988), wages for non-workers were predicted from a wage equation estimated for workers that includes a series of dummy variables for age group (in five-year intervals), for borough of residence, and for birthplace. The equation was estimated and wages were predicted separately for household heads, wives, and other females, and the equations for wives and other females included additional controls for the age and skill level of the male household head.

Table 2 presents several alternative specifications of the wage term. Entered linearly, as in column 1, it displays the same positive but insignificant relationship with participation found in previous historical work.<sup>81</sup> It appears, however, that the specifications that allow differential own-wage elasticities for women in poor households (columns 2 and 4) and for a non-linear total effect (columns 3 and 4) are a better fit for this data. Figure 1 plots the total effect of the quadratic wage term on the participation function, estimated from specification 4 and evaluated across the range of wages found in the data. Participation is decreasing in relation to the wage level at low wage levels, but increasing at higher wage levels (with a turning point at 9.4 *d.*, a little higher than the mean wage). The result is consistent with, and the specification very similar to, that found in Sharif (2003) for women in rural Bangladesh.<sup>82</sup>

Table 6: *Alternative specifications of the wage term in Probit estimation of female labour force participation*

	(1)	(2)	(3)	(4)
<b>Wage (d./hour)</b>	0.00305 (0.00520)	0.0262*** (0.00594)	-1.479*** (0.0435)	-1.355*** (0.0452)
<b>Wage Squared</b>			0.0791*** (0.00240)	0.0721*** (0.00250)
<b>Poor*Wage</b>		-0.347*** (0.0106)		-0.969*** (0.0556)
<b>Poor*Wage Squared</b>				0.0512*** (0.00399)

Note: Standard errors in parentheses. \*, \*\*, \*\*\* denote significance at 10%, 5% and 1% respectively.

Specification 4 exactly matches that presented in table 3; all others use the same sample and set of control variables. Actual wages are used where known.

Table 3 presents the results of the full participation equation. The effect of the variable indicating that household income fell below the minimum standard, or would have without the earnings of the female in question, is unsurprisingly positive and significant with a marginal effect that suggests that the threat of poverty increased a woman's probability of working by 65 percentage points (more for wives and household heads). The signs of most other coefficients are as expected – the effects of other household income and the presence of young children are negative, with women from poor households more responsive to changes in income and less responsive to the presence of children. There appears to be an added-worker effect with respect to the unemployment of the household head but a discouraged-worker effect with regard to the unemployment of other household members, though interestingly the latter is reversed for women from poor households.

<sup>80</sup> An hourly wage could only be observed for those women with known earnings and hours, a sample of 8879, so wages were also imputed for working women with missing hours-of-work information.

<sup>81</sup> Hatton and Bailey (1988), 177; Goldin (1990), pp.132-3.

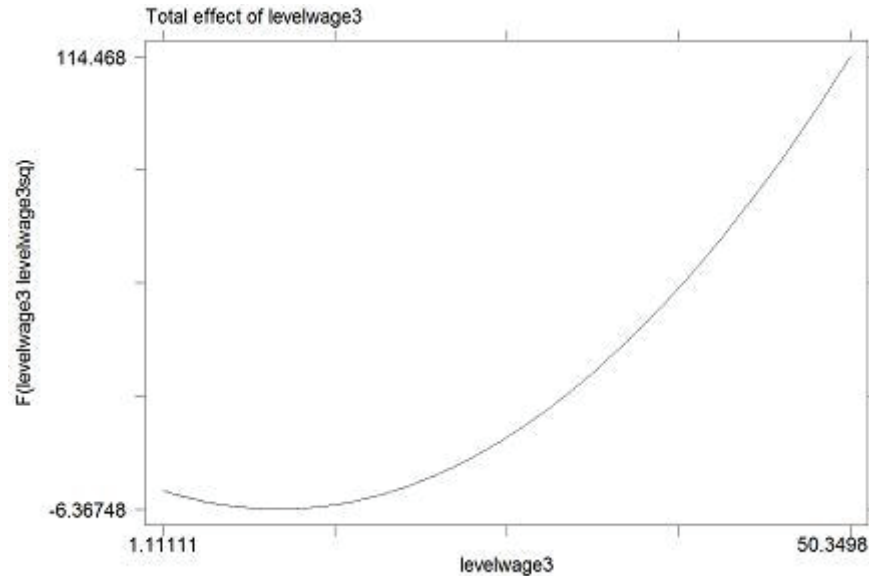
<sup>82</sup> Sharif (2003), pp.107-10.



Table 7: *Probit estimation of female labour force participation*

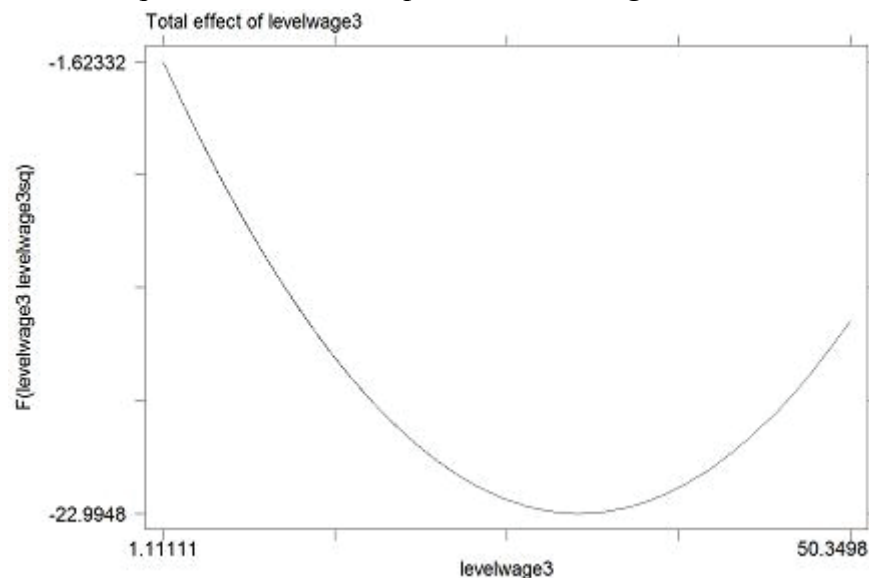
	(1)	(2)		(1)	(2)
	Probit Coefficient	Average Marginal Effect		Probit Coefficient	Average Marginal Effect
<b>Wage (d./hour)</b>	-1.355*** (0.0452)	-0.168*** (0.00548)	<b>Children Aged 0-5 in HH</b>	-0.406*** (0.0403)	-0.0503*** (0.00499)
<b>Wage Squared</b>	0.0721*** (0.00250)	0.00892*** (0.000303)	<b>Young Kids*Poor</b>	0.290*** (0.0631)	0.0359*** (0.00781)
<b>Wage*Poor</b>	-0.969*** (0.0556)	-0.120*** (0.00686)	<b>Children Aged 6-13 in HH</b>	0.0131 (0.0140)	0.00163 (0.00174)
<b>Wage Squared*Poor</b>	0.0512*** (0.00399)	0.00634*** (0.000494)	<b>Young Child* Old Child</b>	0.248*** (0.0629)	0.0322*** (0.00855)
<b>Poor Without Fem's Earnings</b>	4.450*** (0.252)	0.658*** (0.00528)	<b>Total Adults</b>	0.260*** (0.0278)	0.0322*** (0.00345)
<b>Other HH Income</b>	-0.137*** (0.0110)	-0.0170*** (0.00136)	<b>Other Adults in Labour Force</b>	-0.0789** (0.0358)	-0.00977** (0.00443)
<b>Other HH Income*Poor</b>	-0.912*** (0.0600)	-0.113*** (0.00742)	<b>Other Females in Labour Force</b>	0.0962*** (0.0230)	0.0119*** (0.00285)
<b>Benefit Income</b>	-0.150*** (0.0324)	-0.0185*** (0.00401)	<b>Male Head Unemployed</b>	0.210*** (0.0737)	0.0274*** (0.0101)
<b>Benefit Income*Poor</b>	-0.205*** (0.0789)	-0.0254*** (0.00977)	<b>Others Unemployed</b>	-0.233*** (0.0602)	-0.0288*** (0.00746)
<b>Wife</b>	-1.808*** (0.0437)	-0.397*** (0.0119)	<b>Others Unemp*Poor</b>	0.489*** (0.135)	0.0606*** (0.0167)
<b>Wife*Poor</b>	1.143*** (0.115)	0.188*** (0.0238)	<b>Male Head Not in Labour Force</b>	0.0699 (0.0770)	0.00881 (0.00987)
<b>Female Head</b>	-0.752*** (0.0597)	-0.0863*** (0.00649)	<b>Constant</b>	4.829*** (0.221)	
<b>Female Head*Poor</b>	0.838*** (0.140)	0.130*** (0.0267)	<b>Observations</b>	28836	28836

Note: Standard errors in parentheses. \*, \*\*, \*\*\* denote significance at 10%, 5% and 1% respectively. Dependent variable =1 if the woman works and =0 if not. Includes controls for age using a series of dummy variables denoting age group in five-year intervals. Women who were unemployed in the sample week or otherwise have missing earnings are excluded (315 in total). Wages are predicted for women not in the labour force using the wage equation described in the text. Using the Heckman sample selection correction method to predict wages had no discernible effect on the results.

Figure 3: *Fitted quadratic relationship between the wage level and labour force participation*

#### 4. Conditional labour supply in the NSLLL

The NSLLL offers a novel opportunity to estimate the hours component of the labour supply decision using historical data. Table 4 presents the results of OLS estimation of an hours-of-work equation for those female workers whose weekly hours are given. Again, a quadratic specification of the wage term that allows a differential effect for poor women appears to fit the data well. Figure 2 plots the total effect of the wage on hours. Here, the turning point is at a much higher wage level, about 30 *d.*, suggesting that a positive relationship between wages and hours of work existed only in the relatively highly paid clerical and professional trades.

Figure 4: *Fitted quadratic relationship between the wage level and hours of work*

The coefficients on most other variables have the expected signs and the results are qualitatively similar to those for participation. Women from households that would have been poor without their earnings worked an additional 5-8 hours per week. The presence of children, though still significant, appears to have had less of an effect on hours than it had on participation, and the net effect on women from poor households was actually positive (children could also represent additional mouths to feed). It is surprising that other income appears to have had a positive effect on hours for women from richer households, but the expected negative relationship holds for those from poor households. The unemployment of

the household head and of other household members is associated with an increase in hours worked, which suggests that female workers were able to adjust their labour supply in response to others' unemployment. Women from poor households appear to have worked longer hours in the presence of a male head who was not in the labour force, while women from better-off households did the reverse, perhaps reflecting a choice to stay home and care for a sick or elderly husband or father that was not available to those from needier households.

Table 8: *OLS estimates of weekly hours, conditional on working*

	(1)	(2)		(1)	(2)
<b>Wage (d./hour)</b>	-0.888*** (0.0307)	-1.488*** (0.0706)	<b>Total Children in HH</b>	-0.494*** (0.109)	-0.507*** (0.105)
<b>Wage Squared</b>		0.0241*** (0.00248)	<b>Total Kids*Poor</b>	0.116 (0.160)	0.915*** (0.161)
<b>Wage*Poor</b>		-1.204*** (0.143)	<b>Young Child* Old Child</b>	0.868** (0.427)	0.609 (0.412)
<b>Wage Squared*Poor</b>		-0.0231* (0.0126)	<b>Total Adults</b>	0.149 (0.195)	0.501*** (0.189)
<b>Poor Without Fem's Earnings</b>	1.580*** (0.536)	4.725*** (0.542)	<b>Other Adults in Labour Force</b>	-1.412*** (0.253)	-1.612*** (0.244)
<b>Other HH Income</b>	0.475*** (0.0805)	0.409*** (0.0777)	<b>Other Females in Labour Force</b>	0.492*** (0.155)	0.491*** (0.149)
<b>Other HH Income*Poor</b>	-0.640*** (0.232)	-2.076*** (0.236)	<b>Male Head Unemployed</b>	2.437*** (0.462)	3.418*** (0.448)
<b>Benefit Income</b>	-0.598** (0.258)	-0.796*** (0.249)	<b>Others Unemployed</b>	1.606*** (0.364)	1.852*** (0.351)
<b>Benefit Income*Poor</b>	-2.413*** (0.442)	-2.698*** (0.426)	<b>Male Head Not in Labour Force</b>	-1.128* (0.631)	-1.211** (0.608)
<b>Wife</b>	-8.796*** (0.438)	-8.415*** (0.422)	<b>Male Head NILF*Poor</b>	2.769*** (0.893)	2.929*** (0.861)
<b>Wife*Poor</b>	1.130* (0.676)	2.407*** (0.656)	<b>Constant</b>	44.79*** (0.960)	47.08*** (0.981)
<b>Female Head</b>	-7.972*** (0.597)	-7.493*** (0.576)			
<b>Female Head*Poor</b>	4.460*** (0.672)	3.019*** (0.654)	<b>Observations</b>	8879	8879
			<b>R-squared</b>	0.284	0.336

Note: Standard errors in parentheses. \*, \*\*, \*\*\* denote significance at 10%, 5% and 1% respectively. Includes controls for age using a series of dummy variables denoting age group in five-year intervals.

## 5. Conclusion

The methods and findings of this paper relating poverty to female labour supply are new but not terribly surprising; the finding that the relationship between wages and labour supply appears to be negative at low wage levels is likely to be more controversial, and suggests that London's market for low-wage female labour in the interwar period looked more like that of a developing country than of a developed one.

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## The relief of the poor in Cheltenham and Belper Unions, 1860s to 1880s

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The 1860s to 1880s were a time of change. There was the crusade against out-door relief, and the building of additional accommodation in the workhouses, of infirmaries and vagrant wards. Mackinnon has argued that few paupers would enter the workhouse when destitute. Restricting out-relief could reduce union costs, but was the campaign against out-relief effective?<sup>83</sup> The discussion will centre on the changes to poor law legislation and the effects on the unions of Belper and Cheltenham. Data from the census and admission registers were analysed for age and occupation, in an attempt to establish whether the composition of the workhouse population and the activities that went on in the unions were typical compared to other parts of England and Wales.

### Socio-economic profile of Cheltenham and Belper unions

What were the local economies of Belper and Cheltenham in this period and how far did they reflect economic features in the rest of the country? Cheltenham union consisted of the town of Cheltenham and its surrounding parishes. Its population was considerable and rental charges high. One of the major employers in Cheltenham in the nineteenth century was the building industry, with building on a momentous scale, both of fashionable villas and of artisan houses. Retailing and domestic service were the largest employers but the heyday of the spa town had declined by the middle of the nineteenth century and the economy was then boosted by the development of residential attractions, schools and colleges. The town residents included ex-military, civil service and East India Company families, professional people and widows. Agriculture was the main occupation in the surrounding villages. Belper union was composed of a number of large villages and towns. The *National Gazetteer* describes the many industries in the union. The cotton mills employed upward of 2,000 people. The manufacture of silk and cotton hosiery took place, mainly in the homes using knitting frames, and extensive hosiery warehouses were located in the union. The other industries included nail making, coal mines in the east, potteries, quarries, and agriculture.<sup>84</sup>

### Changes to the poor law

The Union Chargeability Act of 1865 provided for all poor law charges to be imposed uniformly on the property within the union, regardless of the number of relief recipients in a parish.<sup>85</sup> George Goschen was president of the Poor Law Board in 1868 and was concerned over the lack of coordination between poor law authorities and those administering charity. Goschen wanted to avoid 'double distribution of relief to the same persons' and ensure that relief funds were paid to the poor in most need.<sup>86</sup> Out of this arose the 'Goschen Minute' in 1869 aiming to control poor expenditure by topping up low wages from charitable sources,

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<sup>83</sup> M. Mackinnon, 'English poor law policy and the crusade against out-relief', *Journal of Economic History*, 47 (1987), p.604.

<sup>84</sup> Extract from *National Gazetteer* (1868) from <http://www.genuki.org.uk/big/eng/DBY/Belper/Gaz1868.html> (2.2.2005).

<sup>85</sup> A. Brundage, *The English Poor Laws, 1700-1930* (Basingstoke, 2002), p. 104; 28 and 29 Victoria cap.79, An Act to provide for the Better Distribution of the charge for the Relief of the Poor in Unions

<sup>86</sup> D.G. Jackson, 'Kent workhouse populations in 1881: a study based on the census enumerators' books', *Local Population Studies*, 69 (2002), p.54.

while those who were totally destitute would be relieved by the poor law.<sup>87</sup> The Poor Law Board was terminated in 1871 and replaced by the Local Government Board.

The majority of infirmaries, vagrant wards and children's schools were built in the period 1867-83. Driver estimated that expenditure on these additional workhouse buildings totalled £2.9 million in the years 1867-83, with 155 infirmaries authorized over the period.<sup>88</sup> Both unions experienced improvements and additional buildings for the workhouse but Cheltenham workhouse accommodation was considered inadequate in the 1870s. A report by the inspector describes how the total accommodation of the workhouse in 'proportion to the population of the union, is below the average of the other unions of the same character in my district'. The report highlighted that accommodation for adult males was insufficient, not just by a few beds, but required 'an improved arrangement for the reception and management of an idle class of able-bodied men who habitually throw themselves on the rates during the winter months'.<sup>89</sup> Cheltenham purchased The Elms in 1882, a large house near to the workhouse, to accommodate all the children over two years away from the bad influences of the workhouse.<sup>90</sup> Cheltenham's tramp ward was completed in April 1884, but the very nature of these wards required additional staff to be appointed, to take charge of the stone yards and old tramp wards thus increasing expenditure on relief in the union.<sup>91</sup>

The 1870s saw a major 'crusade' against out-relief, but why did the central board pursue this change of policy? This was explained by the fact that 73 per cent of paupers still received relief in their homes, but in order to offer relief only in the workhouse, there must be adequate workhouse facilities. The provision of these improved facilities did not occur until the 1870s.<sup>92</sup> As Rose stated 'poor law reform half designed but not implemented in 1834 was remodelled under the impact of the crises of the 1860s'.<sup>93</sup> The paupers most affected by the crusade were the single able-bodied men and women but the majority of workhouse inmates were elderly, disabled, sick, widowed or deserted women, children and orphans. Married couples with family and some single women with children were more likely to receive out-relief than be forced to enter the workhouse. The view of the boards of guardians was that it would be cheaper to keep families on out-relief than to admit them to the workhouse. The central board saw the crusade as a means to 'improve the moral character of society and reduce relief expenditure' by the use of the workhouse test, as a test of destitution.<sup>94</sup> There was no compulsion from the central body to ensure unions restricted relief to the workhouse but instead the central board recommended changes in union policy. Despite the restrictions most unions still gave out-relief. Cheltenham union out-relief committee recommended in 1874 that persons of bad character be relieved in the workhouse, that the habitual beggars should no longer receive out-relief but offered the workhouse and that, unless for medical reasons, the workhouse was the only means of relief to persons resident less than three years.<sup>95</sup>

Williams, in his analysis and graph of mean numbers of indoor and out-door paupers shows that the number of outdoor paupers declined sharply as a result of the crusade against

<sup>87</sup> Brundage, *English Poor Laws*, p.109.

<sup>88</sup> Driver, *Power and Pauperism: the Workhouse System, 1834-1884* (Cambridge, 1993), p.88 (tab. 5.4 ) and p.89.

<sup>89</sup> The National Archives (TNA), MH12/3928, 25 Oct. 1870

<sup>90</sup> Gloucestershire Archives (GA), G/CH 8a/21, Oct. 1881.

<sup>91</sup> GA, G/CH 8c/1, April 1884.

<sup>92</sup> Brundage, *English Poor Laws*, p.116.

<sup>93</sup> M.E. Rose, 'The crisis of poor relief in England, 1860-1890' in W.J. Mommsen and W. Mocks (eds), *Emergence of the Welfare State in Britain and Germany* (London, 1981), p.65.

<sup>94</sup> Mackinnon, *Crusade*, p.607.

<sup>95</sup> GA, G/CH 8a/16, Minutes of Guardians, 22 Jan. 1874.



out-relief and then levelled off to around 500,000 until 1890. The mean number of in-door paupers shows little variation between 1871 and 1890, of around 150,000 paupers.<sup>96</sup>

Table 1: *Poor relief expenditure as percentage of total expenditure, 1854-74*

Year	Total Expenditure (£m)	Percentage expended as poor relief
1854	7.32	73
1864	9.68	67
1874	12.85	60

Source: Table 1.1, D. Fraser, 'The English Poor Law and the Origins of the British Welfare State' in W. J. Mommsen and W. Mock (eds), *The Emergence of the Welfare State in Britain and Germany* (London, 1981), p. 20.

Table 1 shows that, although total expenditure under the poor law had increased over the two decades from 1854, the percentage expended as poor relief fell over the same period. Increased non-Only by reducing the number of paupers through the workhouse test of destitution could numbers and costs be cut and the crusade effective. Some of the decrease in pauper numbers was attributed to the good economic situation in the early 1870s, reducing the number of unemployed.

### Trade recessions and unemployment – the effect on Cheltenham and Belper

The cotton famine in the 1860s resulted in large numbers laid off in the manufacturing districts in the north, and particularly in Lancashire, but this appears to have had little effect on the textile mills in Belper union. It was reported by the Local Government Board that the 'mid-winter of 1878-9 had brought with it an account of privation and want, such as has not appeared and prevailed since the years 1862-3 and 1864, the period long to be remembered as the time of cotton famine. The report listed the causes as general depression of trade, stagnation in cotton manufacture and iron works, inclemency of weather, and frost of extraordinary duration and intensity. Strikes by those in subsidiary trades threw additional people out of work. The inspector reported little material effect in Gloucestershire, while Mr Cane reported that the number of paupers in Derbyshire had increased from 7,231 to 8,009. The numbers would have been greater had it not been for voluntary associations and private charities stepping in to provide relief.<sup>97</sup>

In 1871 there were a large number of able-bodied paupers relieved out of the Cheltenham workhouse due to the severity of weather. The central board made strong observations to the guardians that all able-bodied paupers were to be relieved in the workhouse, with strict adherence to the workhouse test: 'as soon as he is ... made aware that the only form in which he can receive relief is as an ordinary inmate of the workhouse, an inducement to support himself and his family will be held out to him which is altogether wanting'. At the time there were only ten able-bodied men in the workhouse and guardians were required to offer the house as the only method of relief until full.<sup>98</sup> In Cheltenham severe weather occurred again in December 1874 necessitating the appointment of a committee to look after the stone yard, classify the applicants into three classes and provide labour opportunities for the able-bodied applicants for out-relief.<sup>99</sup>

### Age structure in the workhouse

In Cheltenham workhouse the highest percentage of paupers in 1871 was the able-bodied age group representing 40 per cent of the workhouse population, compared to Belper of 27 per

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<sup>96</sup> K. Williams, *From Pauperism to Poverty* (Stroud, 1981), pp.159-160.

<sup>97</sup> *Eighth Annual Report of Local Government Board, 1878-9*, (HMSO, 1879) pp.136, 140, xxiv.

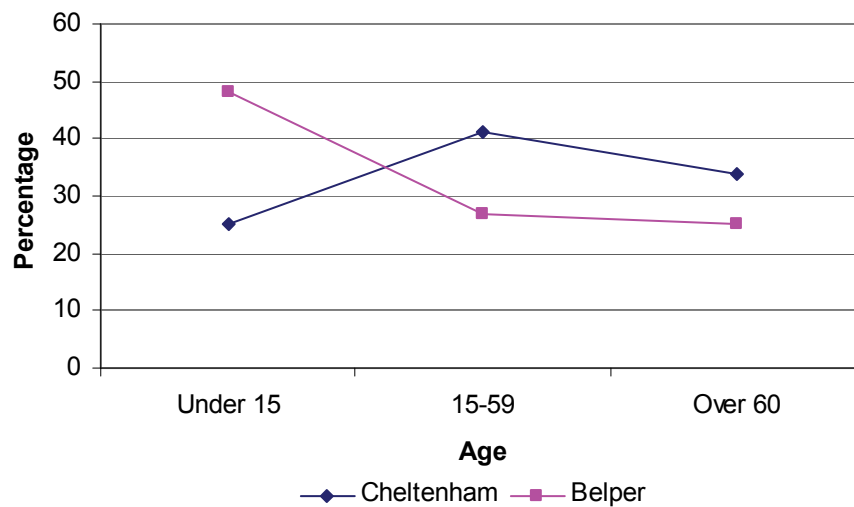
<sup>98</sup> GA, G/CH 8a/15, correspondence LGB to Cheltenham Union, 1871.

<sup>99</sup> GA, G/CH 8a/17, 31 Dec. 1874.



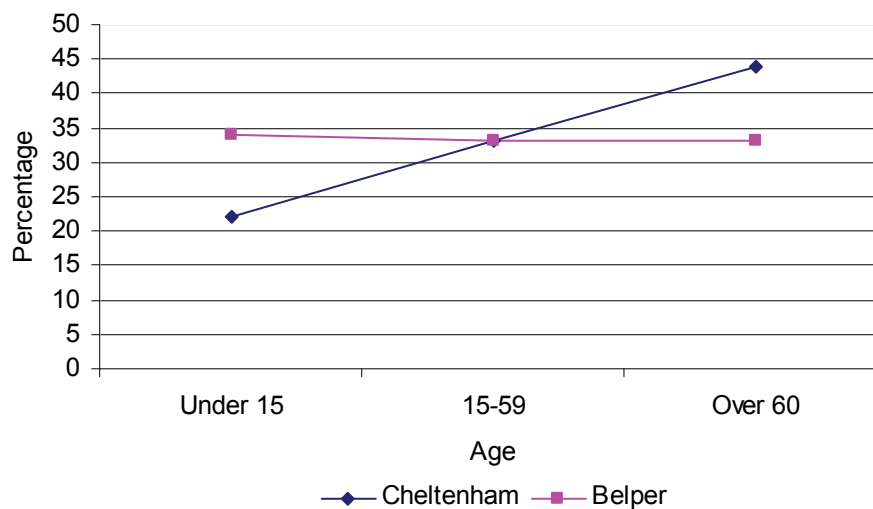
cent. The highest percentage of paupers in Belper workhouse were the under 15s (figure 1). In 1871 these two unions were composed of very different workhouse populations.

Figure 1: *Age profile of Belper and Cheltenham workhouse population in 1871 census*



By 1881 the workhouse population in Cheltenham was dominated by the over 60 group. Belper workhouse recorded a similar percentage in each age group (figure 2). The other major change was an increase in the number of paupers in both workhouses. The percentage in the age 15-59 group was similar in both unions in 1881.

Figure 2: *Age profile of Belper and Cheltenham workhouse population in 1881 census*



In order to see how typical the workhouse populations were in Cheltenham and Belper, comparison has been made to eight Kent workhouses in 1881. Kent averaged to 34 per cent of the workhouse population being aged under 15 (similar to Belper) and 36 per cent of the workhouse population aged over 60, again similar to Belper. Further comparison was made to the work of Page on Leicester workhouse where the workhouse population was dominated by the 15-59 age group (48 per cent), 10 per cent greater than that of Cheltenham and Belper (table 2).

Table 2: *Age of workhouse population in Medway, Kent, Leicester, Cheltenham and Belper unions and nationally in 1881*

	Medway	Kent	Leicester	Cheltenham	Belper	Nationally
14 & under	33%	34%	28%	22%	34%	36%
15-59	32%	29%	43%	33%	33%	56%
60+	35%	36%	38%	44%	33%	7%
No paupers	605	1184	911	401	229	

Sources: Jackson, *Medway*, pp.16-17; Page, *Leicester*, Table III p. 89 (includes 38 staff in total); RG11/2577, 3413.

### Occupations of workhouse inmates

The dominant occupations of workhouse inmates were labourer and domestic servant in both unions. No occupations were recorded by the master for Cheltenham in 1867, and the number without an occupation recorded in the admission registers varied between 9 per cent in 1868 and 27 per cent in 1870. In Belper, between 20 and 50 per cent had no occupations listed in the workhouse registers. These omissions of occupation do not permit a true comparison to be made, both between the two unions and with other research. The censuses for 1871 and 1881 provide a more reliable indicator of the occupational structure of the inmates, particularly for Belper, where only 7-10 per cent have no occupation provided.

In Belper, children dominated the workhouse population. The occupational group headed 'other' in Belper included labourer, nailmaker, mill worker and those in the textile industry. Only a small number were recorded as agricultural workers. Cheltenham had little manufacturing and its dominant occupation was the service and leisure industries. The number of agricultural labourers in the workhouse had doubled between 1871 and 1881 and of the 12 per cent recorded as such in 1881 all came from the rural outskirts of the town and the surrounding parishes (table 3). There was a dramatic rise between 1871 and 1881 of those recorded as domestic servants. One interesting fact that came to light when analysing the occupations in the Cheltenham workhouse for 1870 was the inclusion of 'prostitutes' as an occupation. In the analysis of occupation, the prostitutes were included in the blank/no occupation category. They represented 1.8 per cent of the 11.8 per cent (1869) recorded with no occupation and 4.2 per cent of the 27 per cent of the 'no occupation' category in 1870. This was not a great percentage of the 503 paupers admitted to Cheltenham workhouse during 1870 but it was significant for the master to record these females separately as such in the admission register.

Table 3: *Occupations of workhouse inmates in Belper and Cheltenham Unions, 1867 to 1881 (%)*

	1867 %		1868 %		1869 %		1870 %		1871 %		1880 %		1881 %	
	C	B	C	B	C	B	C	B	C	B	C	B	C	B
Ag Lab	-	0.3	1.0	-	1.2	-	0.6	-	6.3	7.3	-	-	12	7.4
Domestic Servant	-	4.3	21	6.3	21	6.4	9.1	5.6	14	8.9	23	4.9	31	6.6
Other occ.	-	19	41	28	39	30	34	34	32	25	39	43	29	44
Children	-	27	27	34	27	17	30	32	25	48	23	32	23	35
N. inmates admitted during year or at census	616	346	577	379	600	419	503	301	270	192	390	466	401	229

Source: CEB 1871: RG10/2675, 3584; CEB 1881: RG11/2577, 3413; Admission/Discharge Registers GA, G/CH 60/16-18, 20; DRO, D3390/1/10-12, 15-16.

Although Belper paupers were employed in the textile industry there was a far greater diversity of occupation in this union than in the Leicester union even though it was a textile town.

### **Conclusion**

The Poor Law Board was replaced by the Local Government Board (LGB). Various departments of government were annexed to the LGB giving greater accountability to government than previously. Mackinnon argued that workhouse accommodation was poor in the 1840s and 1850s in most unions, and the crusade on out-relief could not have happened earlier than it did. There was a real possibility of a reduction in poor rates when the crusade against out-relief started, and this was clearly the case at the start, but in the long run this proved not to be the case. The 1860s to 1880s were a period of additional building to workhouse accommodation. Both Cheltenham and Belper followed the trend and added infirmaries and vagrant wards.

Cheltenham came up against the central board in its management of paupers in times of unemployment and was censored for not admitting the able-bodied men to the workhouse when there was sufficient space to accommodate this class of pauper. Belper seems not to have been greatly affected by the 'cotton famines' of the 1860s and trade slumps of the 1870s. This can be put down to the diversification of industry available in the union. Poor recording of occupation and age in the workhouse registers by the master in both unions proved a hindrance to the analysis of occupation. There were few agricultural workers in the unions and with little industry in Cheltenham, the number employed in domestic services was high.

I had predicted that the age and occupations of the workhouse population in Cheltenham and Belper would be similar to the rest of England and Wales. In fact this was not the case and Cheltenham was very different due to its relative lack of industry. Analysis of the workhouse population shows that in Cheltenham in 1871 the workhouse population was dominated by the 15-59 group while in Belper the under-15 group were 48 per cent of the workhouse population. In 1881 the workhouse in Cheltenham was dominated by the over-60 group but in Belper all three age groups recorded a similar percentage. The population of both workhouses rose between 1871 and 1881. The composition of the workhouse population in Belper was similar to Kent and Medway.

## Understanding the role of work in the workhouse: bone-crushing and the negotiation of employment policy in the early years of the new poor law

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Historians have long been fascinated with the institution and institutionalizing effects of workhouses established after the passage of the Poor Law Amendment Act of 1834. But whilst there have been many studies detailing the conditions inside the post-1834 workhouse,<sup>100</sup> our understanding of the work performed therein remain somewhat impressionistic notwithstanding that, as Brundage has asserted, an elemental part of the workhouse regime was the allocation of ‘monotonous and irksome’ tasks.<sup>101</sup> In part, this problem stems from the fact that neither the Amendment Act nor its regulatory body, the Poor Law Commission, stipulated the *type* of work which the poor should undertake. As Commissioner George Nicholls noted, the mode of employment was simply ‘left to the discretion of the guardians’.<sup>102</sup> Subsequently, historians have not examined why particular employments were undertaken in particular unions. We do know though that welfare authorities throughout history have consistently failed to obtain ‘profitable labour from the destitute’.<sup>103</sup> It is questionable, however, whether profit was meant to be the only outcome of workhouse employment, especially considering the emphasis placed upon the ‘reformatory’ role of the workhouse in the Act of 1834. This paper seeks to address this lacuna in our understandings through an examination of why one form of workhouse employment was adopted: the crushing of bones for the production of ‘bone dust’ fertilizer.

Whilst the Commission issued many ‘General Orders’ throughout its thirteen-year existence, such orders have received little attention, Hodgkinson’s study of the General Medical Order (1842) and Rose’s study of the Outdoor Relief Prohibitory Order (1844) and the Outdoor Labour Test Order (1851) being notable exceptions.<sup>104</sup> Bone-crushing, as will be shown later, attracted nationwide controversy in the early 1840s leading to it being banned by General Order on 1 January 1846. The Order represented the first time the Commission had actually become involved with directing the types of work that could or could not be performed within the workhouse. This paper examines the genesis of the policy and explores why it was such a contentious piece of legislation. Such an approach can reveal much about the relationship between the centre and localities in the development and implementation of social policies. What follows draws upon parliamentary debates, the 1844 Returns relative to bone-crushing in workhouses, correspondence of the Commission and its Assistant Commissioners, as well as the minutes from a sample of southern Boards of Guardians’ minute books.<sup>105</sup>

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<sup>100</sup> For example: A. Crowther, *The Workhouse System, 1834-1929: the History of an English Social Institution* (Georgia, 1981); S. Fowler, *The Workhouse: The People - The Places - The Life Behind Doors*, (London, 2007); N. Longmate, *The Workhouse: A Social History*, (London, 2003).

<sup>101</sup> A. Brundage, *The English Poor Law, 1700-1930*, (Basingstoke, 2002), p.80.

<sup>102</sup> G. Nicholls, *A History of the English Poor Law*, (London, 1904), vol. 3, p.368.

<sup>103</sup> L. Hollen Lees, *The Solidarities of Strangers: The English People and the Poor Laws, 1700-1948*, (Cambridge, 1998), p.350.

<sup>104</sup> R. Hodgkinson, *The Origins of the National Health Service: The Medical Services of the New Poor Law, 1834-1871* (London, 1967); M. Rose, ‘The Allowance System under the New Poor Law’, *Economic History Review*, 19 (1966), pp.607–20.

<sup>105</sup> The 1844 Returns have been printed in B.P.P. 1845, XLI, Union Workhouses, A return of all union workhouses under the Poor Law Amendment Act, in which the Pauper Inmates thereof are or have been employed in grinding or crushing bones (herein B.P.P. 1845); letters of complaint from Boards of

Whilst, as Crowther notes, the Commission was ambivalent about the actual purpose of work in the workhouse, the Commission wanted pauper labour to 'provide necessary articles for the workhouse'. Nor was work meant 'to be considered a punishment'.<sup>106</sup> The work programmes implemented however soon became penal in nature with Guardians setting the poor to work on stone-breaking and bone-crushing alongside the lighter, but equally monotonous, work of oakum picking, straw plaiting and fruit punnet making.<sup>107</sup> Whilst other employment schemes were adopted throughout England and Wales, such as oakum picking, bone-crushing had a distinctly regional pattern. According to the 1844 Returns, a total of 105 unions in England and 2 in Wales were employing workhouse inmates in this way. It is important to note though that this survey necessarily did not record the many unions which had implemented and subsequently ceased bone-crushing prior to 1844, the Clutton union in north Somerset being one such example.<sup>108</sup> Nevertheless, the returns reveal a high concentration of bone-crushing in the south west (43 unions), Wessex (27 unions), and in Sussex (13 unions). This pattern requires explanation. As all workhouses had to employ their poor and bone-crushing did not require expensive equipment and access to bones was universal, all unions could have potentially adopted the scheme. In addition, it is not the case that bone-crushing occurred in the areas where dust may have been in higher demand, such as in the arable-intensive south east. Instead, the strong regionalism is due to the active promotion of bone-crushing by the local Assistant Poor Law Commissioners, Colonel Ashe A'Court and Edward Carleton Tufnell. As such, whilst the Commission refrained from directing union employment policy, the Assistants showed little such compunction. In addition, those unions which had implemented bone-crushing very early into the new poor law had inspired other unions to implement the same employment.

The Assistant Commissioners had recommended this employment because the work itself would operate as a 'workhouse test'. As A'Court, writing to Somerset House regarding the recent increase in admissions in the Fareham Union Workhouse, proclaimed: 'I have suggested the immediate introduction of such irksome work as may make it a less desirable abode for such as ought to earn their maintenance elsewhere. We must have a mill – bone crushers &c. &c.'<sup>109</sup> The Assistants also had other reasons for promoting bone-crushing: it did not, in Tufnell's words, interfere with 'independent labourers' work'. This was not totally true. As Chadwick acknowledged, 'bone-dust is a regular article of manufacture and private commerce'.<sup>110</sup> In addition, but of 'minor importance' according to Tufnell, was the fact that bone-rushing could make a profit of up to 15 per cent.<sup>111</sup> As the Returns suggest though, such a level of profit was rare. Most unions had only just broke even, a function of the cost of bones and the expense of maintaining crushing equipment, whilst a few unions even made a loss.

Unions were clearly receptive to such economically-framed arguments. Indeed, it is clear that Guardians universally strived to obtain a profit from the activity. Boards of Guardians haggled hard to secure whole bones cheaply and sold the dust at 'the best prices that could be obtained'.<sup>112</sup> The majority of unions sold dust at a fixed, contracted, price, whilst a smaller number sold dust through local markets, public auctions and public tender. This was not always the case though. The Andover Guardians held 'mock auctions' at their

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Guardians, and extracts of minutes, are replicated in B.P.P. 1846, XXXVI, Accounts and Papers, Bone-Pounding (herein B.P.P. 1846).

<sup>106</sup> Crowther, *The Workhouse*, p.197.

<sup>107</sup> *Ibid.*, p.198.

<sup>108</sup> Clutton Union Minute Book, 24 Feb. 1843, Somerset Record Office D/G/CL/8a/7.

<sup>109</sup> A'Court to PLC, 17 Jan. 1837, N[ational] A[rchives] MH 32/4.

<sup>110</sup> Report by Chadwick, B.P.P. 1846, p.86.

<sup>111</sup> Tufnell to PLC, 21 Feb. 1844, NA MH 32/71.

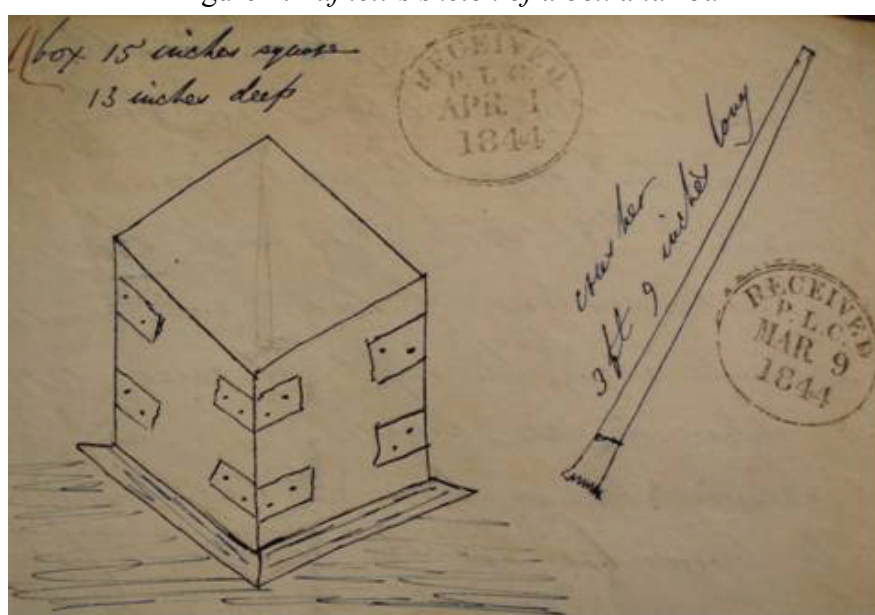
<sup>112</sup> Lewes Union, B.P.P. 1845.



Board meetings which enabled them to sell the dust to each other at a low price.<sup>113</sup> The Fordingbridge union avoided trading altogether. They received whole bones from farmers who then paid the Guardians for their crushing.<sup>114</sup> For a minority of unions bone-crushing was not a commercial activity. The Returns show that 18 unions placed some or all of their dust on workhouse land and, of those, 14 unions had acquired bones from the workhouse kitchen.

Bone-crushing was practised in several different ways. By far the most popular method adopted was the use of an iron rod and box, also referred to as a 'pestle and mortar' (figure 1). According to Tufnell, the box was made of wood and held together with iron brackets. The rod was either solid metal or a metal end cast on a wooden handle, one crusher and box being allocated to each worker.<sup>115</sup> The number of boxes and rods purchased by Guardians varied greatly from union to union depending on the number of men they wanted to employ at a time. In some unions just a hammer was beaten against a 'block', an 'iron plate', or even on the bare ground. Sophisticated bone mills were also used, but due to their cost this was much less popular than the box and rod method.

Figure 1: Tufnell's sketch of a box and rod



Source: Tufnell to PLC, 21 Feb. 1844, NA MH 32/71.

Bone-crushing was a seasonal practice, the work usually undertaken from autumn until springtime as during hot weather the dust would not clear from the air. The work was also reserved for able-bodied men, male vagrants and the 'refractory'. Only the Andover union is known to have also allocated the task to young boys.<sup>116</sup> Inmates so engaged were directed to crush a certain weight of bones per day. However, the bone dust had to pass through a sieve, thus the amount of work required depended upon the size of the sieve's holes. The work, therefore, had other advantages to Boards of Guardians: it made the workhouse a greater 'deterrent' to claiming relief. After the bone-crushing ban had been issued across England and Wales, many Boards of Guardians wrote to the Commission asserting that the 'workhouse test' would no longer be efficacious in their unions.<sup>117</sup> Bone-crushing was also believed to offer a useful way of controlling and – in direct opposition to the wishes of the Poor Law Commission – punishing the inmates through work. In this respect, the Guardians departed

<sup>113</sup> 3 Oct. 1845, *The Times*.

<sup>114</sup> Fordingbridge Union, B.P.P. 1845.

<sup>115</sup> *Ibid.*

<sup>116</sup> I. Anstruther, *The Scandal of the Andover Workhouse*, (London, 1973), p.119.

<sup>117</sup> E.g. Stroud Union Minute, 8 Nov. 1845, B.P.P. 1846, p.71.

from the opinions of the Assistant Commissioners. The Hartley Wintney Board, for instance, believed that bone-crushing was a means 'of keeping the idle and disorderly paupers in order'.<sup>118</sup> The Epping Board thought bone-crushing was a useful task for the refractory inmates who were very 'difficult to deal with in the ordinary way'.<sup>119</sup>

Regardless of the supposed benefits of this irksome employment, bone-crushing in workhouses had been contentious from the start of the new poor law. Four male paupers in the South Stoneham union 'positively refused to do their appointed task of Bone crushing'.<sup>120</sup> In the Beaminster union, the workhouse punishment book reveals a number of similar cases. The most violent act of protest recorded came from James Spacklin who, whilst working in the workhouse yard, picked up one of the bones and threw it at the infirmary window.<sup>121</sup> Whilst these cases of complaint and protest never breached their respective unions, one pauper's views did make it onto the national stage. In 1842, Captain Pechell brought before the House of Commons the petition of William Smith who had become unwell whilst crushing bones in the Eastbourne union workhouse. Smith claimed that: '[i]f I had stopped longer in the bone-house I should not have come out alive'.<sup>122</sup> His statement was initially ignored but Pechell, in support of Smith, wanted to put an end to the employment as soon as possible.

Thereafter, bone-crushing was debated in the House of Commons on a number of occasions. Poor health within workhouses too became publicly linked to bone-crushing, an outbreak of illness in the Basingstoke union generating particular comment.<sup>123</sup> Nonetheless, Pechell became frustrated by the lack of sustained and serious attention over what he thought was an objectionable practice. Consequently, in 1844, Pechell moved for a Return to be completed by every Board of Guardians who were setting their inmates to work grinding bones. There was some delay in consolidating the Returns and the details were subsequently not discussed until 1845. Notwithstanding the delay, Pechell expressed that the employment should be banned. Whilst Sir James Graham, the Home Secretary, agreed, he did not see *how* the Commission could implement the ban due to their limited powers. There was, however, a precedent: other controversial employment practices had already been prohibited upon being raised in the Commons. For instance, the Mansfield Guardians had made vagrants work for four hours a day on a wheel which produced nothing.<sup>124</sup>

On the same day as the Mansfield news, 1 August 1845, Mr Wakely, a fierce new poor law opponent, announced to the House of Commons that men in the Andover union workhouse had quarrelled over and gnawed on the bones they were supposed to crush.<sup>125</sup> 'Under the excitement of the moment', Nicholls later despairingly related, 'bone breaking was denounced as being an improper employment for the inmates of the workhouse'.<sup>126</sup> On 8 November 1845, before the Andover enquiry was even underway, the Commission issued a General Order 'prohibiting ... the employment of Pauper Inmates of Union Workhouses in Pounding, Grinding, or otherwise Breaking Bones, or in preparing Bone Dust' from 1 January 1846.<sup>127</sup>

The fact that a ban had been issued did not mean that the practice stopped instantaneously. Many Boards of Guardians had significant stocks of bones and had invested in the maintenance of crushing equipment. The ban also was implemented in the winter, a

<sup>118</sup> J. Monk (Chairman, Hartley Wintney) to PLC, 3 Jan. 1846, B.P.P. 1846, p.51.

<sup>119</sup> J. Windus (Clerk, Epping) to PLC, 21 Nov. 1845, B.P.P. 1846, p.56.

<sup>120</sup> South Stoneham Union Minute Book, 22 Jan. 1840, Southampton City Archives D/AGF 1 1/1.

<sup>121</sup> Beaminster Pauper Offence Book, 24 June 1843, Dorset Record Office BG/BE B3/2.

<sup>122</sup> *Parliamentary Debates*, 14 April 1842, vol. 62, c494.

<sup>123</sup> Longmate, *The Workhouse*, p.122.

<sup>124</sup> *Parliamentary Debates*, 1 Aug. 1845, vol. 82, c1320.

<sup>125</sup> *Ibid.*, c1320-1.

<sup>126</sup> Nicholls, *A History*, p.369.

<sup>127</sup> Copy in B.P.P. 1846, pp.27-31.



time of year when the population of the workhouses greatly increased. As a consequence, 13 unions were granted suspensions under 'special circumstances'.<sup>128</sup> Although these unions continued the employment for three further months, the suspension had only helped a small number of unions for a short while. Many Boards were now forced to find alternative employments for their male residents, a task many unions thought nigh on impossible. The Commission for the first time now recommended various employments, from oakum picking to deploying hand corn-mills.<sup>129</sup> The affected Guardians vehemently opposed the direction, claiming there were many problems with adopting such employments, not least relating to local economic circumstances. The result was that unions which had previously employed their poor in bone-crushing went for many months and even years without any form of employment for their male inmates.

In conclusion, whilst necessarily brief, this study of bone-crushing demonstrates the central importance of work policies not only within individual workhouses but also within the systems of new poor law governance. Bone-crushing was viewed by Guardians as a useful employment beyond the idea that it was profitable, the work was hard and monotonous and could thus be used to control the poor. As the examination of the genesis of the ban of 1846 shows, it is possible to reveal the interplay between politics and local socio-economic contexts in the creation of national social policies during the early years of the new poor law. The events at Andover acted as a catalyst to put a stop to what was already a controversial form of employment, the totemic scandal acting to galvanize opinion. Indeed, Crowther is incorrect in asserting that the employment was only 'reacted strongly against ... after the Andover scandal'.<sup>130</sup>

Social policies were constantly generated through the negotiations between the various tiers of local and central government. Indeed, whilst the Commission seemed to be dictating policy to the unions through the issuing of the Order, it was union-based events and the efforts of Parliamentary investigators that had brought the Order into being. Either way, it is telling that the Commission did not issue any employment recommendations before the ban, but did so afterwards because of the public nature of the Andover scandal. Many Guardians thought that, by banning bone-crushing, the Commission had accepted their own deficiencies. Indeed, these very deficiencies ultimately led to the Commission's demise in 1847. Yet, what these Guardians had failed to realize was that the very move to ban one type of employment had actually *extended* the government's power over the localities.

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<sup>128</sup> Phrase used on many occasions in correspondence from the PLC to the Home Office, Aug. 1845 – Jan. 1846, NA HO 45/1031.

<sup>129</sup> For example: PLC to Cranbrook Union Guardians, 13 Jan. 1846, B.P.P. 1846, p.33.

<sup>130</sup> Crowther, *The Workhouse*, p.198.

## **‘Someone who instinctively felt and thought as I did:’ The relationship between the Thatcher and Reagan administrations in taxation and monetary policy**

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After the Second World War, the economic policies of both the United States and United Kingdom were characterized to varying degrees by an interventionist Keynesian orthodoxy. In this period, the United States expanded its role as the Western super power whilst the United Kingdom experienced relative economic and international decline. The two countries went through a chequered period of cooperation and conflict in international policy and trading relations. However, instability and stagflation in the 1970s helped to secure electoral success for Margaret Thatcher and Ronald Reagan, who seemingly saw their international interests converging as the Cold War re-emerged. In addition they both embraced monetarist and free-market policies in an attempt to reverse this seemingly irreversible economic decline.

Thatcher and Reagan gained power after promising comparable solutions to similar problems associated with the economic decline of the 1970s. Two key aspects of their domestic agendas were policies to reduce taxation and inflation. This paper is essentially a position paper summarizing two chapters of doctoral research into the relationship between the Thatcher and Reagan administrations’ domestic policies, making use of archival research and oral testimony.<sup>131</sup> Often taken for granted, the details of this mutual impact remain relatively unexplored in the historiography, which has focused on comparative studies of the New Right and the so-called ‘special relationship’ in foreign affairs.<sup>132</sup>

A senior figure at the Heritage Foundation in Washington D.C. argued that their common positions, which owed much to shared influences, meant that Thatcher and Reagan could comfortably talk to each other about economic policy.<sup>133</sup> For instance, the work of Milton Friedman and Friedrich von Hayek influenced Thatcher and Reagan’s shared belief in low taxation, incentives, and a strong monetary policy to reduce inflation. When interviewed, a former Thatcher adviser recalled the first time he met Reagan during a primary for the Republican presidential nomination in 1980. Reagan explained how he wanted to follow Thatcher’s example of removing government pressure from the ‘backs of the people’.<sup>134</sup> Following Reagan’s inauguration, Thatcher praised the new president at the Pilgrim’s Dinner held at London in January 1981. Thatcher declared that the economic policies advocated by both administrations were ‘strikingly similar’.<sup>135</sup> Reagan subsequently wrote to Thatcher confirming ‘an extended period of cooperation and close consultation between your government and my administration’.<sup>136</sup>

<sup>131</sup> My doctoral research explores ‘who influenced whom’ in taxation, monetary policy, privatization, (de)regulation, trade unions and political campaigning.

<sup>132</sup> In *Reagan and Thatcher* (London, 1990), Geoffrey Smith compared the administrations’ domestic experiences, for instance, in the ways that American and British tax reforms appeared to leap frog each other. John O’Sullivan, *The President, the Pope, and the Prime Minister* (Washington D.C., 2006) and Nicholas Wapshott, *Ronald Reagan and Margaret Thatcher: A Political Marriage* (London, 2007) offered a comparison and analysis of their economic policies. However, these three studies generally focused on the international partnership.

<sup>133</sup> Private information based on oral testimony. (Hereafter: private information.).

<sup>134</sup> Ibid.

<sup>135</sup> Margaret Thatcher’s speech at the Pilgrim’s Dinner on 29 January 1981 at the Savoy Hotel in London, Reagan Library NSC Files (Head of State File) 1981-89 RR-MT correspondence (part 1), accessed on THCR AS 10/2/CD-ROM 1, Churchill Library, Churchill College, Cambridge.

<sup>136</sup> Letter from Ronald Reagan to Margaret Thatcher, 2 February 1981, Reagan Library NSC Files (Head of State

Prior to Reagan's meeting with Thatcher in February 1981, Alexander Haig, his Secretary of State, briefed the President: 'Outline your economic strategy. Mrs. Thatcher will want to share her own experience in dealing with the British economy'.<sup>137</sup>

Reagan and Thatcher discussed economic policy. These discussions stemmed from a shared philosophy but also the reality that the fate of the British economy was intertwined with the success of the Reagan administration's policies. In advance of a subsequent meeting with Thatcher in December 1984, George Shultz, Reagan's Secretary of State, advised the President:

Since she believes that Britain's recovery depends heavily on a continuation of the US strong economic performance, she will want your feelings about timing of a pick-up in the US economy in 1985. She may also inquire about deficit reduction and tax reform plans. You may wish to reassure her that we see a revival of growth to a sustainable pace early in 1985, supported by lower interest rates and continued low inflation. You may also wish to outline your efforts to reduce the Federal deficit and discuss possibilities for tax reform.<sup>138</sup>

There was a close relationship between the administrations. After presenting his fifth budget on 15 March 1983, Geoffrey Howe, the British Chancellor of the Exchequer, sent a brief message to Donald T. Regan, the United States Treasury Secretary, explaining his approach to the economy.<sup>139</sup> Paul Volcker, Chairman of the US Federal Reserve, discussed monetary policy with Thatcher, who was 'very interested in monetary policy'.<sup>140</sup> Volcker also met with Howe and Howe's successor, Nigel Lawson, to discuss monetary policy.<sup>141</sup> In his diary, Reagan wrote, 'I'm afraid our friend Margaret is in some political trouble. The UK economy just isn't picking up and, of course, they jump on her' (Thursday 31 October 1985).<sup>142</sup> The administrations' shared experience also translated into policy. In his memoirs, Lawson recalled how, 'I had noted with approval the fact that the American tax reform package introduced by President Reagan had, in the jargon, 'assimilated' (that is, equated) income tax and capital gains taxes. Accordingly, I decided in the 1987 Budget to tax corporate capital gains taxes at the relevant corporation tax rate'.<sup>143</sup>

However, beyond the rhetoric and some specific examples of intellectual transfer, a complex relationship between the two administrations in economic policy emerges. A former White House speechwriter recalled that Thatcher's initial economic policies were a 'test case' for the Republicans. Likewise, a senior figure at the Heritage Foundation recalled that Reagan's 1981 marginal tax cuts were a 'test case' for British observers.<sup>144</sup> In contrast, a former senior British cabinet member argued that Thatcher led the way in taxation reform and the 1979 Budget demonstrated that the Thatcher administration did not have a great deal to learn from Reagan.<sup>145</sup> Regardless, a major American economist noted that Thatcher was always Thatcher and had desired low taxation whilst Leader of the Opposition: the key

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File) 1981-89 RR-MT correspondence (part 1), accessed on THCR AS 10/2/CD-ROM 1.

<sup>137</sup> Memorandum, Alexander M. Haig Jr. to Ronald Reagan, date unclear, 22377, Briefing Book Re Visit of British Prime Minister Thatcher, Feb. 25-28, 1981 (Binder) (1/2), Box 91434 (RAC 1), Executive Secretariat, NSC: VIP Visits, Ronald Reagan Library.

<sup>138</sup> Memorandum, George P. Shultz to Ronald Reagan, Dec. 20, 1984, Thatcher Visit 1984 (1), Box 90902, European and Soviet Affairs Directorate, NSC: Records, Ronald Reagan Library.

<sup>139</sup> Letter, Sir Geoffrey Howe to Donald T. Regan, 15 March 1983, Donald T. Regan Papers, Treasury Department, Correspondence (Hol-Hu) 1980-84, Library of Congress.

<sup>140</sup> Private Information.

<sup>141</sup> Ibid.

<sup>142</sup> Douglas Brinkley (ed.), *The Reagan Diaries* (New York, 2007), p.364

<sup>143</sup> Nigel Lawson, *The View From No. 11: Memoirs of a Tory Radical* (London, 1992). P.691.

<sup>144</sup> Private information.

<sup>145</sup> Ibid.

change was that Lawson presented the Prime Minister a supply side budget, which echoed the principles of 'Reaganomics', whilst Geoffrey Howe (despite lowering the marginal rate in 1979) had never done so. Lawson was therefore 'extremely important'.<sup>146</sup>

Nevertheless, it is possible that Thatcher, driven by her monetarist objectives, initially sought to balance the budget in order to combat inflation, rather than pursue economic growth based on supply-side policies.<sup>147</sup>

A former British Ambassador to the United States recalled that Thatcher was interested in Reagan's experiences of taxation reform. A senior adviser to Thatcher emphasized that discussions were mutually reinforcing as they 'drunk from the same fountain intellectually'.<sup>148</sup> Consequently, Reagan did not need to pressure Thatcher to lower taxation. Thatcher's taxation agenda was illustrated in both Howe's and Lawson's budgets.<sup>149</sup>

It was the tensions and differences between the administrations that were highlighted by the British and American press. For instance, during Reagan's first year, Alan H Meltzer in *The New York Times* noted the fear 'that Reaganomics will produce Thatcheritis'.<sup>150</sup> Writing in *The New York Times*, Steven Rattner reported that when Thatcher visited Washington in February 1981, Donald T Regan created a minor diplomatic problem by suggesting that 'her tax cuts were not as great as they should have been and they raised the value-added tax so that the Government is still taking 70 per cent of the income of those in the higher tax brackets'.<sup>151</sup> Writing in *The Guardian* in 1986, Alex Brummer and Christopher Huhne stated that the Reagan administration was pressuring Britain to stimulate the economy and address unemployment through taxation reform.<sup>152</sup> In *The Times*, Kenneth Fleet suggested that the administration's 1986 taxation reforms 'could provide a model for a third Thatcher government'.<sup>153</sup>

The administrations were also critical of each other. Commenting on the disagreement over the US budgetary deficit, a former White House speechwriter recalled how Thatcher believed that the British budget should be balanced before taxes were cut. Reagan, whilst unhappy about deficit spending, accepted this. The speechwriter explained that initially, 'Thatcher objected to Reagan's tax cuts on principle ... Then she objected to Reagan's tax cuts in practice, convinced that the mounting federal deficits were raising American interest rates, which were in turn draining capital from the United Kingdom'.<sup>154</sup> Ultimately, Thatcher 'finally realized that she was up against two immovable objects'.<sup>155</sup> Firstly, institutional differences meant that Thatcher was able to cut spending whilst Congress 'could defy the president anytime it mustered enough votes to override his veto'.<sup>156</sup> Secondly, Reagan, facing 'his own institutional arrangements, policy options, and political pressures', and obliged 'to choose between her agenda and his, he chose his'. Had they been in each other's positions, both knew 'they'd have done just the same themselves'.<sup>157</sup>

Going beyond ideological empathy, Thatcher had sought practical action from Reagan regarding the deficit. However, Thatcher's concern for the American budget deficit went

<sup>146</sup> Ibid.

<sup>147</sup> Ibid.

<sup>148</sup> Ibid.

<sup>149</sup> Ibid.

<sup>150</sup> Allan H. Meltzer, 'Economic Scene; Policy in the US and Britain,' *The New York Times*, Friday 7 Aug. 1981.

<sup>151</sup> Steven Rattner, 'Reagan and Thatcher differ over economics,' *The New York Times*, Sunday 19 July 1981, Late City Final Edition.

<sup>152</sup> Alex Brummer and Christopher Huhne, 'Reagan tells Britain to stimulate economy/US administration calls on Premier Thatcher to stimulate growth and tackle unemployment,' *The Guardian*, 25 Sept. 1986.

<sup>153</sup> Kenneth Fleet, 'Comment: Tax reforms with an interest rate bonus,' *The Times*, Tuesday 25 Nov. 1986.

<sup>154</sup> Ibid.

<sup>155</sup> Ibid.

<sup>156</sup> Ibid.

<sup>157</sup> Ibid.

beyond her concern for effective economic housekeeping. The financial economy was at the centre of Thatcherism's economic growth as Britain moved beyond the manufacturing sector. Consequently, Thatcher was prepared to ask Reagan to abandon low taxation in order to defend British interests. Thatcher wrote, 'I was therefore glad to see the reports that you will be willing to discuss tax increases as one of the means of reducing the budget deficit. I know how very difficult this must be for you: I share completely your view of the damage done by high taxes ... (but) the priority now has to be for sound money and sound finance'.<sup>158</sup>

According to a senior figure at the Heritage Foundation, the Reagan administration was prepared to cut tax rates and tax revenue, even at the cost of a budgetary deficit. However, claims that the Reagan administration believed that tax cuts would pay for themselves through increased revenue were a 'myth'.<sup>159</sup> The growth of the US deficit was not a surprise to advocates of tax cuts. Moreover, even if supply-side policy had created incredible rates of revenue, the Reagan administration would still have opposed a high level of public spending. Reagan's tax reforms therefore reflected the American political situation and institutions. In other words, Reagan's policy was to 'starve the beast', applying political pressure on Congress to reduce spending as the administration could not cut spending.<sup>160</sup> This was in contrast to Thatcher, who was able to reduce taxation and public spending through the House of Commons.<sup>161</sup>

Whereas Thatcher was able to control both fiscal and monetary policy, Reagan's influence over monetary policy was limited to his support and reappointment of the Chairman of the Federal Reserve, Paul Volcker. Reagan inherited Volcker (and his monetary policy) from President Jimmy Carter. Despite the institutional differences, the Reagan administration was as critical of Thatcher's economic policy as she had been of the US budgetary deficit. In advance of Thatcher's visit to the United States in February 1981, the State Department advised Reagan to expect a discussion about domestic economic policy. Reagan was advised to 'exchange views with Thatcher on her experience, in part to learn from British mistakes', and 'explain your intentions for US economic policy direction and implementation'.<sup>162</sup> The British economic situation and Thatcher's experiences were outlined by the State Department: 'Thatcher has found it difficult to control the growth in money supply, and is concerned about whether the operating techniques of the Bank of England are adequate to do so'.<sup>163</sup> Concerned that the Reagan administration's economic policy would become confused with the failings of Thatcherism, Martin Anderson, an economic adviser, circulated a memorandum to all senior staff.<sup>164</sup> Anderson attached 'a brief description of the basic differences between the economic programme implemented in England by Prime Minister Thatcher and the economic programme proposed by President Reagan'.<sup>165</sup> Anderson acknowledged that 'much of the same rhetoric' surrounds both administrations' respective programmes, yet 'the substance of these programmes has been very different'.<sup>166</sup> A US Treasury Department memorandum was forwarded to Reagan so as to stress the 'several

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<sup>158</sup> FOI 246199, Cabinet Office, Letter dated 22 Oct. 1987, Margaret Thatcher to Ronald Reagan.

<sup>159</sup> Private information.

<sup>160</sup> Ibid.

<sup>161</sup> Ibid.

<sup>162</sup> Briefing paper, Department of State to Ronald Reagan, Department of State Briefing Book re: The Visit of British Prime Minister Thatcher, 02/25/1981-02/28/1981 (2 of 3), Box 91434 (RAC Box 1), Executive Secretariat, NSC, VIP Visits, WHORM: Subject File, Ronald Reagan Library.

<sup>163</sup> Briefing paper, Department of State to Ronald Reagan, Department of State Briefing Book re: The Visit of British Prime Minister Thatcher, 02/25/1981-02/28/1981 (2 of 3), Box 91434 (RAC Box 1), Executive Secretariat, NSC, VIP Visits, WHORM: Subject File, Ronald Reagan Library.

<sup>164</sup> Memorandum, Martin Anderson to Senior Staff, February 26, 1981, United Kingdom – General (Feb. 1981 – July 1981), CF 0219, Edwin Meese Files, Ronald Reagan Library.

<sup>165</sup> Ibid.

<sup>166</sup> Ibid.



differences between monetarism as practised by Margaret Thatcher and what we propose to do'.<sup>167</sup>

Also on the ideological offensive was Friedman, who continued to respond to the criticism which monetarism received in light of the Thatcher and Reagan administrations' experiences. At the International Conference of the Institute for Monetary and Economic Studies in 1983, Friedman observed that, British and American monetary policies 'over the past few years would not have been different if they had deliberately set out to give monetarism a bad name'.<sup>168</sup>

The institutional, economic, and political differences between the two countries meant monetary and taxation policy is an example of both administrations taking comfort in shared rhetoric rather than mutual policy implementation. As a former Reagan speechwriter observed, taxation and monetary policies reflected a mutual 'validation' for Thatcher and Reagan, rather than direct influence over policy.<sup>169</sup> Given that both their international positions and their policy conclusions were 'lonely' and 'singular', Thatcher and Reagan were of 'direct usefulness to each other'.<sup>170</sup> A special adviser to Thatcher argued that it was much harder for the Prime Minister before Reagan was elected President. Thatcher was viewed to be a 'crank' and a 'radical' who was outside of the mainstream.<sup>171</sup> Subsequently, Reagan's election on a similar platform offered 'political cover' for the Thatcher administration.<sup>172</sup> Indeed, neither Thatcher nor Reagan would have been as successful in economic (and foreign affairs) without the other.<sup>173</sup> Thatcher and Reagan claimed to adopt similar policies to revive the stalling British and American economies. Their shared philosophy meant that they could talk to each other about the issues and encourage one another when faced with fierce opposition and criticism. Their rhetoric (if not their policies) was mutually reinforcing.

<sup>167</sup> Memorandum, Beryl W. Sprinkel to Secretary Regan, Feb. 24, 1981, Donald T. Regan Papers, Treasury Department, Box 185, Folder 5, Subject File: United Kingdom 1981-85, Library of Congress.

<sup>168</sup> Milton Friedman, 'Monetarism in Rhetoric and in Practice,' Paper presented at The First International Conference of The Institute for Monetary and Economic Studies, The Bank of Japan, Tokyo, 22 June 1983, 1, released by the Federal Reserve (FOI Request 2007-381), 19.

<sup>169</sup> Private information.

<sup>170</sup> Ibid.

<sup>171</sup> Ibid.

<sup>172</sup> Ibid.

<sup>173</sup> Ibid.

# Imperialism in reverse? Fiscal consequences of decolonization in Kenya and Zambia

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## 1. Introduction

Schumpeter defined imperialism as ‘the objectless disposition on the part of a state to unlimited forcible expansion’.<sup>174</sup> By this he meant that it was not a policy intended to lead to any consistent or achievable end. Rather, the expansion of the empire continued through institutional inertia, driven by those who stood to benefit individually. Retrospective calculations of the costs and benefits to Britain from the Empire seem to prove his point, finding that the costs of the imperialism generally exceeded the benefits.<sup>175</sup>

A similar argument might be made regarding pressure for political independence in the former colonies. According to Flint, the dismantling of the British Empire was, like its foundation, a disorderly and largely unplanned process.<sup>176</sup> Moreover, nationalist movements were no more coherent than proponents of imperial expansion. Nationalists had to build support from a wide variety of competing groups and communities discontented in various ways with colonial rule. Pressure for independence came from the combination of divergent interests coalescing around a faith ‘in the capacity of the independent nation-state to promote material progress and cultural renewal’.<sup>177</sup>

In hindsight, such faith appears misplaced. National independence has not proved a panacea for the social or economic ills of the former colonies, particularly in Africa. Despite this, there have been few attempts to measure the costs and benefits of decolonization (and by extension colonialism) for the former colonies. A complete balance sheet would attempt to measure the financial and economic costs and benefits of decolonization, balanced by its impact on the political and strategic considerations of post-independence governments and their constituents.<sup>178</sup> This paper provides a first step in this direction by examining the impact of decolonization on government finance in two former colonies (Kenya, which became independent in 1963 and Zambia, which changed its name from Northern Rhodesia at independence in 1964).<sup>179</sup> It focuses particularly on the fiscal impacts of more inclusive electoral politics, and the loss of imperial subsidies. It uses annual budget data from Kenya and Zambia from the end of the Second World War through decolonization, supplemented by qualitative evidence on the formation of fiscal policy, and argues that the most significant fiscal impact of decolonization was the introduction of an elected government which allowed a wider range of groups to lobby for fiscal transfers.

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<sup>174</sup> Schumpeter (1951), p.7.

<sup>175</sup> See Feinstein (1997), p.215 for a review. Macmillan’s 1957 ‘audit’ of the Empire might be considered the first of such works, though the conclusions of the audit may have been shaped by Macmillan’s political agenda.

<sup>176</sup> Flint (1983), p.410. This conclusion is somewhat controversial. For a different view see Pearce (1984).

<sup>177</sup> Hargreaves (1988), p.3.

<sup>178</sup> These were the criteria for Macmillan’s 1957 assessment. See minute from Prime Minister to the Lord President of the Council, 28 January 1957, re-printed in Porter and Stockwell (1989), p.451.

<sup>179</sup> Unless stated otherwise, revenue and expenditure data for Kenya are from Kenya, *Blue Books* (1901-15;1926-46); *Administration Reports* (1947-54); *Appropriation Accounts* (1955-70). Figures for Zambia are from British South Africa Company, *Annual Reports* (1901-23); Northern Rhodesia, *Blue Books* (1924-48); *Financial Reports* (1949-64); Zambia, *Financial Statistics of Government Sector 1965-69*; *Statistical Yearbook* (1968-70). Deflated using price indices from Zambia, *Statistical Yearbook* 1970; Kenya *Statistical Digest*, Dec. 1970.



Though often neglected in political histories of decolonization, fiscal realities limited the options available to policy-makers before and after independence. Understanding the fiscal impact of decolonization can not only provide a better understanding of colonial governance, but also help explain why nationalists failed to meet many of their economic and political goals after independence.

## **2. Background**

Kenya and Northern Rhodesia were among the last territories appropriated during the late nineteenth-century 'scramble'. Neither was home to any significant international trade before the beginning of colonial administration, and both relied on British grants-in-aid to make their budgets balance in the first years of colonial rule. Kenya achieved financial self-sufficiency in 1915, while Northern Rhodesia depended until 1927 on grants from the British South Africa Company (which administered it until 1924) and then the British Government.

Though Kenya and Northern Rhodesia remained relatively small players in the imperial economy, the British government considered them more consequential following the Second World War, when policy-makers began to argue that economic development in Africa particularly would be economically beneficial to Britain itself.<sup>180</sup> East and Central Africa therefore received a disproportionate share of grants and loans offered by the British government, which meant that these regions had potentially more to lose than more affluent areas. As settler colonies, the expansion of the franchise was more limited before independence than in non-settler colonies, resulting in a dramatic shift at independence in the politics of allocating public resources.<sup>181</sup> These two factors make them particularly interesting case studies of the fiscal impact of decolonization.

## **3. Voters and government budgets: the transition to elected government**

Though some have argued that decolonization simply raised a new flag over the same institutions, a key difference was that post-independence governments were elected rather than appointed by the British government. Although the franchise was expanded and governance became more inclusive through the 1940s and 1950s, it was only after independence that the head of state became an elected official who was at least theoretically accountable to the electorate. This represented a significant change in the politics of public finance, even if accountability of elected officials has often been lacking in more recent African governments. Nationalist campaigns gained influence by 'making the most fantastic promises of benefits to be derived from independence, when Africans would inherit the earth'.<sup>182</sup> After the new flags were raised, newly elected governments were asked to make good on those promises by devoting resources to areas and groups perceived to have been neglected by the colonial government.

Social services, and especially education, were in particular demand after independence. Expenditure on education increased rapidly in both countries after independence, so much so that the World Bank and others expressed concern about its sustainability, noting that Kenya's recurrent expenditure on education was among the highest in the world as a percentage of GDP.<sup>183</sup>

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<sup>180</sup> Cowen and Westcott (1986), pp.26-7.

<sup>181</sup> Bennett and Smith (1976), p.112; Tordoff (1974), p.7.

<sup>182</sup> Gann (1971), p.145.

<sup>183</sup> World Bank (1975), pp.169-71, 224.

Table 1: *Central government expenditure on education, 1964-9 (1964 £)*

	Kenya	Zambia
1963/4	£6,225,000	£4,781,000
1964/5	£4,180,530	£6,786,439
1965/6	£5,671,392	£8,987,277
1966/7	£5,274,890	<i>Unavailable due to change in fiscal year</i>
1967/8	£7,391,304	£14,339,172
1968/9	£9,228,723	£12,762,006
1969/70	£12,333,645	£14,351,568

Research on the fiscal history of Europe suggests that extending the franchise to new constituencies alters the willingness of the electorate to fund particular types of social spending. The expansion of state-funded education in Kenya and Zambia after independence mirrors the experience of Europe and North America, where a wider franchise was followed by increasing expenditure on state education.<sup>184</sup>

Nationalists also pressed for the reversal of some controversial colonial policies. From a fiscal perspective, perhaps the most important was regional coordination with neighbouring territories, which was seen to empower European settlers and favour some colonies over others.<sup>185</sup> From the beginning of imperial rule, both colonies had shared the administration of some government services (for example, the collection of customs tariffs) with their neighbours in order to minimize the costs to each government.<sup>186</sup> Regional relationships were consolidated during the Second World War, and further encouraged after the war as a way of making colonies more economically and politically viable.<sup>187</sup> This policy ultimately resulted in the establishment of the East Africa High Commission (or EAHC, which included Kenya, Tanganyika and Uganda) in 1948, and the Federation of Rhodesia and Nyasaland in 1953, among others across the Empire.

The provision of common public services was extended under these arrangements, and included administrative services (like the collection of income tax and customs tariffs), the development of infrastructure (particularly railways) and economic services (for example, research). The fiscal savings each territory earned through economies of scale are difficult to measure. However, external observers expressed concern that these services would have to be provided by each government independently should regional coordination agreements end. Prior to the dissolution of the Federation, George Woods, President of the World Bank, said in a letter offering the Bank's assistance in negotiations that 'the effective continuance of the common public services, especially railways and electric power supply, must be a matter of anxiety to all the territories for the sake of their own economic well-being and future economic development'.<sup>188</sup> Though regional coordination in East Africa declined more gradually, surviving in some form until 1977, Bank officials were also worried about the possible consequences of tendencies shown by each of the constituent governments to provide government services independently.<sup>189</sup> The more rapid collapse of the Federation made the transition particularly expensive for Zambia, which had sizeable budget deficits within a few years of independence due to rapidly increasing capital expenditure resulting from the breakup of the Federation.<sup>190</sup>

<sup>184</sup> Lindert (2004), p.33.

<sup>185</sup> For more detail see Leys (1960).

<sup>186</sup> Pim (1938), p.102.

<sup>187</sup> Cowen and Westcott (1986), pp.49-57.

<sup>188</sup> Woods to Chairman, Victoria Falls Conference, June 24 1963 in World Bank Group Archives (WBGA) 193425B.

<sup>189</sup> De Wilde, 'Back-to-Office Report on East Africa Economic Mission', 28 Dec. 1966, WBGA 193298B.

<sup>190</sup> IMF (1971), pp.411-12.

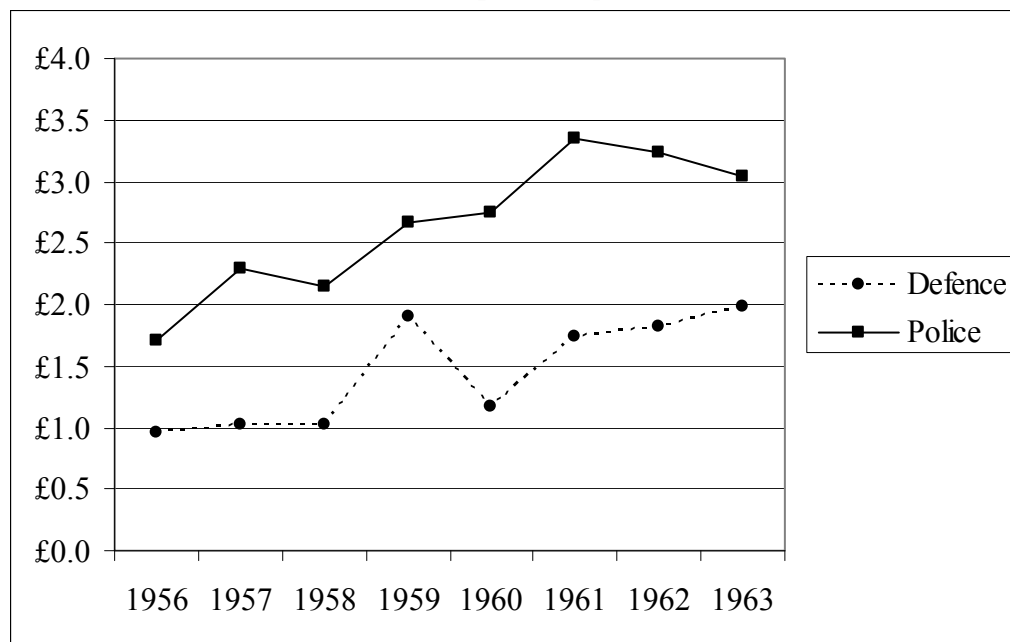
#### 4. Sharing the burden: imperial subsidies

In addition to changing the relationship between newly independent governments and their constituents, decolonization also changed their relationship with Britain. Britain's expenditure on the empire was, according to some, partly composed of subsidies provided to the colonies.<sup>191</sup> These included imperial defence, grants and loans to support economic development in the colonies, and grants-in-aid in times of fiscal crisis. If imperial subsidies constituted a significant contribution to colonial budgets, newly independent former colonies would need to replace them from their own funds, in addition to meeting demands from their new constituents.

According to Davis and Huttenback, the largest subsidy was imperial defence spending.<sup>192</sup> There are reasons to question this argument. During the two world wars the colonies made significant contributions to imperial defence, most notably through the sterling balances accumulated during the Second World War.<sup>193</sup> In addition, Davis and Huttenback do not include the cost of internal police and defence forces, which were funded by revenue raised in the colonies.<sup>194</sup>

In Kenya and Northern Rhodesia, internal police had always been more important for the maintenance of security and stability than external defence. In order to limit the costs of internal defence, the early colonial state had relied on largely unregulated local levies to maintain order in the new colonies.<sup>195</sup> Even in later periods, the costs of local defence were as much or more than expenditure on external defence. Figure 1 compares defence expenditure with police expenditure for Northern Rhodesia from 1956-63.

Figure 1: *Northern Rhodesia defence and police expenditure, 1956-63 (1956 £millions)*<sup>196</sup>



Local policing was particularly important because Britain was reluctant to devote military resources to conflicts it deemed 'internal'. After Kenya's colonial government declared a state of emergency in 1952, Britain was slow to contribute to the campaign against Mau Mau. British troops were dispatched, but only on what the Treasury called an 'extra-cost' basis,

<sup>191</sup> This argument is made particularly by Davis and Huttenback (1986), chs. 5-6, for the period up to 1914.

<sup>192</sup> Darwin (2005), pp.18-19; Davis and Huttenback (1986), p.145.

<sup>193</sup> Cowen and Westcott (1986), p.40.

<sup>194</sup> Edelstein (1994), p.211.

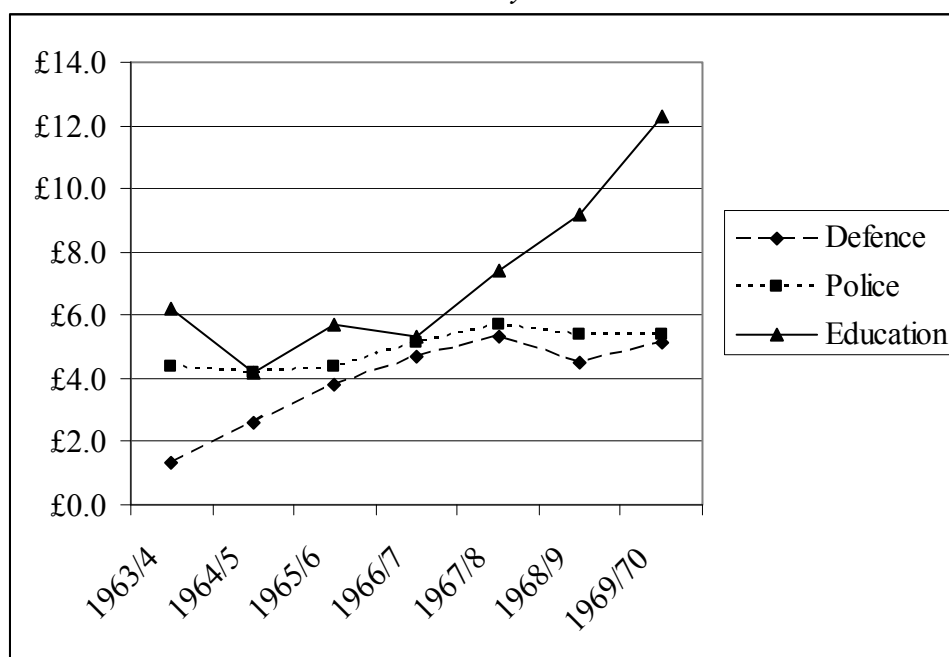
<sup>195</sup> Waller (1976), pp.535-6.

<sup>196</sup> Includes share of Federation expenditure on defence, calculated based on share of total population.

meaning that the costs of having the troops in Kenya had to be reimbursed by the Kenyan government. Kenya's finance minister, made repeated requests for financial aid from Britain, noting that Malaya had received aid. The Treasury's response was that, unlike the conflict in Malaya, which was 'one facet of the world-wide anti-Communist struggle', Kenya's Emergency was solely an internal matter and therefore did not merit financial assistance from Britain. The only way Britain could offer financial aid to Kenya was if Kenya demonstrated financial need, making it eligible for a grant-in-aid.<sup>197</sup> The cost of the Emergency soon diminished Kenya's reserves and in 1954 the British government made the first of several large grants which provided the bulk of Kenya's Emergency Fund until the end of the Emergency in 1960.<sup>198</sup> British defence spending could be a significant subsidy in times of crisis, but otherwise colonies bore the bulk of the expense of maintaining order in their respective territories.

If defence spending by the British government provided a subsidy to colonies, one might expect their expenditure on defence to increase after independence. Data on annual expenditure by both colonies show increases in defence spending up to 1970. Expenditure on policing (i.e. internal defence) remained for the most part greater than or equal to defence.

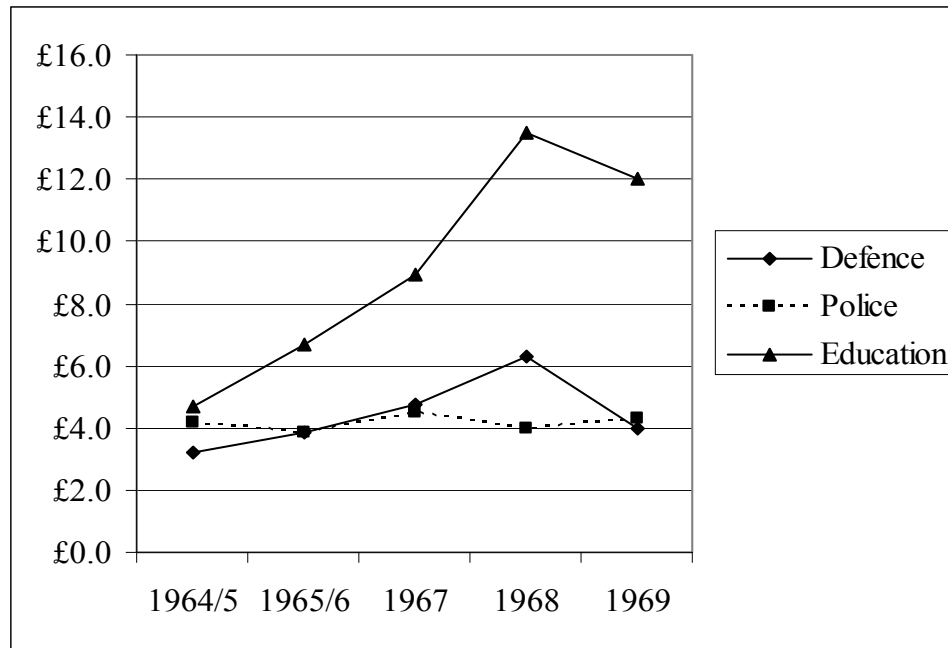
Figure 2: *Expenditure on defence, policing and education, 1964-70 (1964 £millions)*  
a. Kenya



<sup>197</sup> The National Archives (TNA) CO 822/577; T 225/771.

<sup>198</sup> Gardner (forthcoming).

## b. Zambia



However, increases in defence expenditure were not as rapid as the increase in expenditure on education, suggesting perhaps that changes in local politics had a more significant impact on the budgets of the former colonies than the loss of imperial defence subsidies.

### 5. Conclusion: was decolonization objectless?

National independence had mixed effects on the treasuries of the former colonies. The expansion of the franchise was perhaps the most important change. Newly-elected governments faced demands from constituents to supply the social services neglected by colonial governments. In response, they rapidly increased expenditure on education and other social services. They were also unwilling to maintain politically unpopular but perhaps fiscally sensible regional coordination agreements. Expenditure on defence, which previously had been largely supplied by the imperial government, also increased. However, it remained less than that for policing and the maintenance of internal order, which had been the more pressing difficulty throughout the colonial period.

Decolonization was a complicated process which has yet to be completely understood, despite an extensive historiography of its political mechanics. A study of the fiscal impacts of decolonization has the potential to help historians understand the costs and benefits of belonging to the British Empire, as well as the constraints imperial institutions placed on post-independence governments.

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# The non-military issues on the Brussels Treaty Organisation agenda: in search of an explanatory framework

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## 1. Introduction

In his article on British policy towards Western Europe between 1947 and 1949, Stuart Croft argued that ‘the social aspect of Western union [had] remained undeveloped’, as ‘no framework for this aspect of policy [was] developed’, although Bevin’s ideas of January 1948 were echoed ‘in the Brussels Treaty language’.<sup>199</sup>

Since other scholars who dealt with the history of the Brussels Pact in a more complex way have also focused predominantly on the political and military issues and have not paid any particular attention to the cooperation among the five signatory Powers on non-military matters, Croft’s conclusions might be considered as a concise expression of consensus on the subject at hand.<sup>200</sup>

Within its limited scope, the present paper aims to go beyond the conventional wisdom and detail the role the Brussels Treaty played in the development of European integration between 1948 and 1954. In short, it aims to answer the following series of questions: (a) how and why the non-military issues were incorporated into the Brussels Treaty Organisation agenda? (b) What were the motives and intentions behind this decision? (c) What were the main areas of cooperation regarding the non-military issues?

## 2. Creation of the Brussels Pact

In the literature on the subject, there is a broad consensus that the process leading to the signing of the Brussels treaty on 17 March 1948 was launched and driven by three factors. The first of these was the negative reaction of the Benelux countries to the Franco-British proposal. The second was the support of the State Department for a treaty on the principle of *erga omnes*. The third factor was the change in the diplomatic atmosphere after the Prague coup.<sup>201</sup>

As early as the beginning of February 1948, the representatives of the Benelux countries declared, at various levels, that they did not consider the Dunkirk treaty to be a sufficient basis for the negotiations regarding the new western European security system. Instead they proposed to create a body or platform for regular negotiations on all the important issues to attain an acceptable compromise.<sup>202</sup> Moreover, on 19 February, during a conversation with Sir George Rendel, British ambassador in Brussels, Belgian foreign minister Spaak ‘emphasized the view that an absolute condition of useful progress was some practical form of cooperation in economic field’.<sup>203</sup>

George Marshall and Robert A Lovett, the Under Secretary of State, were also not in favour of the Dunkirk treaty approach. This was because the Franco-British proposal accorded with neither the US policy regarding either the European recovery programme nor the German question. In a telegram of 7 February 1948 to the Foreign Office, Inverchapel summarized the position of the State Department as follows:

<sup>199</sup> Croft (1988, pp.627-8).

<sup>200</sup> Dumoulin and Remacle (1998) and Varsori (1988).

<sup>201</sup> Cf. Baylis (1984), De Vos (1993), Dumoulin and Remacle (1998), Krieger (1993), Stengers (1986), Vaïsse (1986), Varsori (1988), (1991), (2000) and (2002), and Wiebes and Zeeman (1991) and (1994).

<sup>202</sup> Cf. De Vos et al. (1998, pp.220-35).

<sup>203</sup> Rendel to Bevin, 19 February 1948, quoted in Stengers (1986, p.127).



The United States Government were now embarked upon the formidable experiment of E.R.P. In their battle with Congress they had been obliged to represent it to be a major effort to create in Western Europe 'a climate for peace' in which the countries concerned could build up their own economic and defensive structures [as well as] Lovett questioned the suggestion that Marshall had approved the proposal to base the approach to the Benelux countries upon the Dunkirk Treaty. From the outset he had felt some doubts about this.<sup>204</sup>

In mid-February it seemed that a longer time would be needed to achieve a compromise acceptable to both Britain and France and the Benelux countries supported by the United States Department of State.<sup>205</sup> However, the February coup in Prague changed the overall situation dramatically. On 26 February Bevin had a conversation with Douglas, the American ambassador to London, in which he expressed his doubts about the possible spill-over effect of the Prague coup on political developments in France and Italy. He was also afraid that the Communist-led Unions would attempt to destabilize the situation in Germany.<sup>206</sup> Also, Bidault changed his mind, and on 2 March informed Caffery, the Ambassador of the United States to Paris, that 'in view of recent events he has changed his point of view about treaties along the Dunkirk model and at this juncture is not particularly concerned about sticking to that formula'.<sup>207</sup>

Thus, in consequence of the Prague coup, the negotiating parties were able to overcome the divergences in their starting positions more easily than would have been otherwise. Moreover, social, cultural, and economic issues were finally added to the agenda of the Brussels Pact.

### 3. Motives and intentions behind

The meeting of foreign ministers after the signing of the Brussels Treaty on 17 March 1948 revealed a wider set of purposes for including non-military cooperation in the agenda of the Brussels Pact. From the structural point of view, two aims were predominant.

The first of these was security related. Bevin and Bidault paid special attention to prevent the communist infiltration of public administration, scientific community and labour unions. For these purposes it was suggested that the 'chief intelligence experts should concert together with a view to overhauling all security questions including a study of the methods to prevent sudden disturbances in factories and workshops by Communist cells'. However, from a broader perspective, Bevin proposed to pay particular attention to the achievement of 'real social and economic security [since this] was the best antidote to communism'. In this respect he wanted to go as far as possible and noted that 'we should aim as time went on at harmonizing and developing our respective social services'.<sup>208</sup>

The second was monetary related. Although some form of fiscal and monetary cooperation among the countries participating in the Marshall Plan had already been taking place, the foreign ministers agreed that further steps in this direction were required. The chief objective was to exclude any dollar or gold payments between the signatory countries and thus to help establish the balance of payments equilibrium. Due to the complexity of the question, it was agreed to place the issue before the Ministers and experts 'concerned with

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<sup>204</sup> FO 115/4359, Inverchapel to Foreign Office, 7 February 1948.

<sup>205</sup> Cf. FRUS (1974, pp.33-4).

<sup>206</sup> Cf. FRUS (1974, pp.32-3).

<sup>207</sup> FRUS (1974, 34); Jean Stengers (1986, 134) pointed out that Bidault evidently referred to the Prague coup.

<sup>208</sup> Archives diplomatiques du ministère des Affaires étrangères, Paris/Pactes (Secrétariat Général) 1948-1950/file 8, Record of a private conversation between the Ministers for Foreign Affairs on 17 March 1948. Available also online at <http://filestore.nationalarchives.gov.uk/pdfs/small/cab-129-26-cp-96.pdf> (accessed 3 January 2009).

financial and also economic questions'. Moreover, as was emphasized by Spaak, these meetings had to be arranged as soon as possible, for:

there had been great economic difficulties in recent weeks between some of the countries represented at this meeting. It had emerged that their economic and financial policies might diverge or even become opposed and if they each went ahead on their own lines, they might have great difficulty in getting things right again.<sup>209</sup>

#### 4. Main areas of cooperation

After the formation of the institutional structure of the Brussels Pact in April 1948, further collaboration was developed by national experts who regularly met at sessions of the committees charged with the examination of specific issues relating to their agenda. During the years 1948-54, the cooperation developed far beyond the scope of initial discussions. The annual reports of the Brussels Treaty Organisation's activities provide the best evidence for this.

##### 4.1 Social issues

Cooperation among the Brussels Treaty Powers on social issues was based on Article II of the Brussels Treaty. The purpose was defined as follows: 'to promote the attainment of a higher standard of living by their peoples and to develop on corresponding lines the social and other related services of their countries'.<sup>210</sup>

The aims of the Brussels Treaty's policies concerning these issues are evident from the very names of sub-committees, such the Public Health committee, and the War Pensions committee. The Social committee focused on the submission of proposals regarding the application of the International Labour Organization conventions and resolutions in the legislature of member states. It also worked out the multilateral convention – signed by the foreign ministers on 7 November 1949 – concerning the application of the social security schemes to the people, 'who worked or lived in more than two of the five countries'.<sup>211</sup> The next areas of collaboration were manpower (promoting student employment, addressing the problem of frontier workers, vocational guidance) and the problem of industrial safety and health.

Questions such as health control over air and sea traffic (i.e. the simplification of health controls by travelling between the five signatory countries), the elaboration of standards for control of the pharmaceutical products, foodstuffs, drinking water, and reciprocal recognition of medical qualifications were the domain of the Public Health committee. Within this domain a very important goal was reached – based on the peer-to-peer principle – concerning the medical treatment of expatriated citizens of the signatory countries in the territories of other signatory countries. This was confirmed by the Social and Medical Assistance Convention signed by Foreign Ministers on 7 November 1949.

The main task of the War Pensions committee was to work out a standard classification of diseases caused by war in order to unify the war pension schemes and financial rates for the war-disabled. However, progress was limited and it was decided that the committee 'should enter a state of suspended animation' after two years of work.<sup>212</sup>

The main task of the last Joint committee was to develop 'the general principles of a policy for the rehabilitation and resettlement of the disabled'.<sup>213</sup> Studies concerning the

<sup>209</sup> Ibid.

<sup>210</sup> The full text of the Treaty of Brussels is available at <http://www.nato.int/docu/basic/txt/b480317a.htm> (accessed 3 January 2009).

<sup>211</sup> The Western European Union Archives (WEU)/DG1/18/222.

<sup>212</sup> WEU/DG1/18/234.

<sup>213</sup> WEU/DG1/18/235.

rehabilitation and vocational re-education of the young congenitally disabled, the blind, deaf, and epileptics, etc. were produced.

### 4.2 Cultural issues

Cooperation in cultural matters was developed under Article III of the Brussels Treaty. This bound the signatory countries to 'make every effort in common to lead their peoples towards a better understanding of the principles which form the basis of their common civilization and to promote cultural exchange by conventions between themselves or by other means'.<sup>214</sup>

The Cultural committee was established to achieve these goals. It coordinated the works of the following subcommittees: Youth, Education, Non-Commercial Films, the Cultural Identity Card, and Government officials.

The Cultural identity card project was intended to ameliorate travel for nationals of the five Treaty countries in order to visit places such as museums, galleries, concert halls, universities, and archives. The holders of cards were granted reduced entry and travelling fees and were entitled to enter university restaurants. This project was also extended to the Council of Europe countries in July 1952.

Action was also taken in the field of education. Four courses for teachers were organized between 1949 and 1952 in order to promote common 'European' values through secondary level education. The question of equalising university degrees and diplomas was studied, as well as that of school-leaving certificates, which granted access to higher education. However, compromise was not achieved.

Special care was paid to youth. Courses and meetings were organized for experts working with youth, young students, and leaders. Considerable work was done to facilitate travel for young people between the signatory countries. A travel guide, '*En Route*', was published in 1951 and a new type of passport for the collectives of youth was introduced in 1952.

Courses for government officials were organized as well. The main objective was to acquaint officials from different levels of state apparatus with the functioning of political systems in each of the signatory countries and to promote personal relations between them.

The last area of work regarded the development of non-commercial collaboration between signatory countries. This aided the exchange of non-commercial films, through the reduction of import fees and taxes, as well as TV and radio programmes.

## 5. Conclusions

At this point, the following concluding remarks could be made. Although the broader development of collaboration under the auspices of the Brussels Treaty did not take place, cooperation among the signatory Powers was relatively vital between 1948 and 1950.

Collaboration was particularly driven by the two following aims: (a) the cohesion of social and welfare standards among the signatory Powers, which had to serve as a key element of the non-military defence of western Europe; (b) the Brussels Pact was seen as an 'engine' for the deepening and widening of the processes of European integration (for example, the attempt to coordinate the fiscal and monetary policies or the funding of the Council of Europe).

From a more structural point of view, the research question is whether or not these attempts were underpinned by the post-Second World War 'welfare consensus'.

To conclude: the impact of the Brussels Treaty cannot be underestimated. Though the opinion-leaders were almost always top-elites such as Bevin, Spaak, Schuman or Bidault, the organization's main contribution was in providing – for the first time in European history – a stable platform for multilateral negotiations. Also, in essence, this system was repeated and

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<sup>214</sup> Text of the Treaty of Brussels (<http://www.nato.int/docu/basic/txt/b480317a.htm> [accessed 3 January 2009]).

adopted for the functioning of the later institutions. This is what makes the Brussels Treaty important: it was a pioneering step.

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# A geographical explanation of the August 1911 British railway strike

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## Introduction

The pre-First World War British railways pioneered modern managerial and organizational techniques, internal labour markets, and contemporaries considered them vital to the economy's success. *The Economist* predicted in 1907 that even a short stoppage in their operations would lead to 'starvation, ruin, and revolution'.<sup>215</sup> When the government acted to prevent a railway strike in 1907, it marked only the second time the British state considered a potential strike sufficiently threatening to public order that it intervened.<sup>216</sup> Despite these actions, railwaymen struck in August 1911, in one of the major strikes of that contentious year. Historians have generally argued that deteriorating working conditions and real wages led railwaymen to strike. These accounts, however, do not explain why the strike affected some regions of Great Britain and not others. Geographical factors give a better explanation of the railway strike's varying intensity.

## Historical background

Labour discontent began to reveal itself on the British railways after Parliament overturned the Taff Vale Verdict in 1906. At this time, only the NER formally recognized the largest railway union, the Amalgamated Society of Railway Servants (ASRS), and union leaders publicly chafed at the wages and working conditions of railwaymen.<sup>217</sup> In early 1907, the two largest railway unions sent their respective National Programmes, calling for improved wages and working conditions, to each railway company and requested a meeting to discuss the Programmes' points. All of the companies, except the NER, rebuffed the unions' overtures and the ASRS responded by putting strike action before its members for a vote in October 1907.

Their members overwhelmingly voted to strike to force the companies to meet union representatives and discuss the National Programme; events which made it 'almost impossible' for the government to remain passive.<sup>218</sup> Lloyd George, then Board of Trade (Board) President, worked to prevent a national railway strike. He managed to broker a compromise between the two sides even though the companies' representatives refused to meet in the same room as the union officials. The Agreement of 6 November 1907 (1907 Scheme) implemented a form of collective bargaining for matters relating to wages and conditions of service. Despite initial optimism from all sides,<sup>219</sup> the August 1911 railway strike made it evident that the 1907 Scheme had not pacified all railwaymen.

The strike began on 5 August 1911 when about 1,000 LYR goods workers in Liverpool struck without union authorization, citing dissatisfaction with the 1907 Scheme as the reason they ceased work.<sup>220</sup> The strike spread quickly and the executives of the four largest railway unions called an official strike on 17 August. The official strike ended two days later after the government helped negotiate a compromise between the unions and

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<sup>215</sup> *The Economist* (19 Oct. 1907), pp.1754-5.

<sup>216</sup> Hunt (1981), p.303.

<sup>217</sup> NA, (1907).

<sup>218</sup> Askwith (1920), p.120.

<sup>219</sup> *PP* [Cd. 5922], p.7.

<sup>220</sup> *PP* [Cd. 6472], p.24.



railway companies.<sup>221</sup> Eventually the parties agreed to a revised Scheme in December 1911. In all, the 1911 railway strike lasted from 5-24 August, directly involved 145,000 men from 41 companies, and amounted to roughly 485,000 working days.<sup>222</sup>

### Historiography

Historians have argued that the decline of railwaymen's real wages and working conditions led them to strike.<sup>223</sup> Some have stated that worries over rising costs<sup>224</sup> or inefficient operating practices prevented companies from raising wages.<sup>225</sup> One historian argued that the companies' disdain of union leaders led them to refuse wage increases<sup>226</sup> while another has emphasized the railwaymen's anger at the 1907 Scheme's inability to satisfy their demands.<sup>227</sup> The historiography, however, remains largely quiet as to whether the strike became general or if wages and working conditions varied across companies.

### Regional nature of the railway strike

The evidence indicates that the railway strike remained regional, rather than a purported 'general railway strike'.<sup>228</sup> A memo written by NER official Sir George Gibb on 19 August 1911 stated that the strike reached its greatest intensity on companies operating in 'South Wales, and in the quadrangle contained between lines drawn through Newcastle, Liverpool, Nottingham and Hull'. Companies in less troubled areas, however, could 'maintain an effective though a reduced service'.<sup>229</sup>

Figure 1 is based on the reports of Chief Constables assessing the state of the railway service and number of staff on strike in their cities, by the morning of 19 August. It ranks 58 English and Welsh cities according to how the strike affected their railway services, with the greatest effect on the red cities, an intermediate effect on the yellow cities, and minimal to no effect in the green cities. Figure 1 reveals a clustering of red cities in the industrial north of England and Wales and the predominance of green cities in the south and east of England supports the notion of a regional strike.<sup>230</sup>

Finally, table 1 gives 15 major railway companies' areas of operations and their percentage change in total receipts (goods + passenger) for the week ending 19 August 1911 compared to the same week in 1910. It shows that companies operating in south Wales and the industrial north of England experienced the largest fall in their receipts. For instance, the LYR experienced a decrease greater than 30 per cent and the LNWR nearly did; losses that amounted to greater than £50,000 and £100,000, respectively. Companies operating in southern England such as the SECR, however, experienced considerably smaller declines in their total receipts.

<sup>221</sup> Ibid., p.25. Most railwaymen returned to work by 21 August, but NER men remained out until they received a separate compromise

<sup>222</sup> Ibid., p.7n. Working days is the number of people affected multiplied by the duration of the strike, accounting for any increases or reductions in the number of labourers involved and if any of them were replaced during the labour stoppage.

<sup>223</sup> Gupta (1960), p.8; Irving (1976), p.71.

<sup>224</sup> Alderman (1971); Clegg (1985), p.73.

<sup>225</sup> Foreman-Peck and Millward (1994), p.89.

<sup>226</sup> Roberts (1958), p.241.

<sup>227</sup> Bagwell (1963), pp.286-7; Bagwell (1982), p.236.

<sup>228</sup> Phelps Brown (1959), p.322.

<sup>229</sup> NA, (1911-15).

<sup>230</sup> Ibid., these reports are in the same folder as the Gibb memo making it possible he based some of his memo on them.



Figure 1: *The effect of the August 1911 railway strike on selected cities*



Source: See text

Although this evidence demonstrates the regional nature of the August railway strike, it does not invalidate historians' focus on wages and working conditions. The regional variation in railway receipts, for instance, may only indicate that railwaymen in the south and east of England had better wages and working conditions than their counterparts in the north of England and south Wales. To determine whether variations in these variables predict the strike's effect, the paper will consider quantitative evidence on wages and working conditions and how they varied by company and region.

Table 1: *Railway companies' areas of operation and change in receipts*

<b>Railway Company</b>	<b>Areas of Operation</b>	<b>8 Aug. 1911 (%)</b>
Caledonian (CR)	Carlisle to Glasgow, Edinburgh and Aberdeen	-6.91
Great Central (GCR)	London to the East Midlands, Manchester and Sheffield	-29.29
Great Eastern (GER)	London to East Anglia	-12.97
Great Northern (GNR)	London to York and Leeds	-12.84
Glasgow and South Western (GSWR)	South-west Scotland, between Glasgow, Stranraer, and Carlisle	-0.47
Great Western (GWR)	London to South West, Wales, West Midlands and Birkenhead	-28.44
Lancashire and Yorkshire (LYR)	Lancashire and Yorkshire	-12.14
London and North Western (LNWR)	London to the West Midlands, North Wales and Carlisle	-29.62
London and South Western (LSWR)	London to the South West of England	-2.73
London, Brighton, and South Coast (LBSCR)	London to the South Coast from Portsmouth to Hastings	-35.42
Midland (MR)	London to the East Midlands, Carlisle and Yorkshire	-21.18
North British (NBR)	Carlisle to Glasgow, Edinburgh and Aberdeen	-9.43
North Eastern (NER)	Region between Hull, York and Edinburgh	-21.73
South Eastern and Chatham (SECR)	South East from London	-2.76
Barry, Rhymney, and Taff Vale (WR)	Wales	-33.02

Source: *Operating Areas*: Crafts, et. al (2008), p. 46; GSWR, [www.gswr.co.uk/history.html](http://www.gswr.co.uk/history.html)  
 'Receipts': *The Economist* (1911).

### Data

One variable cannot capture all that contemporaries meant by 'conditions of service'. They did discuss railwaymen's hours under its general heading, however, and evidence on this exists. The Parliamentary Papers contain returns submitted by the railway companies that give some information on the hours worked by particular groups of railwaymen in a given month. Using the groups of drivers and firemen, signalmen, and guards, the paper formulated a weighted average of the percentage of men from each company that worked a shift greater than or equal to 12 hours at any point during that month. In addition to looking at this average for May 1911, the difference between each company's average in that month and July 1906 will indicate the extent to which the 1907 Scheme brought about the shorter workday railwaymen desired.

The data on wages comes from two separate sources. The average wages of railwaymen for the week ending 20 May 1911 comes from company returns made to the Board, found in the Parliamentary Papers. The Board only began supplying this data in 1911, so the paper relies on the ASRS's census of railwaymen's 1907 wages to gauge the effect of

the 1907 Scheme. Once again, a weighted average of each company's weekly wage is formulated for each period. Because these sources provided evidence on more grades of railwaymen, the weighted average of weekly wages also includes the companies' passenger and goods staffs.<sup>231</sup> The wages are in shillings and deflated by Feinstein's CPI.<sup>232</sup>

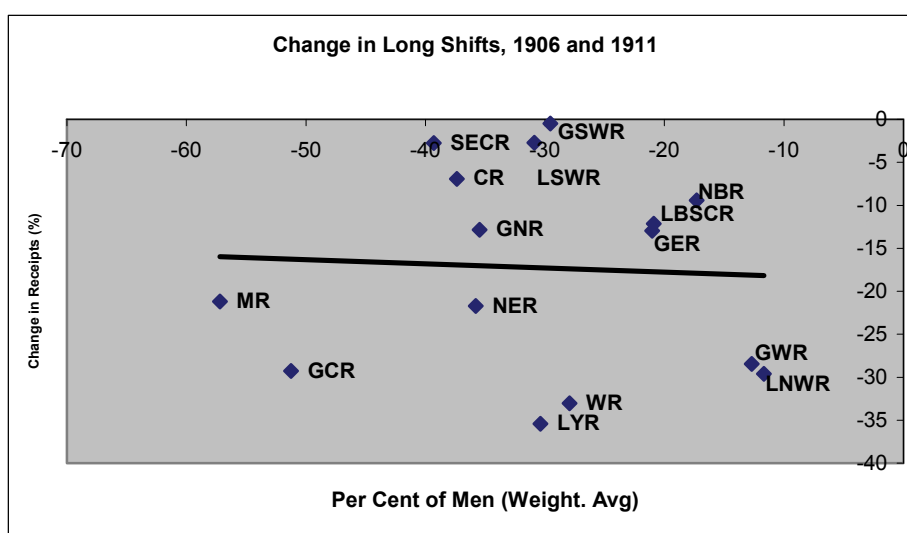
## Results

If the historiography is correct, a negative relationship should exist between the change in receipts and the data on hours. Conversely, a positive relationship should hold between the weighted average of a company's weekly wages and their percentage change in total receipts. Figure 2 gives the individual scatter plots of each company's fall in receipts for the week ending 19 August 1911 on their respective weighted average for 1911 hours and wages and their change between the two periods. The three Scottish companies are excluded from both 1911 scatter plots because they received lower weekly wages and worked longer hours than did their English and Welsh counterparts.<sup>233</sup>

The quantitative evidence does not strongly corroborate the historiography. Figure 2 only shows weak relationships at best and table 2 shows the expected correlation sign compared to the actual results. All of the correlation coefficients are small and have the wrong sign for 1911 hours and wages, suggesting that companies that paid higher wages and required fewer hours from their men had a better chance of the strike severely affecting their services. The correlations have the predicted sign for the changes in hours and wages variables, supporting the contention that men struck due to dissatisfaction with the 1907 Scheme. These two coefficients are the smallest, however, so any support they give to this hypothesis is tentative.

Admittedly, the data available on railwaymen's hours may not adequately proxy the broad concept 'working conditions' or cover all the issues of concern. Nonetheless, it is the best available evidence on hours, which was a major issue for railwaymen and their representatives as were wages, which dominated the discussion of both contemporaries and historians. Consequently, the failure of these variables to predict the strike's relative effect on the individual companies indicates that other factors led railwaymen to strike in August 1911.

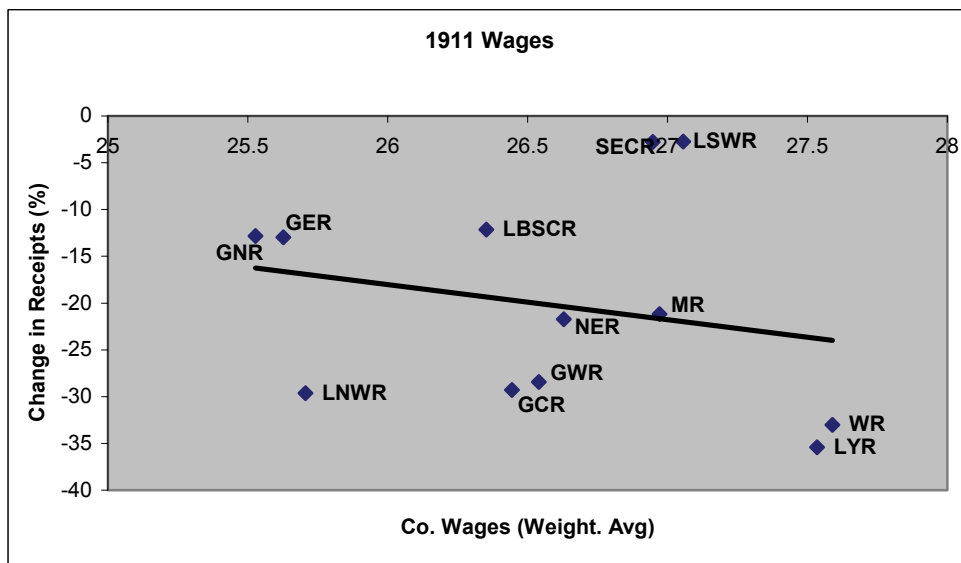
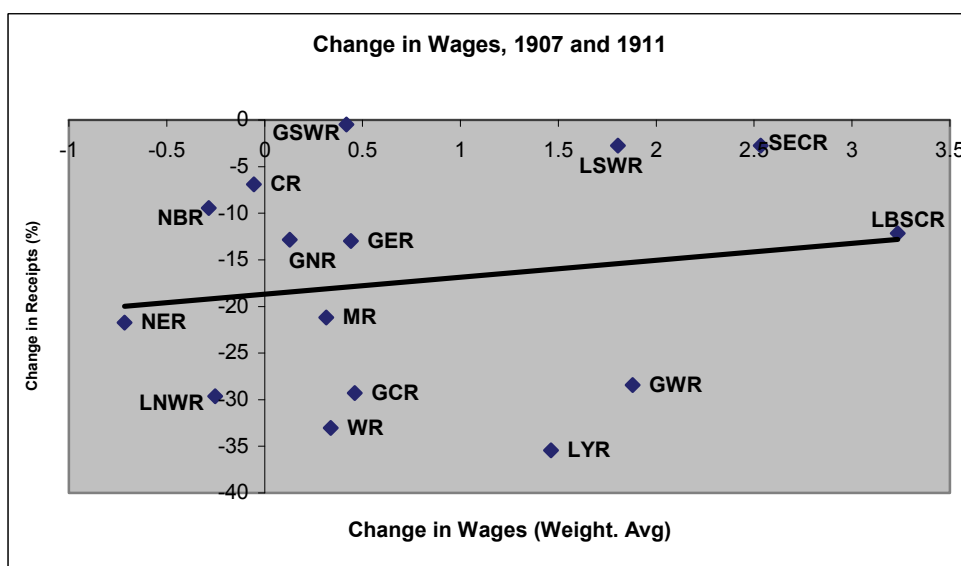
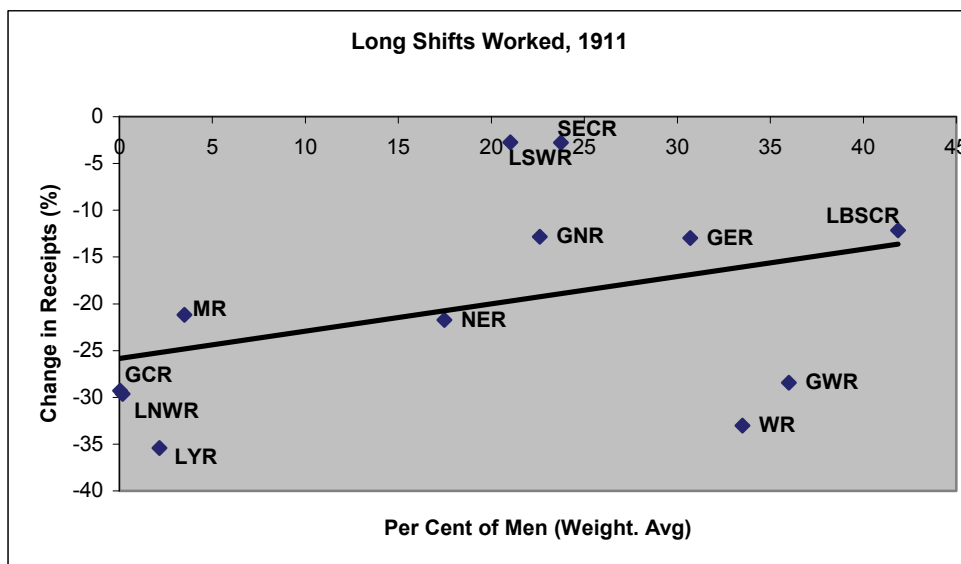
Figure 2: *Scatter of change in receipts on hours and wages*



<sup>231</sup> No goods staff was given for the WR.

<sup>232</sup> Feinstein (1972).

<sup>233</sup> *PP* [Cd. 6053], p. xi.



Source: See text.

Table 2: *Variables and their correlation coefficient*

Variable	Predicted Sign	Correlation Coefficient
Change in Hours	Negative	- 0.05
1911 Hours	Negative	0.38
Change in Wages	Positive	0.17
1911 Wages	Positive	- 0.23

Source: See text.

### Geographical explanation

As the paper previously showed, the strike primarily affected companies operating in the north of England and south Wales while those operating in the south and east of England were affected to a much lesser degree. The previous analysis showed that neither wages nor hours co-varied geographically with the intensity of the strike, which implies that they were not the principal factors behind the industrial action. Focusing on the regional nature of the strike, however, explains why it hurt some companies more than others.

Those regions in which the strike took place were highly unionized and known for industrial action. The NER, for instance, operated in an area of England that their GM labelled ‘the home of organized labour’ where his men worked ‘side by side’ with unionized men from other industries.<sup>234</sup> Operating in such an area helps explain why the NER suffered strikes in 1910, early 1911, and again in August 1911, even though they recognized railway unions. The other railways affected by the strike also share the common factor of operating in areas historically known for unionization and industrial action.

Figure 3 illustrates this historical tendency as the regions comprising the industrial north of England and south Wales account for the majority of the working days during the period. The railway strike of 1911, therefore, is best viewed as part of tense industrial relations in these areas and not independent from them. Events during the strike also reveal problems in these regions unrelated to the railways. For instance, anti-Semitic violence took place in Monmouth<sup>235</sup> and hostilities broke out between Catholics and Protestants in Liverpool.<sup>236</sup> The historiography’s focus on the wages and working conditions of railwaymen as the reason for the strike misses these non-railway regional tensions.

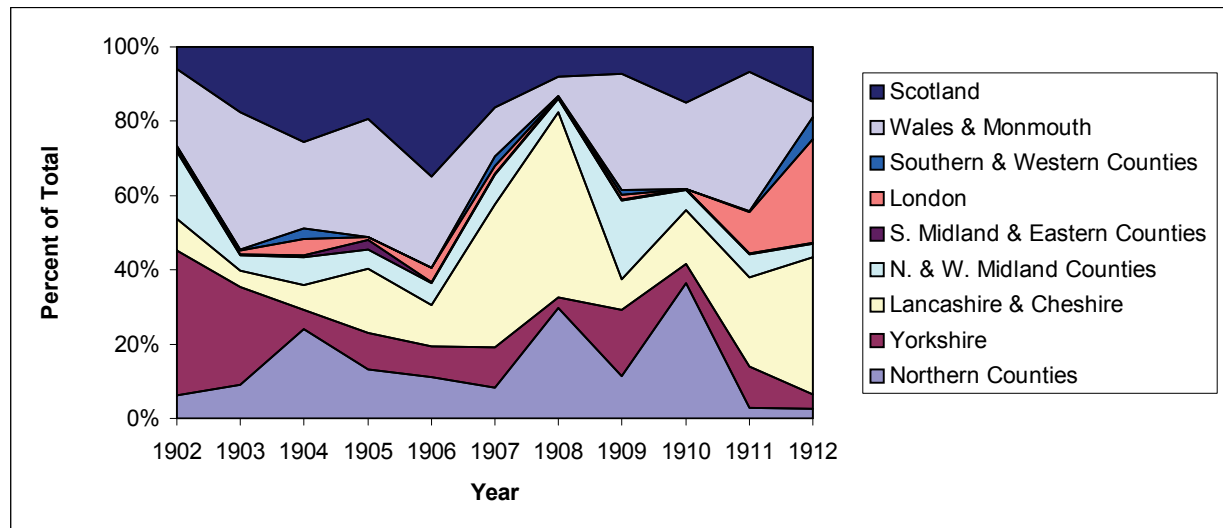
In other words, the material conditions of railwaymen in a particular region do not predict the strike’s intensity in that area. In many cases the railway companies operating in the south and east of England offered poorer working conditions and paid lower wages. These regions historically had fewer labour problems, however, and the 1911 railway strike affected companies operating in these areas to a lesser degree. It is geography and not material conditions, then, that answers the apparent contradiction of why LNWR goods workers in the north of England struck and struck early, even though their counterparts at Euston Station in London remained on the job.

<sup>234</sup> *PP* [Cd. 6014], p.573.

<sup>235</sup> *The Economist* (26 Aug. 1911), p.418-9.

<sup>236</sup> *PP* (323.), p.6.

Figure 3: Regional industrial action in working days, 1902-12



Source: PP, 'Strikes and Lock-Outs', (1902-12).

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# The effect of reparations on the British coal trade

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## Introduction

In the assemblage of writings on the performance of the British coal trade during the interwar period scant attention has been given to the role that reparations played in the dislocation of British coal exporters from their established markets. Traditional accounts of the failure of the British industry have focused upon the inadequacy of British industrial organization, the ineptitude of entrepreneurial talent, and the insufficient level of technical advancement achieved in the industry. Whatever the perceived failures of the British coal industry may have been, a further set of circumstances instituted under the Treaty of Versailles shaped the development of the British coal industry during the period and initiated the irreversible decline in British coal exports. With the signing of the Treaty of Versailles in June 1919, the British Prime Minister David Lloyd George had, by assenting to the delivery of reparation coal to traditional British markets, unwittingly forfeited the future prosperity of his country's coal export trade and exposed British exporters to an uncompetitive world of political tribute and protectionism.

This paper will analyse the effects that German reparation deliveries had on the British coal trade, and challenge the hypothesis that the British coal industry was largely unaffected by the provisions of the treaty.<sup>237</sup> It is contended that reparation coal displaced British coal from the Italian market and caused considerable damage in the French market, markets which had been historically dominated by British suppliers. In both countries the Rheinisch-Westfälisches Kohlen-Syndikat (RWKS) was able to sign long-term preferential contracts with industrial consumers and government purchasers, allowing the German industry to displace British coal long after reparation deliveries had been terminated under the Hoover Moratorium of July 1931. The safeguards built into the Treaty of Versailles in order to protect the British export trade were either circumvented or failed, allowing German suppliers to usurp the west European coal market whilst leaving British exporters hankering for the halcyon days of 1913.

## The provisions of the Treaty

The Treaty of Versailles placed four principal coal requirements upon Germany: (1) the delivery of annual options of reparation coal to France (7 million tons), Belgium (8 million tons), Italy (sliding scale from 4.5 to 8.5 million tons), and Luxembourg (4 million tons); (2) the cession of the Saar mines to France; (3) the reconstruction of damaged French pits in the Nord and Pas de Calais; and (4) the transference of the Upper Silesian mining region to Poland. The provisions irrevocably altered the coal map of Europe, taking into account little in the way of economic logic or regard to the operation of the European coal industry before the war. Germany was stripped of a third of her coal reserves, Lorraine ore was severed from its principal consumers in the Ruhr, and traditional British export markets were subjected to huge flows of reparation coal.

Although British exporters expected greater competition in foreign markets after the war, they also believed that the government would safeguard their interests during the deliberations over reparations payments. The Treaty of Versailles thus had an in-built mechanism designed to price German reparation coal above the price of British export coal,

<sup>237</sup> For instance in the relevant volume of the National Coal Board sponsored history of the industry, Supple suggests that 'it seems unlikely that the effect on total British exports was very great'. B. Supple, *The History of the British Coal Industry: The Political Economy of Decline, 1913-46*, (Oxford: Clarendon, 1987) p.191.

nullifying any advantages of the receiving powers taking reparation coal over British coal on commercial account.<sup>238</sup> The distinction in price was intended to protect British coal from competition from German sea-borne coal to the European and Mediterranean markets, exports that had been and were foolishly expected to remain negligible.<sup>239</sup> The British delegation sought further safeguards in the export of coal to Italy, with at least two-thirds of the Italian schedule required to be taken by land delivery, thus incurring high transportation costs across the Alps.<sup>240</sup>

### Reparations, 1920-24

British concerns over the damaging effect of reparation coal surfaced as early as January 1920, over a year before the Reparation Commission established the total German liability. The British delegation was concerned over French demands to increase German deliveries from 0.6 to 2 million tons of coal per month, arguing that French ports could not cope with much more than the current volume of German deliveries without a corresponding decline in British exports to France.<sup>241</sup> A dearth of merchant shipping, coupled with damaged docking facilities, was diverting shipping and handling facilities from British export coal to German reparation coal, and 'gravely prejudic[ing] the operation of the British coal export trade'.<sup>242</sup>

A year later and the problems were becoming manifest, with British exporters unable to dispose of export coal due to the 'practical cessation of demands for coals from France'.<sup>243</sup> At the root of the problem was believed to be the large quantity of German coal available under the reparation arrangements.<sup>244</sup> The situation prompted the Secretary for Mines to remind the British delegation in Paris that the government had only assented to the Versailles coal clauses due to French assurances that they would continue to take 12 million tons of British coal per annum.<sup>245</sup> The situation was, at this point, hardly cataclysmic for the British industry with an average of 11.9 million tons being exported per annum during 1920-24, against a 1909-13 average of 10.7 million tons.<sup>246</sup>

The situation had, however, become so acutely politicized that the Miners' Federation of Great Britain called for a meeting with Ramsay MacDonald in mid-1924 to demand Britain's abandonment of the treaty. The MFGB pointed out the economic logic in withdrawing from a treaty which had enabled traditional consumers of British coal to become sellers against British interests in the European market, whilst facilitating collusion in price setting between the receiving powers and Germany.<sup>247</sup> The Prime Minister rejected the miners' demands outright, contending that salvation for the British industry could be found in the newly-formulated Dawes Plan which would ensure the stabilization of the mark and the removal of the German advantage of exchange.<sup>248</sup> This would simultaneously improve the

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238 For overland delivery, including barge, German pithead price plus freight to frontier provided pithead price did not exceed the pithead price of British coal for export. For sea-borne delivery the German export price f.o.b. German port ports or the British export price British ports, whichever lowest.

239 British Delegate to the Reparation Commission, 'Price of Coal to be Supplied by Germany under the Peace Treaty', (26 February, 1920) p. 1, (T)he (N)ational (A)rchives BT13/98/1.

240 Cabinet, *Memorandum by the Chancellor of the Exchequer*, (June, 1929) p. 10 TNA POWER26/178.

241 Minutes of Meeting regarding the proposal for exchanging American coal consigned for Switzerland for German reparation coal consigned for Italy, (30 Jan., 1920) p.2.

242 H. W. Fryer, 'Treaty of Peace between the Allied and Associated Powers of Germany, Coal Clauses Annex V', (24 Jan., 1920) p. 3 TNA POWER26/27.

243 Mines Department to British Secretary to the Reparation Commission, (20 January, 1921) POWER26/27.

244 Ibid.

245 Ibid.

246 Mines Department, *Annual Report of the Secretary for Mines*, (London: H.M.S.O., 1931) p.130.

247 Transcript of the Shorthand Notes of Treasury Reporters, 'Deputation to the Prime Minister from the Miners' Federation of Great Britain to the Effect upon British Mines of Deliveries of Coal by Germany under the Scheme of Reparations', (1 Oct., 1924) p. 41ff. TNA PREM1/37.

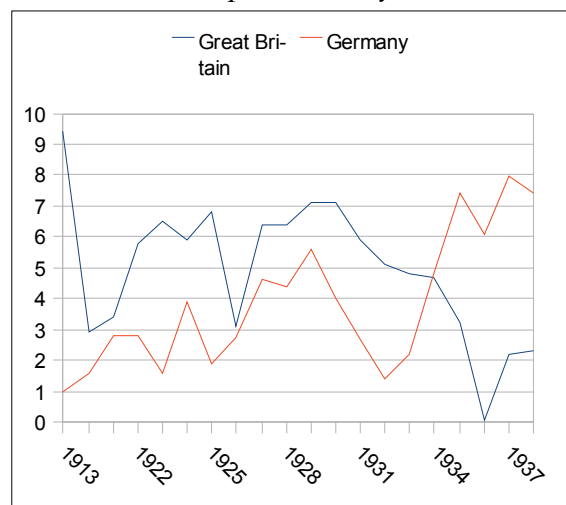
248 Ibid., p.23ff.

competitive position of British coal, whilst removing all the tangible benefits of an undervalued currency which the RWKS had exploited.<sup>249</sup>

### The Italian market

Prior to the First World War Italy was predominantly a British market, importing 86.7 per cent of her coal requirements from the United Kingdom. As a country with practically no fuel resources of her own, she was dependent upon foreign imports. Italian postwar consumption increased substantially, with 19 per cent more coal being imported over 1927-30 compared with 1913. Despite this increase in consumption British exports were down on average 2.3 million tons per annum by the late 1920s compared with 1909-13, whilst German exports increased from 0.96 million tons in 1913 to an average of 4.5 million tons during 1928-30.<sup>250</sup> Although increased German competition was expected in the Italian market after the war, the British coal trade could do nothing to compete with coal being bought on reparation account.<sup>251</sup>

Chart 1: *British and German coal exports to Italy, 1913 and 1920-38 (million tons)*



Source: Mines Department, *Annual Report of the Secretary for Mines*, (London: H.M.S.O., 1938) see statistical appendix; Statistisches Reichsamt, *Statistisches Jahrbuch für das Deutsche Reich*, (Berlin) various volumes 1920-39.

The British government made repeated representations to Italy regarding the country taking almost their entire payment schedule from Germany in the form of reparation coal, with estimates that anthracite exports from South Wales had diminished by around 4 million tons per annum due to the Italian government's policy.<sup>252</sup> The Italian government was eventually forced, under the Hague Protocol of 1929, to throw open part of the contract for the Italian railways and allow Great Britain to secure a guarantee purchase of 1 million tons per annum over three years. By the late 1920s the situation had become increasingly complex for the British industry, as over 90 per cent of reparation deliveries were being carried out by means of commercial contracts which established long-term arrangements between German suppliers and Italian consumers that were exceptionally hard for British exporters to break down.<sup>253</sup> Furthermore the commercial contract scheme included a provision for the payment of bonuses per ton of reparation coal imported from the RWKS, which enabled the syndicate to subsidize

<sup>249</sup> Ibid., p.25.

<sup>250</sup> Annual Report of the Secretary for Mines, (1931) p. 130; Statistisches Jahrbuch, (1930) p.212 and (1931) p.192.

<sup>251</sup> Mines Department, *The British Coal Trade and the Hoover Scheme*, (15 July, 1931) p. 2 TNA T7800/01/2.

<sup>252</sup> Cabinet, *Memorandum by the Chancellor*, pp.11-12.

<sup>253</sup> Reparation Conference, *British Coal Trade*, (1929) p.4.

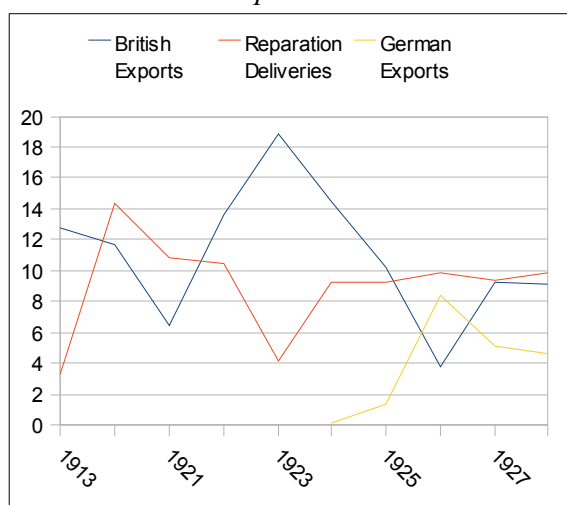
the price of export coal and strengthen the competitive position of German coal in the European market.<sup>254</sup>

### The French market

During the first three years of reparation deliveries the French government operated a system of *peréquation* to determine the price of German coal charged in the domestic market. In essence the *Office des Houillères Sinistrées* was selling reparation consignments at a profit which allowed for the subsidization of domestic coal in order to create a uniform price between the two. The French consumer was able to benefit by purchasing coal at less than the cost of French production, whilst the French producer benefited from being protected against foreign competition in the domestic market.<sup>255</sup> The system of *peréquation* was abandoned towards the end of 1922, whereon the price of German coal was allowed to rise above that of domestic producers.

Following the ratification of the Dawes Scheme the French government entered into a collusive agreement with the RWKS to import German anthracite into the Paris market.<sup>256</sup> Hitherto the impact of German coal on the market had been negligible, and trade had been dominated by imports from South Wales. The French intended to put a ceiling on the price of German anthracite, limiting the price chargeable by merchants to 375 francs per ton. The Treasury correctly saw this scheme as a direct attack upon coal imported from Britain, which retailed at 150 francs, or 25/-, per ton higher than the suggested price for German anthracite.<sup>257</sup>

Chart 2: *British coal exports and German reparation deliveries to France, 1920-28 (million tons)*



Source: Mines Department, *Annual Report of the Secretary for Mines*, (1938) see statistical appendix; Statistischen Reichsamts, *Statistisches Jahrbuch*, (various volumes 1920-29).

Chart 2 shows two main trends in the French market over the course of the 1920s: (1) that British and German coal was substituted during the Ruhr crisis in 1923 and the 1926 General Strike; whilst (2) the German industry began to control an increasing proportion of the market at the expense of the British industry. By 1928 Britain was supplying 1.5 million tons less coal to France compared with 1909-13, despite consumption in the country increasing by 7 million tons.<sup>258</sup> In addition France was taking over 2 million tons of coal from the Saar

254 Ibid. p.5.

255 Fryer, *Relation between the Prices Debited for Coal Delivered on Reparation Account and the Prices at which the Receiving Powers Sell the Coal*, (27 Oct., 1925) p. 1 POWER26/27.

256 *Financial Times*, 26 October 1925.

257 H.W. Fryer, *Statement by the French Minister for Public Works Reported in the Financial Times*, (27 Oct., 1925) T7800/01/1.

258 Reparation Conference, *British Coal Trade*, (1929).

compared with 1913, whilst output was up 21.9 per cent in the newly-reconstructed mines in the Nord and Pas de Calais to 24.5 million tons in 1927.<sup>259</sup> The Hoover Moratorium in 1931 brought no respite for British coal in France, with the French levying a 15 per cent import surtax on British coals, and a subsequent halving in exports to the market from 13 million tons to 6.2 million tons occurring over 1930-38.<sup>260</sup>

### The Young Plan

By 1929 the British industry had become united in its objection to reparation coal, and was unanimous in the deleterious effect the deliveries were having on the British export trade. The President of the Mining Association of Great Britain stated to the Mines Department that the legacy of Versailles had been 'one of the most potent causes contributing to the depression of the coal export trade of this country and to the serious unemployment in our exporting coal fields'.<sup>261</sup> The British Coal Exporters' Federation was incensed at the prejudice British coal had experienced in France and Italy, and especially at the arrangement which had allowed France to take reparation coal at favourable prices and then sell the coal for export from French ports, resulting in the British coal trade bearing 'nearly all the trade dislocation which is inseparable from war indemnities'.<sup>262</sup> The Mines Department suspected that Germany was using the bonus payments to quote lower prices for export coal, allowing them to establish favourable arrangements with French and Italian consumers for coal taken on or beyond reparation account and hampering the competitive ability of British coal.<sup>263</sup>

### Conclusion

The Treaty of Versailles restricted the competitiveness of British coal in the French and Italian markets, and allowed the German coal industry to establish a foothold in these markets. The provisions established in the Treaty seeking to protect the British export trade either failed, were circumvented, or nullified, thus allowing the European coal market to be saturated with German reparation deliveries. Although the effects of reparation deliveries on the British coal trade were slow to materialize it is contended that these deliveries, combined with the subsequent restrictive trade and protective industrial policies of the receiving powers, constricted British coal exports and resulted in the industry bearing the brunt of the economic disturbance from Versailles.<sup>264</sup> By the late 1920s it was clear to both government and industry that the requisition of German coal by the allies had wrought considerable damage upon the British coal trade.

With the possibility of making payments in cash being restricted by exchange problems, Germany had sought to use deliveries in kind as the principal means of fulfilling her war debt.<sup>265</sup> The process required Germany to undertake significant investment and technological innovation in the coal industry in order to fulfil the reparations schedule, bringing increasing efficiency and placing German export coal on a more competitive base against British export coal.<sup>266</sup> The Young Plan had sought to rectify the failures which had left the British industry competing in a world of political tribute. In the event the revised schedule of payments offered little hope to British exporters and, moreover, the industry was beginning to be dogged by the fundamentally larger problem of competition from oil.

259 Reparation Conference, *British Coal Trade*, (1929); H.W. Cole (Mines Department) to S. D. Waley (Treasury), (15 June, 1931) T7800/01/2.

260 Mines Department, *Annual Report of the Secretary for Mines*, (1938) see statistical appendix; Lee to Under Secretary for Mines, (4 Dec., 1931) T7800/01/2.

261 W.A. Lee to H.W. Cole, (27 June, 1929) POWER26/178.

262 C.L. Clay to H.W. Cole, (24 July, 1929) POWER26/178; Clay to Stewart, (8 July, 1929) POWER26/178.

263 Reparation Coal Deliveries and the British Coal Trade; Cole to Fryer, (4 July, 1929) POWER26/178.

264 The opinion of C.L. Clay, Chairman of the British Coal Exporters' Federation: Clay to R.M. Stewart, 8 July 1929, POWER26/178.

265 *Neues Wiener Tagblatt*, (18 Aug., 1929).

266 Ibid.



# **The influence of ‘governmental participation’ on the concentration of coal producing companies in the countries of the European Coal and Steel Community (ECSC), 1952-67**

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## **1. Introduction**

After the Second World War, there was a strong tendency to create a new economic system in Western Europe, in order to prevent a new ‘Great Depression’ and as a reaction to the Second World War, which was perceived as the end result of a crisis that had been caused by the failure of the traditional, ‘liberal’ economic system.

Moreover, there had been a long tradition of extensive ‘involvement of the state’ in, for example, France and Germany and together with the theoretical framework that had been provided by JM Keynes in his *The General Theory of Employment, Interest and Money* (1936), this led to the new concept of the ‘mixed economy’, in which the central paradigm was that only an ‘intervention from the state’ could reinstate the economic demand and reduce the unemployment rate to a ‘socially acceptable’ level.<sup>267</sup> According to the extent of governmental intervention or ‘participation’ in the economy, three variants of the ‘mixed economy’ could be discerned (the ‘neo-collective’, ‘neo-liberal’ and ‘central consultation’ variants) and in each of the postwar (Western) European countries, one of these variants of ‘governmental participation’ was more dominant.<sup>268</sup>

This paper examines which of the three variants of ‘governmental participation’ in the coal producing companies was most dominant in the five coal producing countries of the European Coal and Steel Community or ECSC (West Germany, France, Italy, Belgium and The Netherlands) at the ratification of the ECSC’s foundation treaty in 1952 and how this has influenced the ‘concentration’ of the coal producing companies in these countries. Secondly, we look at how the (very) different ‘concentration ratios’ of the coal producing industry in these five countries have changed between 1952 and 1967.

## **2. Historical background**

The coal and steel industry was very important for both the postwar rebuilding of the European economy and the economic prospects of Europe in the long term. However, the postwar political situation led to major conflicts about who would own and control the production of coal and steel. The main problem was the German coal and steel industry, which had been the dominant economic force in prewar Europe. However, after the Second World War, (West) Germany still had the technological knowledge and the experience to quickly regain its prewar position and therefore, the allies were understandably not inclined to give (West) Germany its (economic) independence back.<sup>269</sup> In response to this ‘problem’ and to the need to take steps towards more European ‘integration’, the political leaders of France, West Germany, Belgium, The Netherlands, Luxembourg and Italy founded the ECSC, which they hoped would provide a ‘common’ legal framework for the coal and steel industry.<sup>270</sup>

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<sup>267</sup> Van der Wee, (2000), p.28.

<sup>268</sup> Aldcroft, (1996), p. 155. and Van der Wee, (1989), p.210-13.

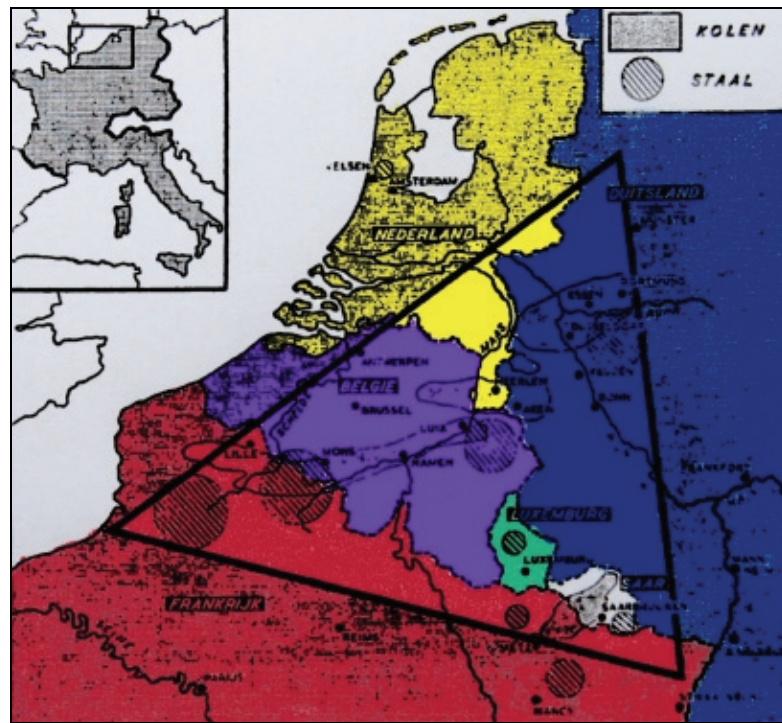
<sup>269</sup> Spierenburg and Poidevin, (1993), p.4.

<sup>270</sup> Bebr, (1953), p. 6. and Gerber, (1998), p.336.

### 3. The ‘industrial triangle’ and governmental participation in the ECSC’s coal producing companies

There were considerable differences in the regional ‘concentration’ of the coal companies within the ECSC countries. Before the Second World War, the region formed by Lorraine and Northern France (in France), the Saar region, Aachen and the Ruhr region (in West Germany), Luxembourg, Belgium and the southern part of the Netherlands was called the ‘*industrial backbone*’ of Western Europe. Most of the coal, iron ore and steel production took place in this (relatively) small geographical area which had the shape of an ‘inverted’ triangle and was therefore called the ‘*industrial triangle*’. In 1952, all six ECSC countries (of which only Italy was entirely outside of the ‘industrial triangle’) produced steel and all but Luxembourg produced coal. In the period 1952-67, the ‘industrial triangle’ remained responsible for more than 90 per cent of the total coal production of the ECSC.<sup>271</sup>

Figure 1: *The ECSC and the Industrial Triangle*<sup>272</sup>



However, the overall number of coal producing companies in the ECSC has markedly decreased in this period (from 149 to 77). In addition, the coal producing companies weren't equally distributed between the ECSC countries and differed greatly in size. Most of these companies could be found in West Germany (71 in 1952 and 34 in 1967) and Belgium (62 in 1952 and 29 in 1967). France had 8 large coal producing companies throughout the entire period we studied, followed by the Netherlands (with 5 companies) and Italy (which had 3 companies in 1952 and only 1 in 1967).<sup>273</sup>

In 1950, the economies of France and Italy were regarded as the *neo-collective* variant of the ‘mixed economy’ whilst the economy of West Germany was regarded as the *neo-*

<sup>271</sup> Eurostat, *Coal and other energy sources*, 1962, 1964, and 1969 and Eurostat, *Energy Statistics*, yearbook 1966: 1950-1965 and yearbook 1968: 1958-1967.

<sup>272</sup> In the statistical data of the ECSC the ‘Saar region’ was only from 1<sup>st</sup> January 1960 on counted as part of West Germany in an economic respect. Until 1960, the ECSC statistically regarded the ‘Saar region’ as an ‘independent’ region, not a part of West Germany. Source: Voorlichtingsdienst van de H.A., (1959), p.62.

<sup>273</sup> Eurostat, *Energy statistics*, yearbook 1966:1950-1965 and yearbook 1968:1958-1967, Fédération charbonnière de Belgique, *L'industrie Charbonnière belge*, p.19 and CECA, HA: Division des problèmes industriels, Bureau d'Etudes et d'Analyses, *Les entreprises de la communauté: I. Charbon, état*, 1959, pp.1-147.

*liberal* variant. The economies of The Netherlands and Belgium were characterized as the *central consultation* variant.<sup>274</sup>

In this respect, the coal industries in these five countries were characterized by the same variants of the ‘mixed economy’ which implied a variable degree of ‘governmental participation’ (table 1).

Table 1: *Governmental participation in the coal industries of the ECSC countries*

In %					
1938	(Saar)	Netherlands	West Germany	Belgium	/
1955	(Saar )/France/Italy	Netherlands	West Germany	Belgium	42
		(63)	(16)		
1961	France/Italy	Netherlands	West Germany	Belgium	44
		(62)	(29)		
1967	France /Italy	Netherlands	West Germany	Belgium	41
		(54)	(20)		
Year	+/- 100	100 – 50	50 – 0	+/- 0	firms(a)

(a) Coal firms under ‘governmental influence’ in the countries of the ECSC.

Source: EGKS, (1963), p. 222, Lister, (1960), p. 165 - 168 and Commissie van de Europese Gemeenschappen, (1968), p.61.

As could be expected, all coal producing companies in Italy and France had been nationalized, and the coal industry of West Germany was (much) more privatized. In addition, there were both nationalized and private coal producing companies in the Netherlands. However, there were no nationalized companies in Belgium, which is rather unexpected as the Netherlands and Belgium were characterized by the same *central consultation variant* of the ‘mixed economy’.

#### 4. The ‘concentration’ of the ECSC’s coal producing companies

The Herfindahl-(Hirschman) index or HHI is a measure of the size of firms/companies in relation to the industry concerned and an indicator of the amount of competition among them. It is defined as the sum of the squares of the market shares of each individual firm ( $M_i$ ), with  $n$  being the number of firms in a given industry.

$$HHI = \sum_{i=1}^n M_i^2$$

The HHI can have a value between 0 and 1, ranging from a very large amount of very small firms to a single monopolistic producer. A higher Herfindahl index is an indication for a less competitive industry. In order to calculate the HHI for a specific year and industry, the market shares of all firms for that year and industry are needed. Because we only found the market shares of all coal producing companies in Belgium and West Germany, we could only calculate the HHI’s for those countries. Between 1952 and 1967, the coal industry in both countries became more concentrated, with an increase in pricing power and a decrease in the level of competition (table 2).

<sup>274</sup> Van der Wee, (1989), pp.210-13, 216-18, 223-26, 228-30.

Table 2: Calculation of the HHI for the coal firms

<i>Coal firms</i>	<i>1952</i>	<i>1967</i>
Belgium	0.0291273	0.0801035
West Germany	0.0320118	0.0431416

Source: Eurostat, *Energy Statistics*, yearbook 1966: 1950-1965 and yearbook 1968: 1958-1967 and *Coal and other energy sources*, 1962, 1964, and 1969.

Other ‘concentration ratios’ were needed to get an idea of the (change in) ‘concentration’ of the coal industries in the ECSC as a whole and in the other three coal producing ECSC countries (France, Italy and the Netherlands). In this respect, we have used the so-called ‘ten-firm concentration ratio’ or C10, which consists of the market share (as a percentage/proportional share of the total production) generated by the ten largest firms in the industry.

Between 1952 and 1967, the C10 of the ECSC’s coal industry has increased from 42.4 to 49.0 per cent of the total production, which indicates a more concentrated industry in the ECSC as a whole during this period (table 3).

Table 3: Ten largest coal firms of the ECSC and their share in the ECSC-production

<b>Share in the ECSC (in %)</b>	<b>1952</b>	<b>1961</b>	<b>1965</b>	<b>1967</b>
The largest firm	12.3	11.7	11.4	12.4
The 4 largest firms	28.4	30.4	28.9	31.9
<b>The 10 largest firms</b>	<b>42.4</b>	<b>48.9</b>	<b>45.6</b>	<b>49.0</b>

The French “Houillères de bassin” were counted as independent firms and not as part of one firm, the large “Charbonnages de France”.

Source: Eurostat, *Energy Statistics* yearbook 1966: 1950-1965 and yearbook 1968: 1958-1967.

However, this increase only reflects the evolution of the coal production for the ECSC as a whole and the ‘point of departure’ in 1952 was different in the five coal producing countries. As already pointed out above, there was a (very) different degree of ‘governmental participation’ (and hence different variants of the ‘mixed economy’) in the five countries and this also influenced the degree of concentration of the coal producing companies. Therefore, for each of the five countries, we calculated the market share, as a percentage of market output generated by the three largest coal companies in the country. We found large differences between the countries with a large governmental participation and those with only limited or no governmental participation. Moreover, we investigated how this (different) degree of concentration of the coal industry in 1952 has changed between 1952 and 1967 (tables 4 and 5).

#### A. Coal firms in countries with a large governmental participation (50 per cent or more)

Table 4: The market share, as a percentage of market output generated by the three largest coal firms

<b>Country</b>	<b>1952</b>	<b>1961</b>	<b>1965</b>	<b>1967</b>
<b>France</b>	82.0	83.2	84.4	85.3
<b>Italy</b>	99.1	99.4	100.0	100.0
<b>The Netherlands</b>	92.7	92.1	91.5	85.4

Source: Eurostat, *Energy Statistics*, yearbook 1966: 1950-1965 and yearbook 1968: 1958-1967.

Generally, we could state that in the countries with a large governmental participation in the coal producing industry (France, Italy, and – to a lesser extent – The Netherlands), the three largest coal companies (which were all ‘governmental’ companies) were responsible for 80 per cent or more of the country’s total coal production in 1952. In each of these countries, there were also numerous (very) small companies that were each responsible for a (very)

small percentage of the total coal production. In other words, the coal industry in France, Italy and The Netherlands was very ‘concentrated’ in 1952. Moreover, between 1952 and 1967, the coal industry remained very concentrated as the total market share generated by the three largest firms barely changed at all and for instance, by 1967, there was just one firm responsible for the entire coal production of Italy (table 4).

B. Coal firms in countries with a small governmental participation (50 per cent or less)

Table 5: *The market share, as a percentage of market output generated by the three largest coal firms*

Country	1952	1961	1965	1967
<b>Belgium</b>	14.2	19.9	28.1	35.2
<b>West Germany</b>	18.8	17.3	22.8	25.8

Source: Eurostat, *Energy Statistics*, yearbook 1966: 1950-65 and yearbook 1968: 1958-67.

In the countries with a (very) low degree of ‘governmental participation’ (Belgium and West Germany), there were much more ‘small to medium size’ companies, without there being very big or very small companies, which meant that in 1952, the coal industry in these countries was not so ‘concentrated’. However, the proportional share of the three biggest coal companies of Belgium and West Germany in their total coal production has increased from 15 per cent in 1952 to approximately 30 per cent in 1967, which indicates that the coal industries have become more ‘concentrated’ by 1967.

That being said, we thought it less sensible to draw similar ‘overall’ conclusions from these data as we did for the ECSC countries with a higher degree of ‘governmental participation’. One important reason for this is that – even in 1967 – the three largest coal producing companies of Belgium and West Germany were still only responsible for a (relatively) small percentage of the total coal production. Moreover, in the period we studied (1952-67), the size of the coal companies in these two countries has changed much more than in the countries with more ‘governmental participation’, which means that in the studied period, the three biggest companies of Belgium and West Germany were not always the same. Therefore, we have analysed the coal producing companies in Belgium and West Germany in much more detail in order to get a picture of the (change in) concentration of the entire coal industry in Belgium and West Germany rather than just 15 to 30 per cent of this industry (table 6).

Table 6: *Absolute number and share in total number of Belgian / West German coal firms, according to size groups (size in 1,000 ton)*

<b>Belgium</b>		
Small: 0 – 250	28 (45%)	8 (38 %)
Medium: 250 – 1,000	26 (42 %)	12 (45 %)
Large: ? 1,000	8 (13 %)	5 (17 %)
	1952	1967
<b>West Germany</b>		
Small: 0 – 250	20 (28 %)	0 (0 %)
Medium: 250 – 1,000	8 (11 %)	2 (5,8 %)
Large: ? 1,000	38 (54 %)	27 (80 %)
Large: ? 5,000	5 (7 %)	5 (14,3 %)
	1952	1967

Source: Eurostat, *Energy Statistics*, yearbook 1966: 1950-65 and yearbook 1968: 1958-67.



In contrast to the situation in France, Italy, and the Netherlands – characterized by a large number of very big companies and a few smaller firms – there was a more equal division/segmentation into different size groups in Belgium and West Germany. In 1952, Belgium and West Germany had many small and medium sized coal firms and a few larger ones. By 1967, however, this situation had changed. Between 1952 and 1957, the number of firms has decreased (from 62 to 29 in Belgium and from 71 to 34 in West Germany). Moreover, the share of certain size groups in production has changed as the number of small sized coal firms as well as their share in the total production has decreased in both Belgium and West Germany (and by 1967, there were even no ‘small’ coal firms left in West Germany). With regard to the medium sized firms, which decreased in number, their share has increased in Belgium and decreased in West Germany. Lastly, in the studied period, the number of large coal firms in both countries has decreased although their share in the overall coal production has increased. In summary, between 1952 and 1967 and as with the three ECSC countries with more governmental participation in the coal industry, the Belgian and West German coal industry became more ‘concentrated’, and there has been a clear ‘shift’ towards less firms of all sizes and larger ‘large’ firms responsible for a larger share of the total coal production.

## 5. Concluding remarks

The coal industries in the five coal producing countries of the ECSC were characterized by one of the three variants of the ‘mixed economy’ (which implied a variable degree of ‘governmental participation’). All coal producing companies in Italy and France had been nationalized, whilst there were no nationalized companies in Belgium and in the Netherlands and West Germany, the degree of ‘governmental participation’ was situated between these two extremes.

The ‘ten-firm concentration ratio’ of the ECSC’s coal market has increased from 42.4 per cent in 1952 to 49.0 per cent in 1967, which indicates a more ‘concentrated’ coal industry in the ECSC as a whole in 1967. However, the ‘point of departure’ in 1952 was different in the five countries, and the different degree of governmental participation in the coal industries has also led to a different degree of ‘concentration’ of the coal producing firms in those countries. In the countries with a large governmental participation in the coal producing industry (France, Italy, and – to a lesser extent – The Netherlands), the coal industry was very ‘concentrated’ in 1952 (as the largest three firms of each country were responsible for at least 80 per cent of total production) and between 1952 and 1967, the coal industry in these countries remained very ‘concentrated’. In the countries with a (very) low degree of ‘governmental participation’ (Belgium and West Germany), the largest three companies were only responsible for 15 per cent of the total coal production in 1952. There were much more ‘small to medium size’ companies, without there being very big or very small companies. However, by 1967, the coal industry in Belgium and West Germany has also become more ‘concentrated’.

In conclusion, we could state that although after the Second World War, each ECSC country ‘chose’ one of the three variants of the ‘mixed economy’, by 1967, they had ‘converged’ to a ‘middle way’ between the different variants which had led to a more ‘concentrated’ coal industry. We think that there are several reasons for this evolution towards a more ‘concentrated’ coal industry throughout the period we studied. Examples of these reasons include the increasing competition worldwide that asked for larger firms in order to remain competitive, the advantages of larger – and then often totally ‘integrated’ – coal (and steel) firms, the fact that the coal producing countries of the ECSC increasingly started to ‘act and react’ as one entity and no longer as the ‘sum’ of different coal producing countries that had wanted to found a community in order to deal with the ‘German problem’.



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# The railway mania: fundamentals of a bubble

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The British Railway Mania, which reached its peak in 1845, followed the classic path of a financial bubble. During the Mania, prices of railway shares rose by an average of 105 per cent, while shares of non-railway companies increased by just 15 per cent. The market then crashed, and during a prolonged decline railway shares fell back below their original value. Several hundred new railways were promoted at the height of the Mania, but many faced financial distress in the latter part of the decade.

The study of financial bubbles, crashes and panics has been reawakened by the 'Dot-com' bubble of the 1990s and the recent Credit Crunch, which has its origins in a property bubble. The classic bubbles, such as the Tulip Mania, the Mississippi Scheme and the South Sea Bubble, have generally received the most attention [Garber (2001), and Temin and Voth (2004)], while the Railway Mania, has been largely neglected. It has often been discussed in studies of the early railways [see Simmons (1978) and Jackman (1966)], but it has only been examined from a bubble perspective by academics focusing on the historical development of accounting practices [Bryer, (1991), and McCartney and Arnold (2003)].

During such bubble episodes it is generally assumed that the prices of assets deviate from their fundamental value, and the relationship between share prices and dividends breaks down. Even the label given to this period, the 'Railway Mania', implies that investors were acting irrationally. However this paper opposes this view, by suggesting that investors were rational, given their imperfect foresight. To examine this proposition a comprehensive database of share prices and dividends has been constructed for the period.

An analysis of this data confirms that railway share prices do rise and fall in a typical bubble pattern, but it also reveals that there is a similar change in the dividends paid by the railways. A series of econometric tests confirm the significance of the relationship between prices and dividends throughout the Mania, a finding which is contrary to popular wisdom. However, only short-term future changes in dividends are incorporated into share prices, suggesting that investors had "bounded rationality" (Simon, 1986), as they had limited knowledge and foresight.

## The movement of share prices during the Mania

The history of the passenger railway is generally dated from the opening of the Liverpool and Manchester Railway in 1830. Several other railways followed in the early 1830s, before a large increase in projected schemes during the 1836-37 promotional boom. The economic downturn and burdens of construction reduced enthusiasm for new railway investment until 1843. It has been generally agreed that the prices of railway shares then rose sharply from 1843 to 1845, and fell thereafter to 1850. However the extent of the rise and fall has only been estimated on a monthly basis, and only for fourteen of the largest railways, by Gayer et al (1953).

To overcome these limitations a unique dataset has been constructed for this thesis, by computerizing the original share price tables published in *The Railway Times* (1843-50). The final dataset consists of 863 railway equity securities, and 142,103 observations, and is supplemented with weekly share price data on the twenty largest 'non railway' companies by market capitalization, obtained from the *Course of the Exchange* (1843-50).

To construct various market indices, the market return has been calculated by weighting the capital gains of the component companies by their market capitalization. The market indices for 'all railway' companies, for 'established railway' companies which existed

prior to the Mania period, i.e. 1843, and for the 'non railway' companies have been plotted in figure 1.

Figure 1: *Weekly market indices for all railways, established railways and non-railways, 1843-50*



It can be seen that the index representing 'all railway' companies shows the greatest increase during the Mania, rising from a base of 1,000 in January 1843 to a level of 2,050 on 8 August 1845. The index representing just the 'established railways' reached a peak of 1,704 on the same day, while the 'non railways' index had risen to just 1,152.

The 'all railways' index remained steady until 17 October 1845, after which it fell by 20.2 per cent in the next month. The 'established railways' fell by 17.6 per cent from their peak to the end of November, while the 'non railways' index fell by just 3.0 per cent from mid-October to the end of November. All of the indices then stabilized throughout 1846, before beginning a steady decline from January 1847 onwards, with the sample ending in 1850 with the 'all railways' index at 873, the 'established railways' at 767, and the 'non railways' at 1041.

### Railway dividends

The theoretical importance of dividends to the value of a security was already well established by this time. A pamphlet issued in 1845, called *The Short and Sure Guide to Railway Speculation* (Successful Operator, 1845, p.5) advises investors that with regards to the 'established lines we have simply to compare the market price of the share with the dividend which it pays'. The *Economist* argued that investors were attracted to railways because they 'appeared to promise a permanent security for very large dividends' (*Economist*, 1848, p.1297). In a similar manner *The Times* (29 January 1844) attributed the early rises in the prices of railway securities to the 'high and permanent rate of dividend that railway stock yields'. *The Railway Times* (1844, p.510) maintained that the 'steady and progressively increasing returns of some of the completed and well established lines' made it clear that railways were a desirable investment.

Recent academic debate has been divided on the issue of co-movements between dividends and prices during a bubble. Shiller (2005, p.188), for example, has stated that 'wiggles in stock prices do not in fact correspond very closely to wiggles in dividends'. Other authors have generally ignored the role of dividends in their explanations, with Blanchard and

Watson (1983) suggesting ‘rational bubbles’ can occur if investors focus on short-term capital gains, and Lux (1995) blaming bubbles on herd behaviour. However, Froot and Obstfeld (1991) have hypothesized that dividends may play a role in ‘intrinsic bubbles’, with investors over-reacting to dividend changes.

To analyse the impact of dividends during this period, the share price data was supplemented with dividend data, which was obtained from the *Course of the Exchange* (1843-50). During the period between 1843 and 1850, when the prices of railway shares changed dramatically, dividends also rose and fell substantially. Figure 2 plots the average dividend, scaled by par value, paid by the established railways, which were constructed before 1843.<sup>275</sup>

Figure 2: *Average weekly dividend/par ratio amongst established railway companies (weighted by par value), 1843-50*



The dividends, as a percentage of par value, paid by established companies at the beginning of 1843, averaged 4.1 per cent. They then increase steadily, reaching a peak of 7.4 per cent in July 1847, before falling to just 2.9 per cent by the end of 1850. The pattern of rising and falling dividends can largely be explained in terms of changes in the economic environment, and in the returns to scale experienced within the railway industry. In the early period the economy was vibrant, but then entered a period of crisis and stagnation (Evans, 1849). The railways initially benefited from increasing returns to scale as passenger numbers grew without much additional investment, but then suffered as passenger growth slowed relative to the expansion of the rail network (*Economist*, 1848, p.1187). There is also the suggestion that dividends may have been inflated by improper accounting practices during the boom (Smith, 1848).

### Co-movements of share prices and current dividends

To find if there was a significant relationship between share prices and current dividends a fixed-effects panel regression was then carried out, on both a weekly and half-yearly basis, using the price/par ratio as the dependent variable. The sample used included the largest twenty ‘non railways’ and the sixty-four ‘established railways’ for which dividend data was

<sup>275</sup> The new railways which were projected during the Mania, and which did not pay dividends, are excluded.

available. As can be seen from table 1, the dividend rate is highly significant in all specifications, suggesting a strong relationship between dividends and pricing.

Table 1: *Fixed-effects panel regression using share price/par ratio as dependent variable*

	Weekly Panel				Half-Yearly Panel			
	Railways and Non-Railways		Railways		Railways and Non-Railways		Railways	
Dividend Rate	0.100*** (0.027)	0.104*** (0.028)	0.054*** (0.017)	0.053*** (0.016)	0.107*** (0.027)	0.109*** (0.029)	0.060*** (0.016)	0.058*** (0.015)
Uncalled Capital		0.968* (0.570)		0.800 (0.632)		0.831 (0.583)		0.673 (0.681)
Company Size		-0.068* (0.036)		-0.101** (0.040)		-0.057 (0.035)		-0.092** (0.037)
Constant	0.775*** (0.181)	0.739*** (0.233)	0.843*** (0.081)	0.956*** (0.107)	0.742*** (0.182)	0.716*** (0.238)	0.832*** (0.076)	0.947*** (0.101)
Observations	22,060	21,540	13,720	13,200	954	933	594	573
Companies	84	83	64	63	84	83	64	63
Overall-R <sup>2</sup>	0.807	0.762	0.328	0.182	0.809	0.780	0.327	0.213

Note: Robust standard errors in parentheses, Significance given by \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

To examine this relationship further, and establish its consistency across time, a cross-sectional regression was carried out for each of the 417 weeks in the sample. This cross-sectional regression examined the relationship between the price/par ratio and the dividend/par ratio, in any given week, between companies. A dummy variable was also included which equalled one if the company was a railway, and zero otherwise.

When a cross-sectional regression was completed for each of the 417 weeks, the time series of coefficients were plotted, with a 95 per cent confidence interval calculated using 1.96 standard errors. It will be seen from figure 3, that for every single week of the 417 weeks within the sample, the coefficient of the dividend/par ratio variable is significantly above zero, a finding which is contrary to the widely held belief that this relationship breaks down during a bubble episode.



Figure 3: *Impact of current dividend rate on share price premium from repeated weekly cross-sectional regressions*

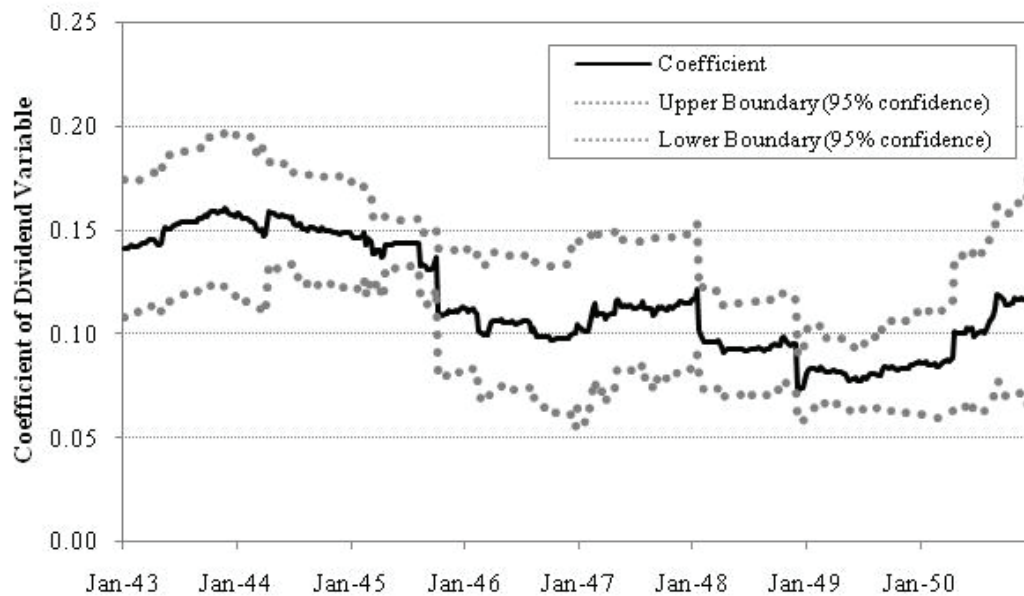
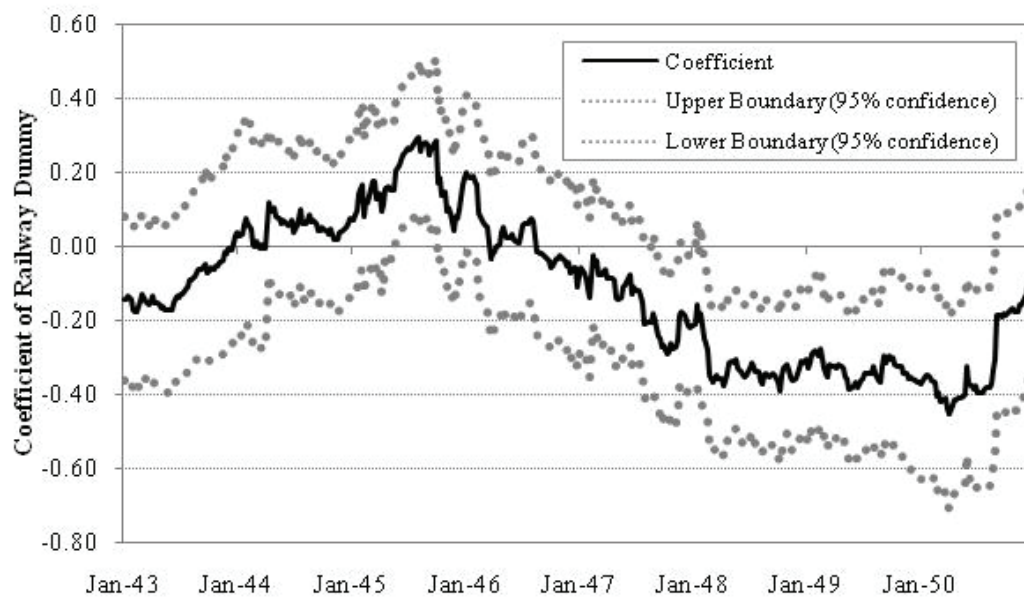


Figure 4 charts the coefficient on the dummy for railways, with the confidence interval providing an estimate of whether the prices of railway shares are significantly higher or lower than ‘non railway’ shares, given the current dividend rate. For much of the sample period the established railways are neither significantly overpriced nor underpriced. However, there is a brief period between 30 May 1845 and 3 October 1845, when railway shares seem to have a higher price than ‘non railway’ shares, and a sustained period between 6 August 1847 and 6 September 1850, where railways appear to be significantly underpriced, given their current dividend rates. This would suggest that around the peak in prices, and during the prolonged downturn, investors were looking beyond the current dividend rate.

Figure 4: *Impact of railway dummy on share price premium from repeated weekly cross-sectional regressions (controlling for current dividend)*





**Railway share prices and future dividends**

To test the importance of future changes in dividends a further series of fixed effects panel regressions has been conducted, using a half-yearly time period, as shown in table 2. The current dividend rate is highly significant in all specifications, with the next four half-yearly dividend changes also appearing to have a significant impact on prices. These results suggest that investors incorporated both the current dividend rate, and short-term future changes in dividends, into their valuations. The time frame suggested by these regressions appears to be plausible as the peak in the established railways' share prices occurs in August 1845, 23 months before the peak in dividends in July 1847. The lack of significance after two years suggests that investors had myopic foresight, and were unable to forecast long-term changes in dividends.

Table 2: *Fixed-effects panel regression using share price premium as dependent variable*

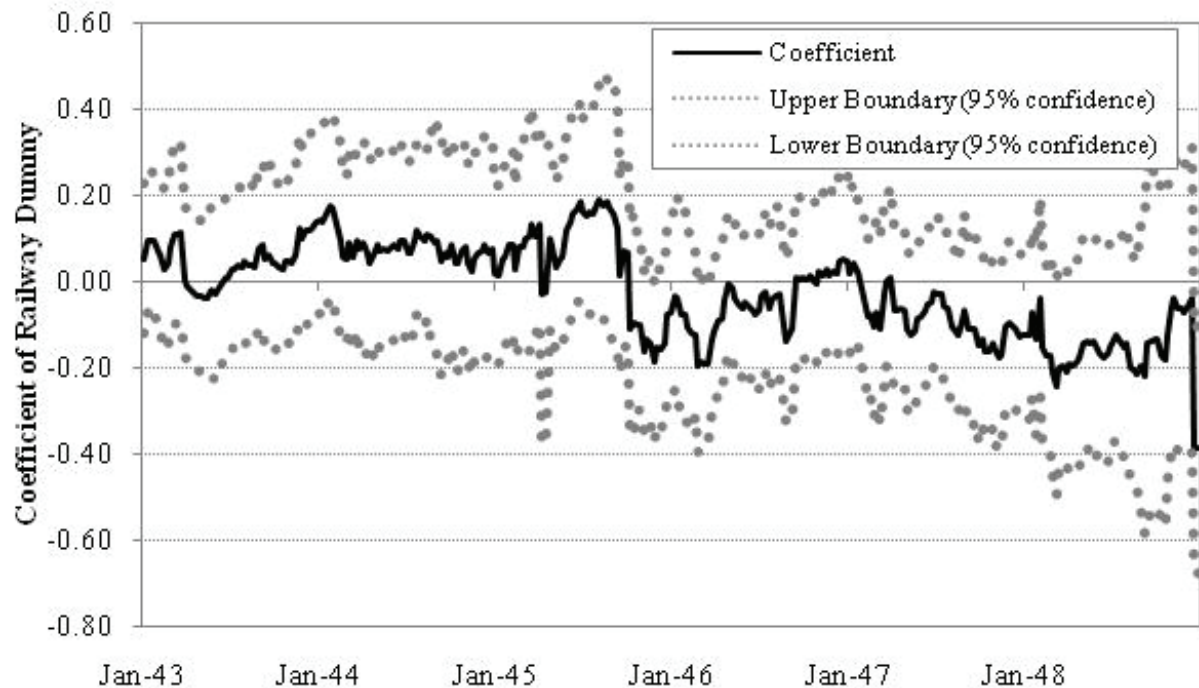
	Railways and Non-Railways			Railways		
Current Div (Time = T)	0.107*** (0.027)	0.208*** (0.049)	0.294*** (0.060)	0.060*** (0.016)	0.189*** (0.028)	0.276*** (0.050)
Change in Div T+1		0.154*** (0.036)	0.210*** (0.044)		0.157*** (0.024)	0.191*** (0.034)
Change in Div T+2		0.122*** (0.036)	0.179*** (0.038)		0.119*** (0.022)	0.142*** (0.033)
Change in Div T+3		0.066* (0.034)	0.118*** (0.030)		0.097*** (0.019)	0.144*** (0.035)
Change in Div T+4		0.032 (0.030)	0.084*** (0.023)		0.050*** (0.009)	0.077*** (0.026)
Change in Div T+5		0.011 (0.026)	0.050 (0.031)		0.025** (0.011)	0.047 (0.031)
Change in Div T+6		0.014 (0.020)	0.070** (0.026)		0.019** (0.008)	0.035 (0.022)
Change in Div T+7			0.021 (0.033)			0.015 (0.024)
Change in Div T+8			0.044* (0.024)			0.001 (0.014)
Change in Div T+9			0.040 (0.027)			-0.025** (0.012)
Change in Div T+10			0.030 (0.022)			-0.015 (0.012)
Constant	0.742*** (0.182)	0.103 (0.370)	-0.524 (0.474)	0.832*** (0.076)	0.261* (0.150)	-0.119 (0.250)
Observations	954	477	270	594	237	110
Companies	84	59	38	64	39	18
Overall R <sup>2</sup>	0.809	0.903	0.936	0.327	0.597	0.620

Note: Robust standard errors in parentheses, Significance given by \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

The cross-sectional regressions which were carried out with the simple two variable model of the current dividend rate and the railway dummy, were expanded to incorporate the changes which would occur in dividends during the next four half-years (i.e. two calendar years). When these future changes are accounted for, railways do not appear to be significantly overpriced at any time, as shown in figure 5, and appear to be underpriced for just five weeks of the sample. This suggests that, if only current and short-term future dividends are

considered, railway shares appear to be priced, throughout the period, in a way that is consistent with investor rationality.

Figure 5: *Impact of railway dummy on share price premium from repeated weekly cross-sectional regressions (controlling for current dividend and next four half-yearly dividend changes)*



Note: Due to the need to incorporate two years of future dividend data, no estimates have been produced for 1849 and 1850.

## Conclusion

The above results, taken together, suggest that dividends remained extremely important to the valuation of shares throughout the period 1843 to 1850, which included the Railway Mania and the subsequent downturn. However the valuations made by investors may be best described as reflecting ‘bounded rationality’ (Simon, 1986), as long-term changes in fundamentals were not fully anticipated. Consequently, the market equilibrium may not necessarily have produced the most efficient allocation of capital. This may provide a rationale for intervention by regulators, but Bernanke (2002) and Mishkin (2008) have suggested that identifying a bubble is difficult ex-ante, an argument which is consistent with the results presented above. However, this paper has focused only on the established railways, and further research is required to analyse the valuation of new companies projected during the Mania.

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# Explaining the City of London's changing position as a leading financial centre, 1870-1939

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London's dominance of the financial world prior to the First World War is one of the key stylized facts of the late nineteenth century. The City of London controlled trade financing and capital issuing, two key international financial services. Despite competition from Berlin and Paris (Esteves 2008), the City remained at the heart of the global financial system until 1913. The interwar years saw this position eroded, and in particular New York rose to be a serious challenger to London's leadership.

The current literature generally takes the City's position prior to 1914 as given (for example, Cain & Hopkins 1987), and the shift of leadership from London to New York is seen as inevitable (Cassis 2006), or as a result of the dollar's rise to become a global reserve currency (Silber 2007). This paper presents an alternative explanation, giving a central role to the bankers that conducted international financial services. The London merchant bankers were very experienced, and had built up an information-sharing network within the City that gave London's institutions a clear advantage over the competition. The First World War allowed New York to enter the marketplace and grow without competition. Coupling this with the restrictions placed on British capital exports to support the pound, New York was able to develop and challenge the City's position as the world's financial centre.

Using material gathered from the archives of five merchant banks<sup>276</sup> and theoretical ideas from New Trade Theory, we present a model which incorporates this information network into a general equilibrium framework. Results from simulations of the model predict that the incumbent location is not easily dislodged by later entrants, as the first mover advantage embodied in the larger network gives the leader a significant cost advantage. The model is then used to predict the impact of the First World War. By allowing New York to develop its own network and expertise, the shock gives the centre a chance to compete with London. We follow these predictions with empirical and archival evidence which tests the model's validity.

## Modelling the industry theoretically

The general theme from the archive material is that information was at the heart of the system for merchant banks. In general, institutions would gather information relating to a particular instrument to set its price. Information-gathering costs differed according to the location of the firm and the type of information required for the product. Our theoretical model therefore gives information a central role, at both the industry and firm level. In addition, there are a number of stylized facts about the sector that should be reflected in the model's equilibrium: dominance of one centre, but a role for second-tier locations, and a large number of firms operating within the market.<sup>277</sup>

Beginning with the observation that the City was able to dominate the industry and draw firms to it, we argue that at the industry level there are economies of scale in the form of a network. We propose that the network's role was in sharing information, both informal information used in production and a reputation-building mechanism which attracted business to a bank. We also assume that a larger network provided more benefits.

<sup>276</sup> Our sample includes the archives of Antony Gibbs & Sons, Kleinwort, Sons & Co, Brown, Shipley & Co, Morgan Grenfell and CJ Hambros & Co, all of which are held at the Guildhall Library.

<sup>277</sup> Skinner's (1880 onwards) 1913 edition lists over 100 international banking houses operating in London.

For information-sharing:

- Locating in the network gives banks access to information flows.
- The larger the network, the more information feeds into it from outside connections.

For reputation-building:

- The more links a bank has with other institutions, the more widely known the bank will be, enhancing its reputation.
- The larger the network, the more widely the bank's reputation is known outside the network, via outside connections.

By using the information gathered, a bank located in a centre's network automatically has an advantage over an institution not connected with other institutions. The archive material gathered supports this, as an example from Gibbs shows: 'We have asked Mr Stubbs about this firm and he does not give a very favourable account of them, evidently short of means. We have made more enquiries respecting this firm this morning and ascertained that it would not do to trust them in any way'. The quote is an entry in the Gibbs information book dated October 1884 about the merchants H Ellis & Son. By using its contacts in the City, Gibbs is able to accurately price the charge for accepting bills (in this case, Gibbs will not accept any bills).

Moving to individual banks, we model their production function as having internal increasing returns to scale, where the average cost of production falls as total output increases. The archive material shows that this is a good assumption for firms. Using the ratio of customer ledgers to information books<sup>278</sup> (table 1) from the Kleinwort archive, we can clearly see that there are economies of scale in the use of information; 116 ledgers of German clients were supported by 6 information books, whilst 2 information books were needed for the 14 ledgers of eastern South American clients. Table 1 also indicates another key aspect of merchant banks in this period: they all specialized, both in the type of instrument and in particular areas. In the case of Kleinwort, their business was focused on Germany, which is clear in table 1.<sup>279</sup> This finding is replicated by all our merchant banks: Gibbs specialized in South American trade financing, Morgan Grenfell in American railroad security issues, and CJ Hambros in Scandinavian capital issues.

Table 9: *Kleinwort, Sons & Co ledgers and information books*

Area	Ledgers	Info Books
Germany	115	6
UK	58	3
Spain	39	4
France & Benelux	56	6
Scandinavia and Russia	31	8
Rest of Europe	36	3
USA	91	4
Eastern South America	14	2
Central & Western South America	35	2
Cape Colonies, East Indies, China, Japan & Australia	14	2

<sup>278</sup> The customer ledgers recorded all transactions on behalf of every customer, whilst the information books recorded all of the important information about individual firms, the general outlook etc.

<sup>279</sup> Kleinwort's involvement in the US came as a result of an agreement with Goldman Sachs signed in 1897, and so many of these clients were actually Goldman Sachs clients.



Having defined the supply side of the industry, we now describe demand. As the New Trade Theory literature (for example, Krugman 1979) shows, to generate an equilibrium with a number of different firms producing, we have to assume that consumers have a preference for variety, i.e. their utility increases more than one-for-one as the number of varieties available increases. Although this is a theoretical result, it is also empirically attractive. For example, we would expect that the wider the choice of securities issued available, the better investors can manage their portfolio and optimize their risk-return payoff.

We combine these three key theoretical characteristics into a general equilibrium model<sup>280</sup> and simulate the equilibrium before the First World War. As an incumbent, London's network was much larger than any of her competitors (in particular Paris and Berlin), and as a result British merchant banks could out-compete their French and German counterparts. This position of leadership and dominance was highly persistent; with no shocks to the system new entrants could not build up a strong enough network to challenge London. The only way Paris and Berlin were able to compete was by cornering markets with information they could access easily, for example Berlin's capture of some of the capital issuing to Eastern Europe (Esteves 2008).

### Importance of the First World War

The First World War brought an opportunity for a challenger to develop their network and rise up to compete with London. As a non-combatant nation until 1917, the US, in particular New York, was in a position to take advantage of London's enforced withdrawal from the market. Taking our prewar equilibrium, we model the shock as a restriction to output from London, which allows New York to expand its network and expertise. This results in New York rising up to challenge the City, particularly in capital issuing where the information needed was less costly to gather, and so the network was less important as an input. However, our simulations predict that the disruption caused directly by the war is not enough to explain the extent of New York's rise in the 1920s. In particular, the model predicts that London should have held on to approximately half of the capital issuing business (as well as nearly all trade financing). This does not agree with reality, where New York captured two-thirds of the market in this period (Michie 2000, Silber 2007).

We can reconcile the model with reality by observing a restriction on the City in the interwar years: limits to foreign capital issues. Michie (1992) notes that these existed (formally and informally) throughout the interwar period, as do the contemporary commentators in Michie (2000). Adding these restrictions to the model results in them being a binding constraint on London's banks, this reinforced the War's positive effect on New York, allowing the Americans to capture issues that London would normally have handled. This implies that the network and its positive effects were highly persistent; not even a transient shock as large as the First World War would dislodge the City from the top spot.

### Testing the model's predictions

The simulations of our model generate two hypotheses, which we now examine. The predictions are:

- Capital issuing merchant banks will suffer, as New York is able to rapidly expand into this market. Trade financiers on the other hand remained in control of their area.<sup>281</sup>
- The capital issue restrictions were a binding constraint throughout the 1920s, and were a significant aid to New York's development.

<sup>280</sup> A complete explanation of the model, the parameter values chosen and robustness checks are given in the full paper.

<sup>281</sup> We did not consider the impact of the Great Depression, which drastically reduced the size of the accepting market and put a number of banks out of business.



Beginning with the first prediction, we turn again to the merchant banks' archives. The accepting houses appear to conform to the model, retaining their prewar markets in the 1920s. Antony Gibbs specialized in Northern South American trade prior to 1914, and this continued into the interwar years. The firm's letter books for the 1920s confirm that iodine (one of their key markets pre-1914) remained important; iodine letters were recorded separately to all others, with one ledger per year devoted to the industry. Kleinwort renewed their connections with their German and Eastern European clients almost as soon as the war ended, and although the bank also moved into foreign exchange arbitrage, examining the bank's ledgers clearly indicates the firm's continuing participation in trade financing.

The evidence from the archives is supported by the aggregate data on trade financing. Using data on the revenue generated by stamp duty (all bills of exchange had to be stamped), we can compute approximate estimates of the value of bills moving through the City immediately prior to and after the conflict. Table 2 summarizes this evidence, and shows that the 1920s saw an increase in real revenue for the government. Although some of this came from fiscal drag,<sup>282</sup> given the slow growth of trade in this period the table indicates that London retained most of the accepting business.

Table 10: *Average annual Stamp Duty revenue*

Period	Nominal Revenue (£m)	Real Revenue (£m)
1910-13	603,999	625,091
1920-24	1,170,577	630,669
1925-29	1,027,131	703,560
1930-34	343,389	319,473
1935-39	276,335	236,279

As a capital issuer, Morgan Grenfell had specialized in issuing American railroad stock in the prewar period, and so was hit particularly hard by the changes that occurred over the war. The decline of the bank in the interwar years is documented by correspondence to and from JP Morgan (the firm's sister bank in New York), and summarized by a letter between partners dated 1940: 'I continue to feel that the time may yet come again when our joint prestige over here [London] maybe of value to us in New York'. The archive material makes it clear that the house declined dramatically over the interwar years, as our theoretical model predicts.

Not all issuing banks suffered as badly as Morgan Grenfell, and in our sample Hambros weathered the storm much better. Their prewar business was focused on Scandinavian capital issuing, and by 1913 Hambros was the leading house in this sector. During the interwar years, the firm diversified, and moved into trade financing when it merged with the British Bank of Northern Commerce in 1920. This was obviously a fortuitous move, but the fact that Hambros turned down an identical offer to merge in 1912 suggests that the partners recognized the changed environment. By being proactive and moving into new areas, Hambros was able to survive the 1920s and 30s and remain a powerful force.

Turning now to the model's second key prediction, we gathered evidence from the Bank of England to assess how constraining the embargo on capital exports was, and whether New York directly benefited from it. The archive contains a number of letters and documents recording meetings between the Governor (Montagu Norman), individual merchant banks and the Treasury. An example from this correspondence is a letter from Erlangers & Co dated 1 March 1927:

<sup>282</sup> Bills with the same real value before and after the war moved up into a new tax bracket as a result of inflation over the period.

I venture to suggest that in other French business our policy is only depriving the City of legitimate and handsome profits without in any way benefiting us. The Loans are officially issued in Amsterdam, Switzerland and New York. The commission is earned there whilst England always proves to be a heavy subscriber and subsequent large purchaser.

As the quote indicates, the embargo was restricting the issues that could be undertaken, and firms were suffering as a result. The quote from the Erlangers letter strongly suggested that the New York bankers were benefiting from London being unable to issue. An entry from Montagu Norman's diary dated 6 February 1925 directly indicates that this was the case, 'Konig: Loan to Austrian Railways: Anticipation advance of 2m ... to be spent on machinery here. I say Loan seems very uncertain and too remote at present for such an advance, should go to NY rather than London'. In this case, Norman is directing the loan negotiator to New York. The interwar years were a period of frustration for issuing merchant bankers, as their business was restricted by the authorities to help support the currency.

### Conclusion

We have presented a model of financial services with information at its core. The model provides an explanation of London's prewar dominance as a result of a strong information-sharing network, preventing new entrants from successfully competing on a large scale. The First World War changed this situation, with New York developing its own network and expertise to become a serious competitor. However simulations of the model predict that the war alone was not enough of a shock to match reality, and that the British capital issue embargo was a binding constraint that aided New York. These predictions are supported by the evidence; the City's strong network was a formidable advantage to overcome, and without the disruptions to business caused by the First World War and its aftermath, New York would not have been able to challenge London in this period.

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## The evolution of the market microstructure of the world's first stock exchange: the Amsterdam market for VOC-shares 1602-1700

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Was the creation of the first stock exchange a financial revolution? Financial historians tend to call every step in the development of financial markets a 'revolution'.<sup>283</sup> However, most of the changes that took place were just gradual stages in the evolution of finance. When the States General of the Dutch Republic granted the Dutch East India Company (VOC) its charter in 1602, they could not foresee the consequences the financial structure of this company would have on the world's financial infrastructure – and they definitely did not intend to launch a financial revolution. Their aim was to create a company that would stay in operation for at least 10 years and that would be able to withstand the fierce competition of the Spanish and Portuguese in the East Indies. They called on the Dutch to raise the necessary funds. But who would want to lock up his money for a period of 10 years in a company with a highly insecure future? To overcome this problem, the company directors laid down a rule in the stock subscription book, which stated that shareholders could transfer their investment to a third party. Thus they guaranteed the company's continuity; shareholders could not withdraw their funds, but they could sell their share.

There are earlier examples of trade in financial claims in history, but the size of the VOC capital resulted in unprecedented trading activity. In 1688, for example, 436 traders transferred a total of 1,350 shares<sup>284</sup> (worth 121 per cent of Amsterdam's total stock) and this number reveals only part of the total trade: many transactions were contracted informally. Compared to other pre-modern financial markets, this market's liquidity was so high that foreign merchants used it for their financial needs. How did an emerging – or rather: new – market manage to perform so well in less than a century's time? This paper aims to show how investors were persuaded to participate in the market. Two fields of economics address this important issue. According to Maureen O'Hara, 'in emerging economies where regulatory and legal protection is weak, market microstructure [the way a market settles transactions, LP] can provide a way, maybe the only way, to induce investors to participate. [...] Well-functioning clearing and settlement procedures can assure buyers and sellers that their trades will be consummated'.<sup>285</sup> Other economists regard investor protection by a country's legal system as the major determinant for financial development.<sup>286</sup> This paper concludes that market dynamics can replace the role of legal institutions.

Most – if not all – of the financial history literature considers the secondary market for VOC-shares as a very important stage in the development of modern finance. Oscar Gelderblom and Joost Jonker treated the company foundation in 1602 and the market's early years in which derivatives trading emerged and showed this market's positive effects on the credit market since shares turned out to be the perfect collateral. Other historians took 1688 as a starting point, using Josseph de la Vega's famous treatise on the stock exchange to describe

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<sup>283</sup> For example, P.G.M. Dickson, *The financial revolution in England: a study in the development of public credit, 1688-1756* (London 1967). Oscar Gelderblom and Joost Jonker, 'Completing a Financial Revolution: The Finance of the Dutch East India Trade and the Rise of the Amsterdam Capital Market, 1595-1612', *The journal of economic history* 64 (2004) pp.641-72.

<sup>284</sup> Capital ledger VOC (Amsterdam chamber), National Archives (NA, The Hague), 1.04.02, inv.nr. 7072.

<sup>285</sup> Maureen O'Hara, 'Optimal Microstructures', *European Financial Management* 13 (2007) pp.825-32, 826.

<sup>286</sup> Rafael La Porta et al., 'Law and Finance', *The journal of political economy* 106 (1998) pp.1113-155.

the market that was copied by London after the Glorious Revolution.<sup>287</sup> Pioneering work on the development of the market has been done by M.F.J. Smith (1919), but his focus was on government regulations – although the bulk of the transactions were conducted informally.

### Contract enforcement and investor rights

In 1602, there was just one rule that regulated the market: it stated how share ownership could be ascertained and transferred. Traders who had agreed on a share transaction were to go to the East India house to officially transfer the share from the seller's to the buyer's account in the capital ledgers. This involved transaction costs (the bookkeeper charged f0.60 per transaction and the fee for the deed of transfer was f2.20)<sup>288</sup> and the traders had to go to the East India house twice to complete a transaction: the first time to check the seller's balance and then, after the buyer had paid for the share, to actually transfer the share. Shares could be transferred every day, but there were times when the East India House was closed because the directors were out of town for a meeting.<sup>289</sup> These inconveniences notwithstanding, during the year 1605, before the last instalment for the subscription was due, 153 transactions (worth 7 per cent of Amsterdam's total stock) were registered. In 1610 this number had grown to 409 transactions (24 per cent).<sup>290</sup>

But does this mean that the spot market was liquid, meaning that both buyers and sellers could perform the trades they desired at minimum trading costs? No, or so Jacques de Velaer, a merchant from Amsterdam, wrote to his uncle in early 1609: he had great difficulties buying a share.<sup>291</sup> But by the end of the first decade of share trade, other possibilities to take part in the share trade came up. Starting in 1607, forward contracts<sup>292</sup> appear in the protocols of public notaries. There were no regulations concerning the forward trade, but the merchant community had gained experience with this trading method from the commodities trade. The merchants seem to have been a bit wary of utilizing forward trading on the market for shares, however, since many of them registered their forward transactions with public notaries. The contracts in the protocol of notary Jan Fransz Bruyningh (25 in the first five months of 1607) show that the forward traders made sure that every step in the process of a forward transaction was officially noted down; they all came back to the notary's office to register the contract's settlement.<sup>293</sup>

Soon, however, records of forward contracts being registered with a public notary disappear, notwithstanding the fact that forward trade grew much larger during the seventeenth century.<sup>294</sup> What caused this change in the contracting of forwards? It may sound paradoxical, but Isaac le Maire's bear raid in 1609 – a syndicate of traders, led by the illustrious merchant Le Maire, went short on a large amount of forward contracts, hoping that the share price would fall and thus make a profit<sup>295</sup> – reinforced confidence in the functioning of the market and in institutions to enforce share trade contracts. Precisely this event, which caused so much confusion and uproar on the market and which could have resulted in

<sup>287</sup> For example, Charles Wilson, *Anglo-Dutch commerce and finance in the eighteenth century* (Cambridge 1941).

<sup>288</sup> Pieter van Dam, *Beschryvinge van de Oostindische Compagnie* 1A (1701), F.W. Stapel (ed.) (The Hague 1927) p.145.

<sup>289</sup> Letter De Velaer to l'Empereur, 3 April 1609, Thysius Archive (TA, Leyden), A2/16.

<sup>290</sup> NA, 1.04.02, inv. nr. 7066.

<sup>291</sup> Letter De Velaer to l'Empereur, 29 January 1609, TA, A2/11.

<sup>292</sup> A forward contract is a personalized contract where two parties agree to trade a share on a future date at a predetermined price. A standardized, and hence more easily tradable, forward contract is called a futures contract.

<sup>293</sup> Bruyningh was specialized in financial contracts. Amsterdam city archives (ACA), Archives of public notaries (5075), inv.nrs. pp.105-8.

<sup>294</sup> ACA, Notarial card index.

<sup>295</sup> See Van Dillen (1930) for details on Isaac le Maire.

widespread distrust of financial trade, enabled all participants and institutions that were involved in the market to better define their relation to the share market.

Right after the first rumours of Le Maire's bear trading consortium had spread over the trading community, many buyers of forward contracts went to a public notary to summon their counterparty to show his share possessions in the capital ledgers of the VOC. In most cases, no real conflicts arose and the share was delivered according to the conditions in the contract, or the forward contract was settled by paying the difference between the contract price and the market price. But some cases in which one of the contractors did not comply with the contract were brought to court. Twelve cases appeared before the *Hof van Holland* (the provincial court) during 1612-4, and they probably only represent a fraction of the total amount of legal cases relating to breaches of forward contracts.<sup>296</sup> In every single one of the *Hof van Holland* cases, the court enforced the terms of the contract. Thus it became clear to the share traders that informal written contracts would be enforced by the courts. The fact that the traders were willing to enter into lengthy and costly litigation underlines my point that contract enforcement was not at all obvious from the start. After this episode, the number of cases dealing with contract breaches declined sharply, which indicates that traders simply complied with their contracts, knowing their case would not stand much chance in court.

### Changing rules

Share trade related court cases dating from later years dealt with another matter: the upholding and interpretation of new laws regulating share trade. Isaac le Maire's bear raid had inspired the States of Holland to issue a ban on short selling both in the spot and forward trade (February 1610). A contract would become null and void if it was revealed that the seller did not own the amount of shares he had sold. It is important to note, however, that the States of Holland did not ban 'regular' forward trade, but focused on ending its under-the-counter character: share transactions – forward transactions included – had to be registered at the company's office within a month's time after the contract had been negotiated. This rule, however, posed a problem to forward trade. The seller of a forward contract would never allow his share to be deducted from his account before the forward transaction had been settled and he had received his money (forward transactions were paid for at the time of delivery). This would mean that he would lose his legal title to the share. To overcome this problem, the Amsterdam chamber of the VOC changed the rules for share transfers. On 17 June 1613, they resolved that shares that were involved in a forward transaction would be temporarily transferred to the seller's *reekening van tijt*, a 'time account'. On the settlement date, the actual transfer to the buyer's capital account would take place.<sup>297</sup>

The registration rule, however, was doomed from the start. The main reason for traders to participate in the forward market, rather than in the spot market, was that it enabled them to bypass the hassle and accompanying costs of going to the East India house to officially transfer a share. This advantage would be largely undone by the 1613 resolution. The traders simply ignored the rule: time accounts only appear very rarely in the company's ledgers.<sup>298</sup> The States of Holland regulations, too, went unheeded: the authorities felt compelled to repeat the ban on short selling several times; on 3 July 1621 they explicitly mentioned that brokers were not allowed to negotiate contracts that contained a clause that the buyer ceded any rights he would have on the basis of the 1610 decree. This indicates that share traders knowingly continued short-selling shares.<sup>299</sup>

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<sup>296</sup> In Amsterdam, commercial conflicts were first brought before the Amsterdam *Schepenkamer*, whose archives unfortunately have been lost. The *Hof van Holland* was the court of appeal for the *Schepenkamer*; I base my argument on the appeal cases.

<sup>297</sup> M.F.J. Smith, *Tijd-affaires in effecten aan de Amsterdamsche beurs* (The Hague 1919) pp.46-7.

<sup>298</sup> The capital ledgers (NA, 1.04.02, 7068-7081) are only available from 1628 onwards. It is therefore not possible to trace the immediate effects of this resolution.

<sup>299</sup> Smith, *Tijd-affaires*, pp.57-60.



A known example of a printed forward contract dating from 1629 does not include any such clauses, but another one dating from 1662 states that both the buyer and the seller agree to forbear from prosecution and to not comply with the company's registration rule.<sup>300</sup> This shows that the traders not only ignored the rules, but also waived their rights. The fact that this contract was printed indicates that this was regular practice. There was a danger involved, however, for the courts followed the rule of law. The judges of the *Hof van Holland* sentenced on 27 May 1667 that several forward contracts were null and void because the sellers could not prove that they owned the shares at the time of the sale in 1665 and, moreover, they had not transferred the shares to the buyer's time account. They had misled the buyer.<sup>301</sup> The buyer's legal proceedings were probably considered dishonourable by the trading community, so it is doubtful if he was still able to find counterparty for his trade afterwards.

### Market clearing

The traders chose deliberately not to rely on the investor protection of the Dutch legal system. This was feasible because of the existence of a very efficient market clearing mechanism: monthly *rescontre* meetings, where traders came together in a café or coffeehouse to mutually settle their contracts. It is not possible to put an exact date on the emergence of the *rescontre* system,<sup>302</sup> but it is clearly visible in the sources that forward contracts became standardized from the 1660s onwards.<sup>303</sup> Almost all of the contracts were now due on the first day of a month. The standardization greatly enhanced the forward trade, since all contracts that were due on the same day could be used for mutual settlement or renewal. The sheer size of the *rescontre* dealings, organized at the end of each month – a few days before the contracts' delivery date, underlines the importance of these meetings: in the meetings of 1683-4 the monthly turnover of Joseph Athias and Manuel Levy Duarte, Jewish jewellery merchants from Amsterdam, ranged from f200,000 to over f2,000,000. In the meeting on 25 August 1683, for example, they bought 57 (total value: f1,013,666) and sold 60 contracts (f1,018,856). The nominal value of both their sales and purchases equalled f249,000, which means that they made a profit of f5,190.<sup>304</sup>

Obviously, the *rescontre* boosted the share market's liquidity. In these same years, Athias and Levy only transferred nine shares to and from their account<sup>305</sup>, but their actual dealings were infinitely much larger. The market's liquidity also attracted foreign investors to participate in the market: Athias and Levy represented Salvador de Palacios from Hamburg and Luis Alvares from Paris in the *rescontre*. But even more importantly, the sophisticated clearing system of the *rescontre* guaranteed the traders that their trades would be consummated. Moreover, the monthly meetings functioned as a monitoring system. The semi-closed character of the *rescontre* made that traders with a history of non-compliance or litigation could be denied access. Hence, the market microstructure substituted for the legal investor protection the traders had given up on.

<sup>300</sup> The 1629 example: Gelderblom and Jonker, 'Amsterdam as the Cradle of Modern Futures and Options Trading, 1550-1650', in: William N. Goetzmann and K. Geert Rouwenhorst (eds.), *The origins of value: the financial innovations that created modern capital markets* (Oxford 2005) pp.189-205, there 199. The 1662 example: ACA, Archive of the Portuguese-Jewish Synagogue (334), inv.nr. pp.678, 926.

<sup>301</sup> Sebastiaen da Cunha vs. Michiel Rodrigues Mendes c.s., 27 May 1667, NA, Court of Holland, inv.nr. 784, 60. The main reason for the buyer to litigate was probably the considerable fall in the share price during the term of the forward contract due to the Second Anglo-Dutch war.

<sup>302</sup> Gelderblom and Jonker have suggested that this system came up in the 1630s, because in this decade similar tulip bulb trading clubs emerged: 'Amsterdam as the Cradle', pp.202-4.

<sup>303</sup> ACA, Notarial card index.

<sup>304</sup> ACA, 334, 688 f.3-6.

<sup>305</sup> NA, 1.04.02, 7072, f.383.



### Conclusion

The liquidity of the market for VOC shares greatly enhanced the Dutch credit market and also attracted foreign investments. It was the result of the interplay between the traders, the courts and the authorities: by enforcing informal contracts, the courts took away ambiguity that could have restrained merchants from participating in the market. The legal backing provided a fertile soil for the growth of the market, but the *rescontre* clearing system worked so well that the traders made the rule of law redundant. The major advantages of the market's microstructure gave the market its prominent place in Amsterdam's financial system.

## **‘Red herrings and fishy business’: forgery in six medieval English towns**

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Forgery in trade and manufacturing was committed by many different sections of society, and across a range of products, and yet it has received relatively little attention as an element of the regulation of trade in English towns. This paper will show that detecting and preventing the use of false weights and measures, and documents and seals, as well as trade in falsely manufactured goods, was an important aspect of the regulation of trade. Taking a comparative approach across six towns – London, Norwich, Yarmouth, Colchester, Leicester and Nottingham – over the period 1250 to 1400, it will discuss what towns were striving for in regulating forgery across the period as a whole, and what specific factors dictated the pattern of variation over time.<sup>306</sup>

There were three types of variation in the manner in which forgery was regulated. The first was variation across commodities, with distinct approaches being taken to the regulation of local, national and international trade. This aspect of variation illustrates four main concerns of the civic authorities which will be discussed shortly. Variation across towns, meanwhile, shows that there were differences in the emphasis in the regulation of forgery in trade and manufacturing. The final type of variation was variation over time. The intensity with which the civic authorities regulated forgery was stronger at some times more than others. A range of economic, political and fiscal factors have been statistically examined to see if their variation over time impacted on the chronology of forgery prosecutions. This analysis was based upon a specially constructed database of approximately 3,000 entries taken from the civic archives of the six towns.<sup>307</sup> In addition to forgery prosecutions, the database included prosecutions for other infringements of trade regulations, such as the evasion of duties, together with details of the regulations themselves.

Forgery in trade and manufacturing is defined as deception effected using a created or altered item or modification of a manufacturing process. The inclusion of both ‘creation’ and ‘alteration’ in the definition indicates that the forged item was either newly produced, or produced by modifying an existing (normally authentic) item. No specific term was used in the records to describe forgery, but words such as false, deceptive, unfaithful, and deficient were all used to describe the offence during the prosecution.

During 1250 to 1400 many towns obtained charters of liberties from the Crown, which allowed them a degree of self-government. The Crown essentially leased the town to its citizens, in return for which the town made an annual payment called a farm. Towns were

<sup>306</sup> John Hatcher and Mark Bailey, *Modelling the Middle Ages* (Oxford, 2001); R.H. Britnell, *The Commercialisation of English Society 1000-1500* (Cambridge, 1993).

<sup>307</sup> Sources: London: *Calendar Letter-books A-I* (CL-B), *Early mayor's court rolls* (EMC), *Calendar of Plea and Memoranda Rolls Vols 1-3* (CPML), *Memorials of London and London Life* (MLL), London Metropolitan Archives X109 microfilms of letter-book manuscripts; Norwich: Norfolk Record Office NCR/5B/1-11 Leet rolls, NCR/17B Book of Pleas, Book of Customs, Liber Albus; Yarmouth: Norfolk Record Office YC4/6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 20, 21, 27, 28, 29, 31, 35, 39, 40, 49, 50, 58, 59, 66, 67, 75, 80, 81, 88, 97, 98, 106, 107; Colchester: *Court Rolls of the Borough of Colchester Vols 1-3*; *The Oath Book*, *The Red Paper Book*; Leicester: Leicestershire, Leicester and Rutland Record Office (LLRRO) all court records and legislation from period 1250 to 1400 in BR II, III, IV, V, BR/II/3/2 The Vellum Book, Not included in statistical calculations BR III/3/1 Book of Contemporary Copies of Statutes Ed I-Ed II, BR III/3/3 Book of Contemporary Copies of Statutes Ed III-Henry VI; Nottingham: Nottingham Borough Court Rolls Project Indices of enrolments, counts and replies: 1303-36, 1351-76 and 1378-99 with thanks to Trevor Foulds, Richard Goddard and Judith Mills, *Records of Nottingham Vols 1-2*; Royal statutes not included in calculations *Statutes of the Realm Vols 1-2*.

therefore able to select who served in civic offices, rather than having to accept royal nominees. It was these civic officers, elected annually, who formed the civic authorities in the towns, and who presided over the town courts. The Crown, however, was still in overall charge and could continue to intervene in the government of towns which paid the farm. Variation across commodities shows that there were four main concerns of the civic authorities regarding the regulation of trade (Table 1).

Table 1: *The four concerns of the civic authorities*

Concern	Description
Basic commodities	Regulating the quantity of food and basic household items at the point of sale and the point of production
Equality	Protecting the interests of the poor and distinguishing between non-habitual and persistent offenders
Trading reputation	Maintaining and promoting the town's national and international markets for the benefit of the whole population
Relations with the Crown	Ensuring that the town kept its privilege of self-government by adhering to royal writs and statutes and cooperating with royal officials

Inquiries by the civic authorities into the use of false weights and measures at the point of sale to supply reduced quantities of goods was one aspect of the concern with basic commodities. Problems at the point of production were also addressed, for example the use of fish nets of a small and incorrect gauge which caught immature fish, risking long-term depletion of fish-stocks. Imported goods that could not be produced within the city were also regulated. Charcoal was important as a fuel for metal-working and the use of inaccurately small charcoal sacks by charcoal sellers from the counties around the city was an offence prosecuted by the London civic authorities during the period 1368-85. In London in 1376, for example, the servant of Richard Welker of Croydon was prosecuted by the civic authorities because the load of coal that he was supplying to the city included 'three sacks ... which were found to be deficient of six bushels'.<sup>308</sup> He claimed that the sacks were able to hold a quarter but 'some were frayed and torn in the journey, so that the coal fell out, which was the cause of the deficiency'. However, 'as it seemed to the court that the sacks could not hold a quarter' one of the 'new and untorn sacks' was measured and was found to hold only seven bushels.

Equality involved protecting the well-being of the most vulnerable citizens, as well as the wealthier members. Consumers who lacked the technical expertise to identify deceit were protected and educated by public display of confiscated forged items. Leniency was shown to poor people who might have been driven to offend out of necessity; in 1329 in London eight fishermen found guilty of using false nets had their fines pardoned 'for charity's sake, seeing as they were but poor men'.<sup>309</sup> While the authorities felt it was necessary to prosecute those whom they found committing offences, they did not wish to be so harsh on local traders that they were unable to trade again.

Through an awareness of the poor and vulnerable, the civic authorities were able to deter dishonest traders from targeting these groups, and through leniency they removed the incentive for poor people to re-offend in order to make-up lost income. Promoting a sense of unity in the town may also have helped to deter civic unrest.

Trading reputation was significant as it was not in the interests of any of the population to have the town's reputation damaged as a result of the behaviour of a minority of dishonest traders. In a period of increasing competition between towns there was a risk that consumers, especially merchants, would go elsewhere to make their purchases. Policing

<sup>308</sup> *CPML 1364-1381*, pp.221-22.

<sup>309</sup> *CL-B E*, pp. 237-38; *MLL*, p.171.

infringements of quality and quantity in national and international trade was therefore as important as in local trade. Regulating the conduct of manufacturers and merchants was sometimes achieved by delegating responsibility to members of craft guilds or the merchant guild. Guild members were granted the power to conduct searches of their members and their technical expertise also helped to detect deceits, such as in metal-working, that might have evaded non-professionals.

On at least one occasion, the civic authorities were extremely explicit in their concern for trade reputation, and at a level that transcended the priorities of manufacturers. In 1344 in London four cappers were charged with dyeing light furs dark and then selling them as good.<sup>310</sup> The four admitted to dyeing furs for other people, but not to selling them. A jury from outside Ludgate, where many cappers lived, was summoned. Their verdict was that the cappers had always dyed old white furs brought to them, but not for sale nor for the deception of the people. However, the civic authorities believed the verdict to be unreasonable and untrue and decided to make their own decision on the matter. They eventually decided 'in order to prevent deception and maintain the reputation of the Skinners' trade' that the dyeing of fur was to be made an offence. When the decision was read out, Richard de Bryby, a capper, 'shouted out that he would continue to do as he had done before in spite of it', and was imprisoned.

Friendly relations with the Crown were necessary if the town wanted to avoid being placed under direct royal control. Cooperation with inspections made by visiting royal officials was one way in which the civic authorities could impress the Crown.<sup>311</sup> The civic authorities also used their own initiative, such as in a prosecution for the use of bad yarn in c.1379 in Leicester, when reference was made to 'the falsity which people speak of' and the two offenders were made to swear, after a session on the pillory, an oath of loyalty to the King, to the Earl of Lancaster, to the Earl of Derby, and to their craft.<sup>312</sup>

Variation across towns shows that the trading characteristics of the town influenced the emphasis in the regulation of forgery in trade and manufacturing. London had the widest range of commodities appearing in forgery prosecutions, including several that did not appear in prosecutions in other towns. For a relatively small town, Nottingham had a surprisingly wide range of prosecutions, encompassing water supply and silver among others. Norwich and Colchester both had a smaller range of commodities – primarily food items, although woad and leather appeared in Norwich and wool in Colchester. Cloth and wool, meanwhile, were the principal priorities of the civic authorities in Leicester. Yarmouth had only four types of commodity appearing in the prosecutions, none of which were related to the town's primary trade in fish.

While the four concerns of the civic authorities, and the differences in the emphasis in regulation between towns, explain some of the pattern of forgery prosecutions, they do not explain all aspects of the chronology. It is therefore useful to examine, in addition, the impact of economic, political and fiscal factors on forgery prosecutions to see if their variation over time had an impact on the chronology of forgery prosecutions.<sup>313</sup> For each factor two hypotheses were constructed, one suggesting a positive impact on forgery prosecutions and the other a negative impact. Regulation was reported at the local level while real wage, tax and war were reported at the national level.

To assess the impact of regulation, the number of trade regulations recorded in the civic archives that related to one or more of the 30 commodities that appear in forgery prosecutions were used as an indicator. If greater regulation led to greater enforcement then greater regulation would increase the number of prosecutions, whereas if greater regulation

<sup>310</sup> *CPML 1323-1364*, pp.213-14.

<sup>311</sup> James Davis, 'The representation, regulation and behaviour of petty traders in Late Medieval England' (PhD thesis, University of Cambridge, 2001), p.162.

<sup>312</sup> LLRRO BR/II/3/2 The Vellum Book, f. 5r.

<sup>313</sup> Bruce M.S. Campbell and Ken Bartley, *England on the eve of the Black Death* (Manchester, 2006), p.273.

had a powerful deterrent effect then it might reduce the amount of forgery and hence the number of prosecutions.

To assess the impact of economic prosperity the real wage was used as an indicator. Recession could stimulate forgery if, when profits were squeezed, merchants and artisans were induced to cut corners by using inferior materials or giving short measure. On the other hand, prosperity could encourage forgery prosecutions if it attracted to towns merchants and artisans who wanted to make a quick profit from boom conditions but whose work, either through incompetence or deception, was substandard.

Tax was assessed using the annual average of combined direct and indirect tax revenue taken over the decade. The first hypothesis tested in relation to taxation is that increased taxation reduced the post-tax income of merchants and therefore induced them to forgery. The second is that it removed the spending power from consumers and shifted it to the King, causing the Crown to be more vigilant about the quality and quantity of items purchased for royal use, and possibly providing the civic authorities with a greater incentive to comply with royal requests.

An increase in the number of years of war in the decade may have similarly increased royal vigilance, leading to an increase in prosecutions. Alternatively, it is possible that with the King and his ministers occupied by war, the resources available to regulate forgery diminished and so forgery prosecutions decreased due to inadequate policing.

Table 2<sup>a</sup>: *Results of backwards multiple regression of prosecutions for forgery against the exogenous factors on a town-by-town basis*<sup>314</sup>

Variable	London	Norwich	Yarmouth	Colchester	Leicester	Nottingham
Local and national regulations	0.228 (0.001)	2.405 (0.916)	None available	1.3 (0.304)	0.356 (0.156)	-0.703 (0.616)
Real wage	1.919 (0.006)	20.102 (0.116)	3.786 (0.002)	-2.221 (0.576)	0.463 (0.282)	0.961 (0.281)
Tax	-0.003 (0.7)	-0.114 (0.304)	-0.001 (0.919)	-0.018 (0.214)	-0.004 (0.326)	-0.012 (0.277)
War	0.045 (0.237)	0.583 (0.481)	0.007 (0.935)	0.111 (0.356)	-0.056 (0.015)	0.016 (0.87)
Constant	-1.507 (0.013)	6.719 (0.028)	-3.146 (0.008)	1.204 (0.11)	0.555 (0.001)	0.382 (0.097)
R <sup>2</sup>	0.873	0.576	0.623	0.689	0.607	0.366
Adjusted R <sup>2</sup>	0.817	0.011	0.482	0.066	0.433	-0.269
F	15.487	1.019	4.411	1.107	3.479	0.576
Number of decades used	14	8	12	7	14	9

<sup>a</sup> The regression co-efficient is given first, and then the level of significance in brackets.

<sup>314</sup> Sources: Regulations: See footnote 2; Real wage: calculated from David L. Farmer, 'Prices and Wages' in H.E. Hallam, *The Agrarian History of England and Wales Vol II 1042-1350* (Cambridge, 1988), pp. 776-77, from 1350 Farmer, 'Prices and Wages' in Edward Miller, *The Agrarian History of England and Wales Vol III 1348-1500* (Cambridge, 1991), pp.520-21; Tax: 'Revenues to the English crown from direct and indirect taxation, 1168-1547' European State Finance Database <http://www.le.ac.uk/hi/bon/ESPDB/frameset.html> dataset: c:\orm\engm017.ssd; War: Denys Hay, *Europe in the Fourteenth and Fifteenth Centuries* (Harlow, 2<sup>nd</sup> ed., 1989); Nicholas Hopper and Matthew Bennet *Cambridge Illustrated Atlas: Warfare in The Middle Ages 768-1487* (Cambridge, 1996); W.M. Ormrod, *The Reign of Edward III* (London, 1990); Michael Prestwich *The Three Edwards* (London, 1980); James Sherborne (ed. Anthony Tuck) *War, Politics and Culture in Fourteenth Century England* (London, 1994).

Table 2 shows that economic, political and fiscal factors explain a significant amount of variation in the chronology of forgery prosecutions in all the towns, with the greatest significance in London and the least in Nottingham. National factors as well as local circumstances therefore provide explanations for the chronology of forgery prosecutions. Forgery prosecutions increased in relation to increases in regulations, the real wage and war. Increases in regulations led to increases in forgery prosecutions in all the towns except for Nottingham, but were not the only contributing factor. Increases in the real wage resulted in a rise in forgery prosecutions in all the towns except for Colchester, indicating that forgery prosecutions increased in periods of prosperity. A rise in the number of years of warfare led to a slight increase in forgery prosecutions, suggesting that there was heightened vigilance during periods of conflict. In contrast, forgery prosecutions decreased as taxation levels increased, suggesting that tax levels were not so oppressive as to massively reduce incomes.

Statistical analysis shows that the regulation of trade in medieval English towns was pragmatic, responding to economic and social factors in a coherent way. Regulations tackled specific economic and social issues, rather than being targeted against particular social groups, and responded to national factors as well as local issues. Regulation, therefore, was more effective and less repressive than previously thought.



# The medieval usury prohibition as a barrier to entry

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## 1. Introduction

Why did the Church's prohibition against usury persist during the Commercial Revolution? The tightening of the legal ban on interest during a period of falling interest rates and widening participation in capital markets is difficult to reconcile with both the traditional historical interpretation of the usury prohibition and with recent economic reinterpretations of the ban. This paper argues that one reason for the persistence of the ban was that it created a barrier to entry that enabled a small number of merchant bankers to earn rents.

In order to establish this claim I introduce a simple model to analyse the actions of the Church and merchants. The model enables consideration of strategic behaviour by both merchants and the Church. I use this model to develop an analytical narrative which examines how prominent merchant bankers like the Medici benefited from the canonical prohibition against lending at interest. This framework can reconcile a number of strands of the historical evidence that are inconsistent with alternative accounts of the medieval usury prohibition.

## 2. Three historical puzzles

The usury prohibition remains poorly understood. In particular there are three historical puzzles that emerge from the literature. The first puzzle surrounding the prohibition concerns the motivation of the Church. Many historians since William Ashley (1888, 1890) have viewed the intent of the usury prohibition as a public spirited attempt to help borrowers. However this view is hard to square with the writings of canon lawyers or theologians or the attitude taken by Popes such as Innocent III who viewed usury as intrinsically sinful.

The second puzzle is: why did the Church attempted to tighten the laws against usury when merchants could always get around the law? Table 1 details the various types of contracts that could be used to evade the law. As table 2 illustrates, from the Second Lateran Council (1139) onwards the Church increased the severity and sophistication of the prohibition. In particular canon law became more sophisticated and a number of contracts that had previously been used to disguise interest payments were outlawed.

Table 1

Technique	
Partnerships	<i>commenda</i> or <i>societas</i> used to fund investment.
Mortgages	Credit collateralized on the value of land.
The sea loan	Insured against 'the risk of the sea'. Dry sea loans were used to supply credit on land.
Discretionary deposits	A secret interest payment <i>a discrezione</i> to depositors.
Bill of exchanges	Used to transfer specie. Can be used as a credit instrument.
The loan on exchange	Bill of exchanges used to convert foreign exchange transfers into credit.

The third puzzle concerns the role Jewish lending played during this period. The Church disapproved of Jewish lending but Jewish lenders were free to lend at interest under canon law. The activities of Jewish lenders were regulated by secular authorities. The Jews were expelled from England and France for usury but they were patronized as lenders by many Italian city states (Botticini 2000). Why did attitudes to Jewish moneylending vary from state to state?

Table 2: *Tanner (1990); Gilchrist (1969)*

1139	Second Lateran Council	Usury prohibited to laymen as well as clergy (13) <sup>†</sup>
1179	Third Lateran Council	Manifest usurers to be excommunicated and denied Christian burial (25).
1215	Fourth Lateran Council	Jewish usurers to be ostracised (67).
1245	Council of Lyon I	Churches forbidden from contracting usurious debts (1).
1274	Council of Lyon II	Usurers to be expelled (26). Bishops who fail to excommunicate usurers to be suspended. (26) Wills of usurers invalidated. Judges who upheld the wills of usurers are to be treated as usurers (27)
1311	Council of Vienne	Inquisition to investigate rulers who tolerate usury (29). Lenders compelled to handover their account books.

<sup>†</sup> Numbers in brackets refer to the relevant canons, constitutions and degrees of the council in question.

### 3. The model

This paper argues that these three puzzles can be understood if market power is taken seriously. The answer to the questions posed can be found once it is understood that certain merchant bankers benefited from the usury prohibition because it limited entry and gifted them market power.

The main contribution of the paper is that it develops a game-theoretic model to support this argument. The virtue of a model is that it enables us to systematically analyse the strategic relationship that existed between merchants, moneylenders and bankers on the one hand, and the Church on the other.<sup>315</sup> The purpose of this modelling exercise is to provide an economic mechanism that is consistent with the available evidence and that can generate additional insights and predictions.

#### 3.1 The assumptions

The model builds upon a number of features of the medieval credit markets. In particular:

- Merchants lent money at interest but this interest had to be disguised. The usury law could be evaded but evasion was itself costly.
- Complex contracts were used to disguise explicit interest rates. Not all merchants were able to write contracts of this form. Therefore the cost of evading the prohibition varied across merchants.
- Credit markets were oligopolistic. This industry structure was supported by the prohibition because under the prohibition merchants had to pay a fixed cost in order to write the kinds of complex contracts that were required to escape prosecution.

#### 3.2 The sequence of the game

This is a game of complete information. The sequence of play is as follows:

- (i) The Church chooses the level of legal sophistication.
- (ii) Each merchant chooses the quantity of loans he wishes to supply to the market. At the same time he chooses what type of contract to use.
- (iii) The courts assess whether or not a randomly selected merchant is guilty of usury on the basis of the type of contract he is using.
- (iv) Profits are realized.

<sup>315</sup> The full version of this model is available as working paper at: <http://users.ox.ac.uk/~trin1401/>

The level of profits and the interest that obtains in the credit market will vary in equilibrium with the severity or sophistication of the usury law. The outcome of the model is determined by a (Nash) equilibrium between the Church on the one hand, and the population of merchants on the other hand.

### 3.3 Results

This model generates the following comparative statics results:

- I. The more sophisticated the law is, the less competition there is in the credit market.

The sophistication of the usury prohibition thus offers a potential explanation for Richard Goldthwaite's finding that competition between merchant bankers in Renaissance Florence 'did not reach the point where they developed the techniques of product variation, cost-cutting, underselling and other cut-throat market practices' (Goldthwaite, 1995, p.647). This outcome cannot have been undesirable from the point of view of the Church: if an industry produces a negative externality, monopolization may be a beneficial and low cost way of mitigating the externality.

- II. An increase in the demand for credit leads to a fall in the rate of interest and an increase in the sophistication of the prohibition.

This is because an increase in demand induces entry into the credit market. Merchants who previously did not supply positive amounts of credit now do so. The total amount of credit increases and the rate of interest falls. This means that in equilibrium the level of legal sophistication must be correspondingly higher. This partially offsets the original fall in the rate of interest

- III. Elite bankers benefit from the usury prohibition.

The prohibition restricted lending to a small group of merchants who were able to write complex and sophisticated contracts that evaded the letter though not the spirit of the Church's laws against interest. It resulted in higher implicit rates of interest than would *otherwise* have obtained and in monopoly power and profits for the small number of merchant bankers who were able to dominate mercantile lending.

The results are driven by (i) the actions of merchants who attempt to maximize their profits, and to minimize the probability that they are convicted as usurers; and (ii) the aims of the Church. If the Church decides that the law is simple then the probability that a merchant is caught and convicted of usury will be low, and a large number of merchants will participate in the credit market. If the usury prohibition becomes more sophisticated, however, many of these merchants will prefer to exit the market since the cost of writing complex contracts will be too great. The model establishes that certain merchant bankers could benefit from the usury prohibition. Therefore these merchants would be willing to pay the Church to uphold or enforce the ban on interest. Side payments of this form have the potential to affect the payoffs of the Church.

## 4. Resolving the puzzles

### 4.1 The incentives facing the Church

It is now possible to attempt to resolve the three puzzles posed in section 2. First let us say something about the incentives facing the Church. In the model the Church has two objectives. The Church aimed at suppressing usury but the Church also had to maintain or increase its revenue streams. The Church maximizes a weighted average of these two objectives. First suppose that eliminating usury is expected to have a negative impact on the revenue of the Church. This is a plausible assumption. Church thinkers like William of

Auxerre explicitly recognized that a trade-off existed between enforcing the usury prohibition and economic prosperity. Usury was theft but it was acknowledged that ‘a certain worldly good to the community may arise from this kind of theft’ (quoted in Langholm, 1992, p.85). A concern for revenue may thus have moderated the campaign against usury at least initially. In 1208, Innocent III advised the bishop of Arras to ‘proceed cautiously in enforcing the decrees of the Lateran Council [against usury] because usurers are so numerous that if all were punished many churches would have to be shut down’ (Tanner *et al*, 1929, p.491). Under this assumption, the model indicates that a Church concerned with revenue would have an incentive to keep the usury prohibition simple and to permit evasion.

This finding is reversed if the Church itself could profit from suppressing usury. The model suggests that the Church was more likely to make the law sophisticated when it benefited financially from the repression of usury. Ekelund et al (1989) argued that this was the case but their argument was based on the claim that the Church was an important lender and this claim is rejected by most historians (see Tan, 2005). Nevertheless there is substantial evidence that the Church did in fact benefit from restitution payments made by guilty usurers (Nelson, 1947, Cohen 1988, Galassi 1992). Prominent bankers such as Marco Dantini, and Giovanni de’ Medici also made generous donations to the Church. This has the effect of ensuring that both bankers and the Church benefited financially from the repression of usury.

#### 4.2 *The response to commercialization*

Usury laws became more sophisticated over time. Many of the techniques used to evade the law were subsequently made illegal. At the same time capital markets became broader and deeper. In 1179 it was deemed necessary to use the threat of excommunication to deter manifest usurers. Whereas previously an alleged usurer had to be accused by an unhappy borrower, in 1207 a change in legislation meant that it became possible to bring a case against a suspected usurer in the absence of a plaintiff. This reduced the likelihood of lender and borrower collusively agreeing to honour interest-bearing contracts. In 1215, the auricular confessional became compulsory thus tightening the grip the Church had on morality. In the decretal *Naviganti*, published in 1234, Gregory IX declared passive partnerships to be usurious because the burden of risk was shared unequally.

Existing accounts of the usury prohibition struggle to explain this. According to Glaesar and Scheinkman (1998) usury laws provide *ex ante* redistribution from fortunate to unfortunate individuals by limiting the rates at which the latter have to borrow from the former. But if this were true then the usury law should have relaxed as capital markets develop. The model developed here is consistent with the historical evidence. It demonstrates that as demand for credit increases, the response of the Church is to tighten the prohibition and not to weaken it. The net result is that interest rates fall but they do not fall by as much as they would have in the absence of a usury prohibition.

#### 4.3 *Jewish lending*

Finally why did attitudes towards Jewish lending vary? Since Jewish lenders faced no risk of prosecution from the Church, they did not need to use the complex forms of evasion used by Christian usurers. As a result they were able to charge lower rates of interest. Nevertheless Jews were often expelled as usurers. The model I develop suggests that Jewish lenders were opposed by Christian usurers because they were often competitors. In the full paper I explore this in more detail.

### 5. **An analytical narrative**

The model presented here indicates that a regulatory capture theory of the usury prohibition can explain a number of features of the medieval prohibition. In particular it can account for the increasing sophistication of the laws against lending at interest. This model can also be used to examine a specific historical episode. We can tell whether or not these barriers to

entry were qualitatively significant by whether or not usury laws were supported by elite merchant bankers when they were in a position to influence policy.

Florence in the fifteenth century provides a historical test of the model. Florence in the 1420s was dominated by the Albizzi family, rivals of the Medici. In 1429, the Signoria banned the exchange of bills (*cambium sine litteris*) as usurious. The official reason given for the prohibition was to protect borrowers from ruin. The Medici bank earned most of its profits through foreign exchange transactions. This Europe-wide money market also served as a capital market since the most important way in which the usury prohibition was circumvented was by transforming credit transactions into foreign exchange transactions via a bill of exchange (Roover, 1963, pp.108-41). Thus this was an attempt to reduce the financial power of the Medici. It failed and in 1434, Cosmo de' Medici returned from exile. In 1435 the law was revoked. The exchange of bills was again permissible. What is significant is that the Medici, once in power did not sanction lending at interest. Rather they simply reverted back to the *status quo ante*. The usury prohibition as it stood was consistent with a small subset of usurers making supernormal profits. Merchant bankers were usurers, but they were not against usury laws *per se* since these laws benefited those merchants who were able to evade the prohibition successfully by limiting competition.

## 6. Concluding remarks

Moneylending inspired widespread opprobrium in medieval society. This paper has not attempted to explain or account for this opprobrium. What it has done is shown that the attempt to outlaw lending at interest had the effect of creating monopoly profits for the small subgroup of merchants who had a comparative advantage in evading the law. The interpretation can explain why the usury law tightened over time even as interest rates fell, why the prohibition lasted for as long as it did and why it was supported by prominent merchant bankers.

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## Apprenticeships in Rome

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No sooner had I left off school, being then well on in my teens, than my father and his friends began to discuss what he should have me taught next. Most of them thought that higher education required great labour, much time, considerable expense, and conspicuous social position, while our circumstances were but moderate and demanded speedy relief; but that if I were to learn one of the handicrafts, in the first place I myself would immediately receive my support from the trade instead of continuing to share the family table at my age; besides, at no distant day I would delight my father by bringing home my earnings regularly.<sup>316</sup>

This passage, and the sentiments it contains, could have come from any period of time and probably from any region in the world. It was written by Lucian of Samosata,<sup>317</sup> which is now in modern day Syria, in the latter half of the second century AD. This is part of an autobiographical account of how Lucian became a rhetorician; a modern analogy might be made to a speechwriter. The account contains details of how and why a handicraft was chosen for Lucian to train in; possible terms of his apprenticeship; a contract between his father and his teacher; and the disastrous outcome of his first day. More problematically, it also recounts a dream he had following his first day at work in which two women, personifying the trade of Sculpture and Education, fight for his attention; this is part of a long running philosophical debate about the status, or lack of it, of craftsmen and manual workers. Although this account is seen as containing genuine biographical detail, the addition of the allegorical dream makes one wary of taking the entire account at face value. In this paper *The Dream or Lucian's Career* will be used as a template to guide an investigation into apprenticeships in the Roman period, testing both the biographical information it contains and how common Lucian's experiences were in the wider context of the Roman Empire.

From around the end of the Second Punic War in 201 BC Rome grew in both size and confidence; by the time of the Emperor Augustus two centuries later it is estimated that the population of the City of Rome was around the million mark, making it at least four times larger than any other city in the empire. The size of the population of the city, and the concentration of wealthy landowners who formed the political elite of the empire, made it possible to support an ever-growing number of specialist trades and craftsmen. These craftsmen appear to have become more and more specialized; whereas in a smaller urban setting a cobbler could be found to make sandals, in Rome one could find a cobbler who made only a particular type of ladies slipper. What many of these highly skilled trades and crafts had in common was the production of luxury items, including those using precious metals and stones. The question arises as to how these highly skilled craftsmen were trained.

There is surprisingly little evidence for apprenticeships in Rome, or indeed in the entire empire. This is based partly on the chance survival of documents, the way in which many legal affairs were conducted, and the problem that the majority of ancient texts which have survived were written by an elite for whom work was something done by other people and so did not really concern them. Appreciation and value were for the articles made by craftsmen, there was little value placed on the work itself. In order to exclude the more informal passing on of skills within a close family; or the training of slaves within a household to work within the household; I have defined ancient apprenticeships as: the

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<sup>316</sup> Lucian, *The Dream or Lucian's Career* Vol.3, Loeb Classical Library, translated by A.M. Harmon p.214ff.

<sup>317</sup> c. 125-180 AD.

training of a person, of whatever sex or status, in a manual craft outside of close family ties necessitating the formation of a verbal or written contract.

It is very difficult to place the young Lucian in the social hierarchy of his times. Lucian does not reveal his father's means of providing for his family; whatever it was he did not want, or it was not possible for, Lucian to follow in his footsteps. Lucian makes it clear that one of the reasons for finding him a trade was so that he could reduce the economic burden on his family; he does not appear to have followed a trade but to have continued in higher education, this despite saying that his family lacked the disposable income and social position for him to do so. Lucian's father's first step was to discuss the problem with a group of his friends, who all appear to have been craftsmen or in a similar social position to himself. This implies that the apprentice system was based on personal relationships; a prospective teacher was either known personally by the person wishing to place an apprentice or known to a mutual acquaintance. Also of interest are the criteria for choosing a trade; ease of learning and the expenses which might be incurred in setting up in the trade being taken into account, as well as the question as to the suitability of the trade for a man of free birth. Lucian's father settles on his wife's brother, who was a sculptor, as a potential teacher. He asks him if he will take on his nephew "and teach him to be a good stonecutter, mason, and sculptor"; his uncle agrees. This may be part of a *stipulatio*, setting out the expected learning outcomes of Lucian's training. Lucian is given over to his uncle's care and begins his apprenticeship, presumably on the terms he outlined at the beginning of the account, that is that his uncle would now be providing board and possibly lodgings, and at least a little pay for his work. On his first day Lucian is given a chisel and asked to lightly strike a slab of rock; he hits it too hard and breaks the slab. His uncle is angry, picks up a stick and beats him. Lucian runs away and goes home, sobbing, where he complains to his mother.

There are no contracts for apprenticeships within the legal texts of the *Digest*; these agreements were, in all probability, made by *stipulatio*, a form of verbal contract, and so we should not expect to find much written evidence for them. There is, however, some evidence for apprenticeships in Rome. In the *Digest* an apprentice is called a *discipulus*, *discipulis* in the plural. What little evidence there is comes mostly from the papyri of Hellenistic and Roman Egypt, these are mainly records of contracts or evidence of legal disputes arising from contracts; and even here only a few trades are represented. From the Egyptian evidence<sup>318</sup> it appears that there were two basic forms of apprenticeship; in one form the craftsman undertaking the training of the apprentice was paid a fee for the tuition, and in the other the craftsman was given no fee and may have been expected to provide food and/or lodging for the apprentice. In both cases a time limit in which the craftsman was supposed to teach the apprentice, and in which the apprentice was expected to learn sufficient skills, was part of the contract. The difference between the two forms appears to have been the type of skilled work the craftsman was teaching. For those skills which required a high level of knowledge before being able to perform in a satisfactory way tuition pay appears to have been standard. Examples in the papyri of this type of apprenticeship are a flute player<sup>319</sup> and a boy training to be a shorthand writer.<sup>320</sup> For other crafts, such as weaving<sup>321</sup> and the making of nails,<sup>322</sup> it was more common for the craftsman to provide for the apprentice; the costs incurred by this were met by the work done by the apprentice, who could be set on very simple aspects of the work from the earliest stages of his or her training. There is no set scale of wages for the apprentices, although those apprenticed for a period of years may see a rapid increase after a couple of years as their skills increase and they can operate independently. The sooner an

<sup>318</sup> W.L. Westermann, "Apprentice Contracts and the Apprentice System in Roman Egypt," *Classical Philology* 9, no. 3 (1914).

<sup>319</sup> *B.G.U.*, IV, 1125.

<sup>320</sup> *P.Oxy.*, IV, 724.

<sup>321</sup> *P.Oxy.*, II, 275; *P.Teb.*, II, 385; *P.Oxy.*, IV, 725; Wessely, *Karanis*, p.32; *P.Oxy.*, II, 322.

<sup>322</sup> *B.G.U.*, IV, 1124.

apprentice became accomplished at the craft the more the craftsman would benefit from his tuition, although it does not appear to have been usual for there to be a formal examination of the apprentice's skills at the end of the period of the apprenticeship. In the case of the boy being apprenticed to the flute player<sup>323</sup> the boy is a slave and his owner is required to supply the slave with food and clothing for the duration of the apprenticeship, which is set at six months. In this contract the flute player is only required to teach the slave. The cost for this tuition is 100 drachmas, paid in equal instalments at the beginning and end of the contract. The contract also stipulates that in order to ascertain that the slave has been taught the skill to the required standard he is to be examined by three men who are to be agreed upon by both parties, who should also be proficient at flute playing. This appears to be the only evidence for an examination of the apprentices' skills in the contracts. This may be because of the highly technical skill required for this type of craft, and may have been reflected in other such areas where great skill was needed.

The Egyptian evidence demonstrates that both the free-born and slaves could be placed as apprentices. Free-born members of the craftsman's extended family, like Lucian, or acquaintances might be taken on, as could the children of free men who wanted their children to learn a trade, other than their own if they had one. Slaves could be apprenticed by their masters, in order to be set to work later for their benefit. In the surviving Egyptian contracts the apprentices, both slave and free born, are young. The most well known example of an apprenticeship in the *Digest* is to be found in the discussion about the actions which can be brought under the *lex Aquilia*.<sup>324</sup> The question asked is whether a teacher is liable under the *lex* for unlawful damage if he kills or wounds a slave during a lesson. Julian, who believes that the teacher is liable under the *lex*, gives an example which may reflect a genuine case. A cobbler struck a boy, who happened to be free born, on the neck with a shoe last so hard that his eye was knocked out. Julian says that there is no action for an insult<sup>325</sup> (to the father of the boy) for this because the blow was not intended as an insult but as a correction for poor work. The opinion of the jurists' is that the father of the boy may have actions against the cobbler for breach of the contract for his services as a teacher (*megistris*) "since a teacher only has the right to administer reasonable chastisement", or for the loss of his son's future earnings, and also for the medical expenses incurred. Ulpian refers again to this case later on,<sup>326</sup> where he says that the action against the cobbler can be made on the action of lease,<sup>327</sup> because, as a teacher he was only allowed to punish his student mildly, and he had not observed this limitation. It also appears, due to several references to the level of chastisement a teacher was permitted to inflict, that these agreements were standardized.

So far the evidence from the Egyptian apprentice contracts appears to be supported by the evidence in the *Digest*. But where the Egyptian evidence points to only children being apprenticed, the *Digest* suggests this is not the case. Two texts discuss the obligation of a freedman or woman to their patron if they have learnt a craft after manumission. Callistratus<sup>328</sup> points out that after manumission a prostitute should not be expected to render her services to her patron, as this would endanger her reputation, likewise a gladiator, because to do so would endanger his life. He goes on to say:

If, however, a freedman practises a craft, he will have to offer services of this kind to his patron, even if he had learned his craft after manumission.

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<sup>323</sup> *B.G.U.*, IV, 1125.

<sup>324</sup> *Digest* 9.2.5.3.

<sup>325</sup> *inuria*.

<sup>326</sup> *Digest* 19.2.13.4.

<sup>327</sup> *Locatio*.

<sup>328</sup> *Digest* 38.1.38.1.

Paul agrees:<sup>329</sup>

The freedman will have to offer services in the skill that he has learned after manumission if they are of a kind which, at whatever point they are provided, [are provided] honourably and without risk to his life, and not necessarily those which should have been rendered at the time of his manumission.

This indicates that adults could also be apprenticed, as slaves were expected to have reached a minimum age before being manumitted. The texts make it quite clear that the training could take place after manumission. Indeed, in the cases of the prostitute and the gladiator it is unlikely that they would have pursued the same careers as freedmen as they had as slaves; unless both were going to be fully provided for by their patron after their manumission they would have had to find themselves roles which befitted a citizen.

It is possible to compare Lucian's story to the legal evidence. His age, in his late teens, corresponds with many of the Egyptian texts where an age is indicated for a free born apprentice,<sup>330</sup> he may have had an extended schooling which could have made him slightly older than usual. His treatment at the hands of his uncle mirrors very closely that of the cobbler's apprentice in *Digest* 9.2.5.3. Lucian went home to complain to his mother about his treatment by her brother, he did not stay with his uncle. In some of the Egyptian apprentice contracts the apprentice continues to live at home, but the Master makes a financial contribution to his apprentice's upkeep.

In the texts, which cover the Roman Empire from the Greek-speaking east and the Latin-speaking west represented by Rome itself, there is no distinction made between a free born apprentice and a slave, is this because there were none? If this is so it would be possible for a poor, unskilled adult worker to apprentice themselves, at the cost of their labour, to a craftsman in order to learn a craft and so to secure a more stable economic future. The question, which may remain unanswerable, is was this potential opportunity taken by many adult inhabitants of Rome?

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An English translation of Lucian's *The Dream or Lucian's Career* can be found at: <http://www.sacred-texts.com/cla/luc/wl1/wl107.htm>

<sup>329</sup> *Digest* 38.1.16 pr.

<sup>330</sup> A poll tax was levied in Egypt on those 14 and over; who was to pay this tax is included in some of the contracts.

## Commerce, the plant trade and the exchange of botanical knowledge between France and Britain, c. 1760-89

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This paper examines the ways in which connections were formed between France and Britain via the trade in plants, and the exchange of knowledge about plants, between c. 1760 and 1789. I will show that the plant trade was deeply intertwined with contemporary scientific culture. This intersection of science and commerce affected Anglo-French connections during the closing years of the Ancien Régime.

France and Britain's mutual influence on each other's development as political, economic, and cultural units has attracted the attention of numerous historians. François Crouzet's economic comparisons reveal that Anglo-French rivalry was deeply significant in determining the fortunes of each country.<sup>331</sup> Maurice Crosland has shown that this competition was also important in the history of science: scholars usually shared information with their foreign confreres, but political and economic rivalry also provoked further research.<sup>332</sup> Thus, André Bourde has demonstrated that French agronomy was heavily influenced by studies of, and competition against, English agriculture.<sup>333</sup> Anglo-French rivalry did not usually inhibit the exchange of scientific information between the two countries, but nevertheless stimulated much research of a scientific nature. Competition could be productive, leading to more innovation in each country.<sup>334</sup>

However, French and British economic, scientific, and cultural developments have been largely discussed through a comparative framework, which seeks to explore similarities and differences. Studies of the *connections* between Britain and France, such as the one I propose in this paper, are informative of how and why influences travelled between two countries and can highlight how they were assimilated into wider culture.<sup>335</sup> The story of the establishment of the nursery trade in France is only in part about competition against Britain. We will see that the connections between the two countries ebbed and flowed in response to a mixture of commercial and scientific pressures.

Plant merchants enjoyed close connections with the scientific community in the eighteenth century. The French nurseryman Philippe-Victoire Lévêque de Vilmorin has been described as 'the veritable creator of a scientific commerce of seeds'. He is remembered 'for his experiments in cultivation, his writings, his activity, his intelligence and his numerous commercial relations'.<sup>336</sup> Indeed, Vilmorin was fundamental in forging a connection between botany and the trade in plants. Influential botanists such as the English scientific statesman Sir Joseph Banks, and André Thouin, the head gardener of the Jardin du Roi in Paris, maintained close contacts with commercial nurseries, especially those that traded exotic plants. They monitored the plants that nurseries obtained from overseas, kept their catalogues and visited their gardens.<sup>337</sup> The nurseries were significant because they often obtained unknown exotic

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<sup>331</sup> François Crouzet, *Britain Ascendant. Comparative Studies in Franco-British Economic History* (Cambridge and Paris, 1990).

<sup>332</sup> Maurice Crosland, *Scientific Institutions and Practice in France and Britain, ca. 1700- ca. 1870* (Aldershot and Burlington, 2007); Maurice Crosland, 'Anglo-Continental Scientific Relations, c.1780- c.1820', in R.E.R. Banks *et al.*, (eds), *Sir Joseph Banks: a global perspective* (Kew, 1994), pp.13-22.

<sup>333</sup> André Bourde, *The Influence of England on the French Agronomes, 1750-1789* (Cambridge, 1953).

<sup>334</sup> Maxine Berg, *Luxury and Pleasure in Eighteenth-Century Britain* (Oxford, 2005), pp.85-110; Crosland, 'Anglo-Continental Scientific Relations', pp.13-14.

<sup>335</sup> M. Werner and B. Zimmerman (eds), *De la comparaison à l'histoire croisée* (Paris, 2004), pp.7-14.

<sup>336</sup> Gustav Heuzé, *Les Vilmorin (1746-1899)* (Paris, 1899), p.12.

<sup>337</sup> H.B. Carter, *Sir Joseph Banks, 1743-1820* (London, 1988), App. XII.



plants before botanists had done so. Nurserymen and women developed considerable practical expertise in cultivating fragile exotics, and made further contributions to science by identifying and experimenting on plants.<sup>338</sup> Commercial plant traders were valued as active members of the scientific community.

But how did French nurseries obtain plants, and what role did their connections with Britain play in this? During the 1750s and 60s, the wealthiest French garden proprietors purchased plants directly from merchants located outside of France. The plants that these consumers chose were mainly exotics, which most French nurseries did not cultivate. Even Vilmorin purchased exotic plants from British nurseries and sold these to his customers.<sup>339</sup> Britain and the Dutch Republic were the leading suppliers of such specimens; the nursery trade in each country boomed thanks to growing international demand. Contemporary French agronomists claimed that the reason why these nurseries dominated the exotic plant trade was because they had better access to suppliers. Britain's maritime trade was more extensive than that of the French, and, it was claimed, they could therefore obtain a greater quantity of plants.<sup>340</sup>

However, this assumption that the exotic plant trade was driven by supply was not borne out by the evidence. France's maritime trade was sufficiently far-reaching to have permitted nurseries to obtain exotics, had they wished to do so. The country enjoyed strong connections with parts of the world that sported great floral wealth, including Saint Domingue, southern India and North America, and its colonial trade increased tenfold 1716-87.<sup>341</sup> French botanists sent out plant-hunters and encouraged travellers to collect specimens.<sup>342</sup> Thus, French nurseries certainly could have obtained exotic plants if consumers had wanted them.

In contrast to such claims, it seems that demand was the main factor determining the influx of exotic specimens to France.<sup>343</sup> Amateurs of botany in the mid-eighteenth century commonly lamented that there had been a lack of wider support for importing new flora.<sup>344</sup> The plants' fragile natures, and the high prices charged for them, meant that they were luxuries that few could afford to buy. This stunted the French nursery trade until mid-century when, thanks to the expanding consumer culture, demand increased. By the 1770s, nurserymen were independently creating their own contacts overseas, rather than purchasing exotic plants from British suppliers. Thus, in 1779 Vilmorin gave assistance to the French plant-hunter and botanist André Michaux, who was at that time travelling through North America. In return, Michaux sent seeds to Vilmorin, whose catalogue expanded from 93 pages in 1760 to almost 400 pages in 1785.<sup>345</sup> Thanks to their American suppliers, French nurseries could undercut the higher prices charged by British re-exporters.<sup>346</sup>

<sup>338</sup> A.F. de Silvestre, 'Notice bibliographique sur P.-V.-L. de Vilmorin' (Société d'agriculture, 26 Brumaire an XIV [17 Nov. 1805]), p. 197; Blanche Henrey, *British botanical and horticultural literature before 1800* (3 vols, London, 1975), vol. 2, p.652.

<sup>339</sup> Silvestre, 'Notice', p. 195; Archives Nationales [AN], 399 AP 98; AN, 399 AP 99, Malesherbes to [Comte de Rochainbeau] [no date; 1780s?].

<sup>340</sup> Silvestre, 'Notice', p.195.

<sup>341</sup> Crouzet, *Britain Ascendant*, pp.18-20, 296; François Crouzet, 'The Second Hundred Years War: Some Reflections', *French History* 10 (1996), pp.444-5.

<sup>342</sup> Marie-Noëlle Bourguet and Christophe Bonneuil, 'De l'inventaire du monde à la mise en valeur du globe. Botanique et colonisation (fin XVIIe siècle – début XXe siècle)', *Revue française d'histoire d'outre mer* (Paris, 1999), pp.11-12, 15.

<sup>343</sup> H. J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, 2007), p.304.

<sup>344</sup> Anon., *Jardinier Portatif* (Liège, 1772), pp. 19-20.

<sup>345</sup> Pierre d'Andrieux, *Catalogue de toutes sortes de graines, fleurs, oignons de fleurs* (Paris, 1760); de Grace, *Le Bon Jardinier* (Paris, 1785); Heuzé, *Les Vilmorin*, p.12.

<sup>346</sup> AN, AJ/15/511, 399 AP 98, 399 AP 99 and 399 AP 101; Bibliothèque Nationale de France [BNF], NAF 2757, NAF 2758, f. 102.



French nurseries' contacts with overseas plant traders meant that, by the 1780s, the majority of direct exchanges between French and British nurseries had ceased. This forms an intriguing counterpoint to the fact that, during the same decade, Anglo-French trade in other types of commodities was becoming more open.<sup>347</sup> French nurseries were terminating their trading connections with their British counterparts precisely when other traders were forging new contacts.

Yet Anglo-French commercial horticultural connections did not cease even though French nurseries turned away from British suppliers. Other types of associations were maintained and strengthened during the same period and, paradoxically, they remained in the marketplace. The cross-channel trade in plants was determined by considerations that surpassed immediate political and economic factors. They were, as we shall see, a product of the confluence of commercial and scientific interests that underpinned much of the plant trade during this period.

To discuss these further, I will focus on the role played by Thomas Blaikie (1750-1836), a British plant-hunter, gardener, and botanist who connected commercial and scientific circles within both France and Britain. Blaikie built his career on the strength of existing connections between the two countries. He moved permanently to France in 1776, having been hired as a gardener by the French aristocrat and anglophile, Louis de Brancas, comte de Lauraguais (1733-1824).<sup>348</sup> Lauraguais had found Blaikie via recommendations from the British botanist Joseph Banks and from the London nurseryman James Lee. Blaikie's initial connection with France was thus derived from an association between two men of science, Banks and Lauraguais, which had a commercial dimension, as Lauraguais was Lee's customer.

Blaikie encountered several other British and German migrant gardeners who worked for Parisian aristocrats.<sup>349</sup> Hiring a foreign gardener was attractive to the elite, partly because this was a form of conspicuous consumption. Gardeners trained in England were especially prized for their specialist skills in cultivating exotic plants and for their aptitude at designing and maintaining fashionable gardens such as the Jardin Anglais.<sup>350</sup> But the movement of people from Britain to France also stimulated the development of new commercial relationships, in spite of the rise of the independent French nursery trade.

Thomas Blaikie maintained close contacts with London nurserymen throughout his career, and his employers sent him on several journeys to Britain to purchase plants. He apparently never established connections with the more reputed French nurseries in the Île de France. This seems strange, because the expansion of the Parisian nursery trade in the 1770s and 80s meant that Blaikie probably would have been able to obtain all the plants he desired from local suppliers. Given the small and intimate nature of the horticultural community at this time, it is highly unlikely that Blaikie had really *never* heard of the more elite Parisian nurseries. Yet he continued to obtain plants from traders in London. This was both unnecessary and expensive. Why did he encourage his patrons to continue to purchase their plants from Britain?

To some extent, we can say that his employers had more money than sense. 'Anglophilia' was a major reason why consumers such as Lauraguais purchased plants from

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<sup>347</sup> W.O. Henderson, 'The Anglo-French Commercial Treaty of 1786', *Economic History Review* 10 (1957), p.112.

<sup>348</sup> Janine Barrier and Monique Mosser, 'Introduction', in Thomas Blaikie, *Sur les terres d'un jardinier. Journal de voyages 1775-1792*, trans. and ed. Janine Barrier (Paris, 1997), pp. 20, 26; Blaikie, *Sur les terres*, 13 Sept. 1776, p.135.

<sup>349</sup> Blaikie, *Sur les terres*, Jan. 1782, pp. 217-221; 23 Nov. 1777, pp.172-3; 03 Oct. 1777, p. 162; 04 Oct. 1777, p.163; 28 April 1780, p.211.

<sup>350</sup> Blaikie, *Sur les terres*, 18 Sept. 1777, p.159, note 110; 14 Nov. 1779, pp.200-1; Jan. 1782, pp. 219-220; 1783-1784, pp.226, 228; 1785, p.240.

Britain.<sup>351</sup> Indeed, Lauraguais's passion for English culture extended to him stocking his farm with animals bred in Britain, and to hiring 'English' farmhands and an 'English' housekeeper. Purchasing plants from Britain was a natural extension of this.<sup>352</sup> But the paradox within this behaviour is that the plants that Lauraguais purchased were mostly exotics, and had only been cultivated in Britain for a few years. They would sometimes have to be naturalized a second time following their transfer to France. When viewing his flourishing garden, Lauraguais would not have been able to identify which exotic plants had come via Britain, and which came via France.

But there were also specific reasons why Blaikie would wish to maintain connections with Britain. One of the most obvious is that of trust: Horticultural manuals warned readers that it was easy for nurseries to mislead them, for example by sending seeds of an inferior quality or the wrong seeds entirely.<sup>353</sup> Nurseries gained consumers' confidence through developing a reputation that was in part constructed upon their assertions of scientific ability.<sup>354</sup> The creation of personal relationships between vendors and their customers was also essential to this. For example, Vilmorin repeatedly encouraged potential customers to come to his garden in person, where they could discuss their needs and view the plants on display.<sup>355</sup> His surviving correspondence abounds with personal advice to consumers regarding their gardens.<sup>356</sup> Nurseries worked hard at maintaining such relationships, once established, and it is therefore perhaps understandable why wealthy consumers such as Lauraguais would be unwilling to change suppliers. Similarly, gardeners such as Blaikie were careful to find reputable suppliers because their own positions depended on the success of the plants that they grew.

So Lauraguais would not have been able to tell which country his exotic plants had been bred in, and Blaikie *could* have replaced his British contacts with French ones. Even in combination, the attraction of Anglophilia and the need for trustworthy suppliers cannot explain why Lauraguais and Blaikie attributed so much significance to buying plants from Britain.

I argue that the motivations behind this behaviour came from the links between the trade in plants and botany. Blaikie and Lauraguais chose to purchase their plants from Britain thanks to the influence of, and their desire to participate in, scientific culture. Blaikie's given motive for travelling to London on plant-buying expeditions was commercial, but while he was there he also engaged in many other activities that were not directly related to purchasing plants. He visited and evaluated other gardens, and spent much time discussing and exchanging objects and information with British botanists.<sup>357</sup> This was transformed into gifting relationships when he returned to France. In 1776, Kew gardener William Aiton sent 36 species of American plants; five years later Joseph Banks sent seeds that had been gathered by botanists aboard the ship *Discovery*.<sup>358</sup> Blaikie reciprocated by sending plants to James Lee in 1777 and to Joseph Banks in 1780.<sup>359</sup> Such gifts were important because they confirmed that not only Blaikie, but also the Comte de Lauraguais, were men of science. It was common for scholars to cultivate their reputations by distributing objects from their collections as gifts.

<sup>351</sup> Blaikie, *Sur les terres*, 22 Nov. 1776, p.140.

<sup>352</sup> Berg, *Luxury and Pleasure*, pp.188-191; Josephine Grieder, *Anglomania in France, 1740-1789. Fact, Fiction, and Political Discourse* (Geneva, 1985).

<sup>353</sup> Anon., *Jardinier Portatif* (1772), pp.19-20.

<sup>354</sup> Silvestre, 'Notice', p.199.

<sup>355</sup> Société Vilmorin, Box 'Vieux documents', Annonce [ca. 1786]; de Grace, *Bon Jardinier* (1785); Le Berryais, *Traité des Jardins* (Paris, 1789).

<sup>356</sup> Société Vilmorin, Box 'Vieux documents', Vilmorin-Andrieux (Paris) to Madame de Grandchamp, 20 Oct. 1786; BNF, NAF 2758, f. 108, L. Tripière (Paris) to Vilmorin (no date).

<sup>357</sup> Thomas Blaikie, 'Foreign Notices', *Gardeners' Magazine*, vol. 3, 1828, p.207.

<sup>358</sup> Blaikie, *Sur les terres*, 01 Oct. 1776, p. 136; 18 April 1781, p.214.

<sup>359</sup> Blaikie, *Sur les terres*, 02 Oct. 1777, p. 161; 12 Feb. 1780, p.203.

By exchanging specimens, Blaikie and Lauraguais confirmed their connections with other botanists, and enhanced their potential to access new plants before other gardeners did so.<sup>360</sup> Recipients were aware that Blaikie played a key role in selecting the specimens that were sent away under Lauraguais' name.<sup>361</sup> The Comte and his gardener thus both benefited from their participation in a natural-historical gifting economy.

I have shown that despite the rise of an independent trade in plants within France, individual gardeners and garden proprietors maintained commercial contact with their British counterparts. The cultural influence exerted by Anglophilia was certainly a major stimulus to this, motivating a demand for British gardeners and 'British' plants. But most importantly, migrant British gardeners formed a kind of commercial backbone that supported connections between botanists and amateurs on both sides of the channel. The rise of the French nurseries could have put a break on Anglo-French connections, but this didn't happen. People and scientific information continued to travel back and forth between the two countries. This two-way transfer was both supportive of and supported by the trade in plants.

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<sup>360</sup> Avner Offer, 'Between the gift and the market: the economy of regard', *Economic History Review* L (1997): pp.450-76; Anne Goldgar, *Impolite Learning. Conduct and Community in the Republic of Letters 1680-1750* (New Haven and London, 1995), pp. 19-21ff.; Emma Spary, *Utopia's Garden. French Natural History from Ancien Régime to Revolution* (Chicago and London, 2000), pp.65-78.

<sup>361</sup> British Library, Add. Ms 8096, 'Lauraguais (Brussels) to Sir Joseph Banks (London), 04 April 1785, ff. 118-119.

# Provincial selling: retailing and distribution in north-east England, c. 1650-1780

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## Introduction

The areas of supply and demand, production and consumption, have been artificially separated. For years economic historians dominated research on eighteenth-century British economic change, enamoured by the 'industrial revolution'. Emphasis on the importance of production and supply has continued despite research since the 1960s characterized by social and cultural interpretations of social, cultural and intellectual changes affecting and associated with demand. Despite recent efforts to bridge the gap, the separation still exists.

Eighteenth-century north-east England has been a victim of the traditional interpretation of the industrial revolution. Portrayed as an area of economic specialization and early growth by Levine and Wrightson, the region has been characterized as exclusively production-orientated.<sup>362</sup> Only recently have historians sought to explore cultural developments. My research reassesses the region's position in an economic system where both production *and* consumption were equal.

Retailing is a key system connecting the processes of production and consumption. In recent years national and regional histories have been set within an arena of contrasting research, arguing for and against the modernism of eighteenth-century retailing. Unfortunately, north-eastern history remains unchanged by these studies. Despite Weatherill's evidence of higher than average rates of consumer goods ownership in the north-east at the beginning of the eighteenth century, little has been done to explore how goods found their way into the economy.<sup>363</sup> Similarly, though Lancaster claims that the first modern department store appeared in nineteenth-century Newcastle, no work has explored the earlier history of retailing in the region.<sup>364</sup>

In this paper I will discuss the structure and extent of retailing between the mid-seventeenth and later eighteenth centuries. I will concentrate on the role that Newcastle, as provincial capital, played in retail and distribution. Particular attention will be given to how Newcastle's facilities provided for and drew in retailers from the surrounding region.

## Structure and change

### *Mid-seventeenth to early-eighteenth century – a market-based system?*

Scarcity of sources makes any quantitative assessment of retailing before 1700 a difficult task. Fortunately at a regional level qualitative sources can provide vital data. Map 1 displays the main trading streets (in red) highlighted by William Gray in his *Chorographia, or A Survey of Newcastle upon Tine* (1649). Gray identified retailing areas which he believed were the most significant in Newcastle.

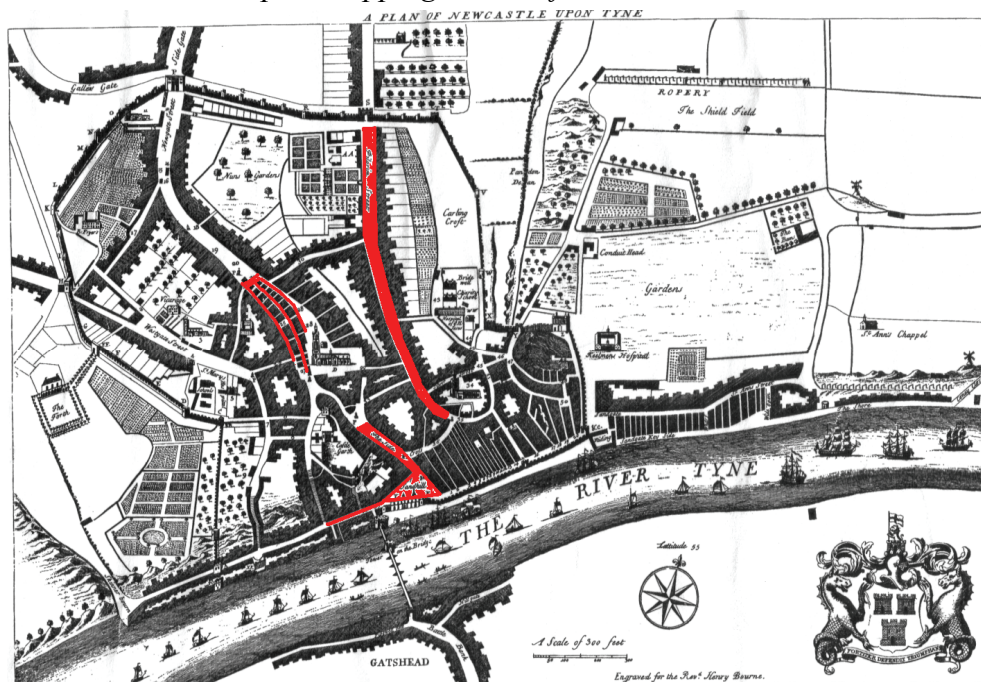
<sup>362</sup> D. Levine and K. Wrightson, *The Making of an Industrial Society* (Oxford, 1991).

<sup>363</sup> L. Weatherill, *Consumer Behaviour and Material Culture in Britain 1660-1760* (London, 1996).

<sup>364</sup> B. Lancaster, *The Department Store* (London, 1995).



Map 1: Shopping streets of Newcastle, 1649



Source: William Gray, *Chorographia* (1649).

The key retail areas, according to Gray, were concentrated in a handful of locations in a primarily market- and fair-based system. Regular markets located at Sandhill (nearest the river), Middle Street (to the left of the map) and Pilgrim Street (to the right) provided the provisions of life, whilst two annual fairs brought agricultural and manufactured goods to customers. Markets dominated Gray's description of Newcastle, but shops were also scattered throughout the town and it is worth noting that they were located within the market areas. The prominence of the Side and Sandhill (nearest to the river) as retailing areas reflects Newcastle's position as a major port town which depended to a considerable extent on sea trade.

Shops aside, it was Newcastle's Saturday flesh market that Gray described as 'the greatest market in England'.<sup>365</sup> Justifying this claim he reasoned, it 'is not the populousnesse of the towne that make it, it is the people in the countrey (within ten [twelve] miles of the towne), who makes their provision there'.<sup>366</sup> Clearly Newcastle, as a centre of exchange and retailing, had a dominant influence on the hinterlands, drawing in producers and customers from surrounding villages to a central market.

Newcastle's importance as a distribution centre grew during the later seventeenth century as the structure of retailing in the town and region began to change. Hesitant growth in the number of market towns resulted in few large distribution centres near Newcastle, reinforcing its position in the north-east.<sup>367</sup> Chapmen supplemented the market system, but chapmen licenses for 1697-98 reveal that they were also geographically concentrated with 54 registered for the Newcastle district and only a few in the wider region.<sup>368</sup>

By the end of the seventeenth century shops had taken on a new importance nationally and in Newcastle. It was not the markets of Newcastle that stunned Celia Fiennes in 1698 on her tour of England, but the modernism of its shops. She enthused, they 'are good and are of Distinct trades, not selling many things in one shop as is ye Custom in most Country towns

<sup>365</sup> W. Gray, *Chorographia* (1649), p.68.

<sup>366</sup> Ibid.

<sup>367</sup> A. Everitt, 'Country, County and Town' *TRHS* (1979); A. Dyer, 'Small market towns 1540-1700' in P. Clark (ed.) *The Cambridge Urban History of Britain Vol II 1540-1840* (Cambridge, 2000), pp.425-50.

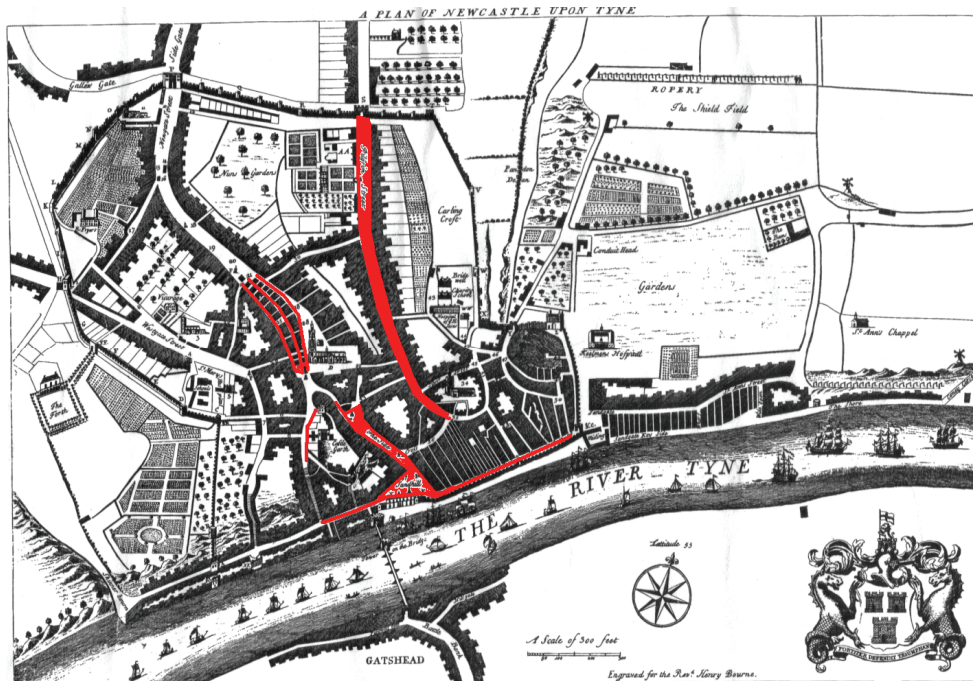
<sup>368</sup> M. Spufford, *The Great Reclothing of Rural England* (London, 1984), p.15.

and Cittys'.<sup>369</sup> Historians of post-nineteenth century retailing have denounced early modern shops for being over-specialized, but Fiennes' comment should be considered in the context of seventeenth-century discourse. Debate concerning the decay of trade dominated later seventeenth century dialogue and one solution strongly advocated by contemporaries was that in all cities and market towns 'shopkeepers do all they can at the first settling of trades to distinguish the same ... one from another'.<sup>370</sup> Newcastle, like London and other major cities, had already made moves towards specialization. Having such shops separated Newcastle from the 'custom' of county towns and other cities, addressed a key issue highlighted in the decay of trade debate, and suggests that, as Stobart and Hann have stressed, specialization did not necessarily mean retailers were 'primitive or hidebound'.<sup>371</sup>

Sources for enumerating shopkeepers are unavailable for the early eighteenth century, however, Henry Bourne provides some useful comments in his *The History of Newcastle upon Tyne* (1736). The main retailing areas (map 2) do not indicate a dramatic organizational change from 1649, but Bourne's description of the facilities available does suggest that gradual development was occurring. Those areas which Gray identified as important places of exchange remained. The markets around Middle Street retained their prominence and the street continued 'as it was in *Grey's* Time, where all Sort of Artificers have Shops and Houses'.<sup>372</sup>

By the early eighteenth century a number of new trading areas had developed. The area around Castle Yard had arisen as a district for trade and Bourne commented '[a]t present there are a good many Shops and Houses ... in and about it'.<sup>373</sup> The Side (the street leading down towards the river) was 'from the one end to the other fill'd with Shops of Merchants, Goldsmiths, Milliners, Upholsterers, &c' and led to the Quayside which was already a significant exchange and retail area.<sup>374</sup>

Map 2: Shopping streets in Newcastle, 1736



Source: H. Bourne, *The History of Newcastle upon Tyne* (1736).

<sup>369</sup> C. Fiennes, *Through England on a Side Saddle* (1888), p.177.

<sup>370</sup> J. Thirsk and J. P. Cooper (eds.) *Seventeenth Century Economic Documents* (Oxford, 1972), p.396.

<sup>371</sup> J. Stobart and A. Hann, 'Retailing Revolution in the Eighteenth Century? Evidence from North-West England' *Business History* (2004), p.173.

<sup>372</sup> H. Bourne, *The History of Newcastle upon Tyne* (1736), p.53.

<sup>373</sup> Bourne, *History of Newcastle*, p.121.

<sup>374</sup> Ibid, p.122.



*1750 onwards – a shop-based system?*

Contemporaries seemed clear by mid-eighteenth century that the North was well provided for by retail outlets. Richard Pocock commented in a letter to his sister in 1760 that Northumberland, Durham, Westmorland and parts of Cumberland had ‘great shops of all kinds’.<sup>375</sup> Contrary to contemporary opinion, the first useful quantitative source, the 1759 Excise enumeration of retail shops analysed by Mui and Mui, does not suggest that the region was well-provisioned compared to national standards.<sup>376</sup> According to Mui and Mui’s analysis, Durham and Northumberland had the highest ratio of population to shops in England, with 82 people to every shop.<sup>377</sup> This suggested to Mui and Mui that the North ‘lacked an appropriate structure and thus lagged behind the rest of the country in the number and types of shops’.<sup>378</sup> How can we account for this evidence which sits awkwardly beside contemporary commentary and probate inventory evidence from the late-seventeenth and early-eighteenth centuries which suggest advanced consumption?

The sparsely inhabited nature of the area, highlighted by Mui and Mui, may have limited retail development, but this is a rather one-dimensional explanation. Northumberland and Durham covered large geographical areas, had few prominent cities and relatively dispersed populations. According to comparative evidence from the Durham Hearth Tax returns, a large proportion of northerners were relatively poorer than those in southern counties.<sup>379</sup> These factors undoubtedly inhibited development. However, the concentration of retailing in Newcastle may also have hindered region-wide growth. Gray had written over a hundred years earlier that people travelled from the surrounding area to shop in Newcastle. There is no reason to assume that this had changed dramatically, especially in light of Newcastle’s continued economic growth.

The use of eighteenth-century trade directories as a source for understanding trade and retail in particular localities has previously been open to considerable criticism. However, they provide a useful baseline for numbers of tradesmen and retailers and their location within towns. William Whitehead’s *First Newcastle Directory* (1778) indicates that Newcastle had continued to grow as a distribution centre. The directory recorded 1,092 traders, producer-retailers, and retailers in Newcastle and although there are no earlier figures for comparison, the amount of streets these retailers inhabited when compared with evidence above, does suggest retailing was expanding.

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<sup>375</sup> Cited in Weathrill, *Consumer Behaviour*, p.52.

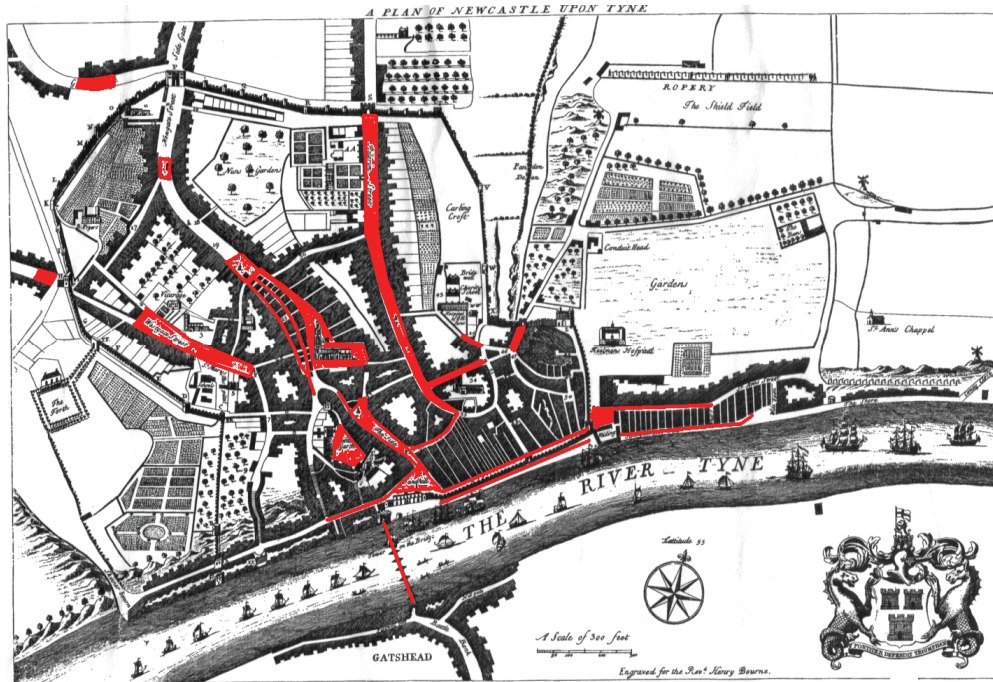
<sup>376</sup> H. Mui and L. Mui, *Shops and Shopkeeping in eighteenth-century England* (London, 1989).

<sup>377</sup> *Ibid*, p.296.

<sup>378</sup> *Ibid*, p.71.

<sup>379</sup> E. Parkinson (ed.) *County Durham hearth tax assessment Lady Day 1666* (London, 2006), p. xciii.

Map 3: Shopping streets in Newcastle, 1778



Source: W. Whitehead, *First Newcastle Directory* (1778).

Map 3 displays the retail streets in Newcastle as identified by a survey of Whitehead's *Directory*. The map indicates that retailing had grown considerably and indeed new retail streets had developed. However, by looking at a breakdown of the number of trading premises per street, displayed in table 1, it is evident that retailing was still largely concentrated in a handful of locations.

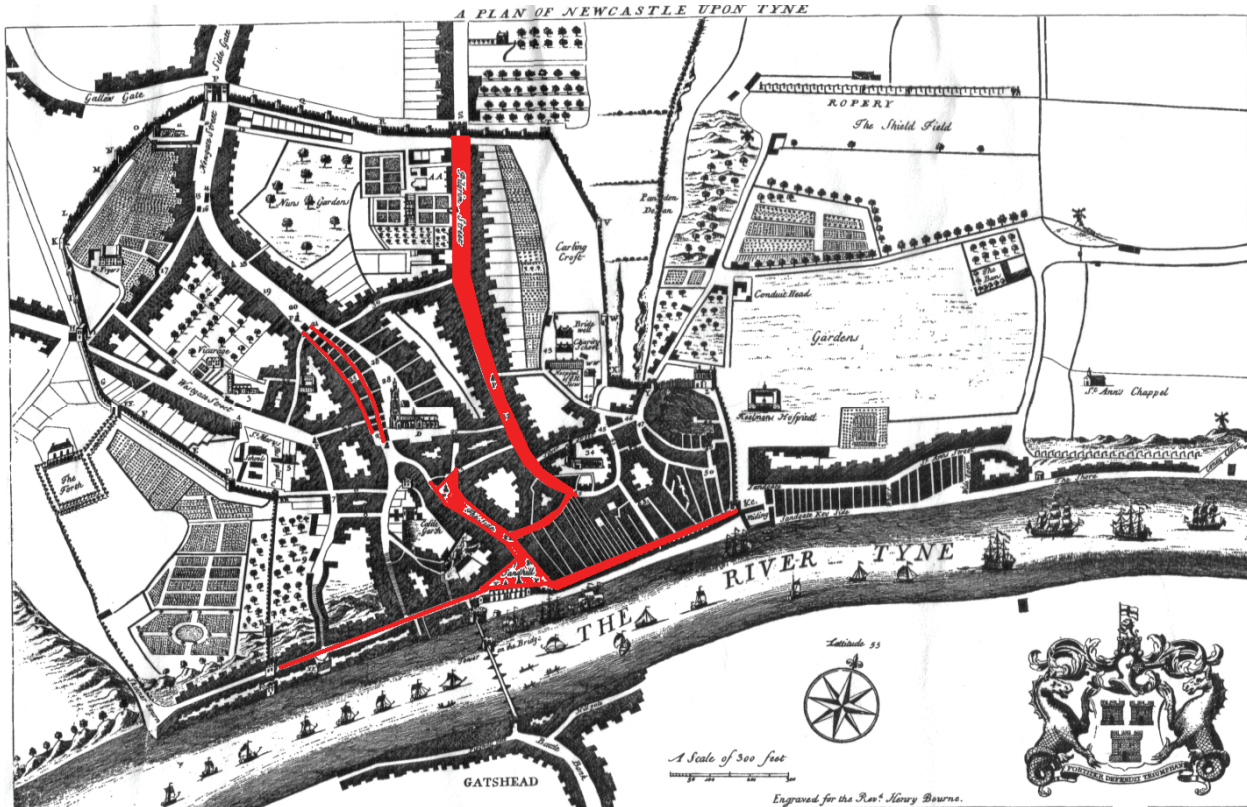
Table 1: Shopping streets in Newcastle, 1778

Tradesmen's Premises per Street	No. of Streets with this no. of Premises
1-9	77
10-19	12
20-29	2
30-39	4
40-49	5
50-59	0
60-69	1
70-79	1
80+	1

Source: Whitehead's *First Newcastle Directory* (1778).

A large number of streets housed only a handful of premises, whilst three particular streets had more than 60 premises each. Map 4 displays the retail streets occurring with more than 40 premises on. When displayed in map form it is clear that the *main* retailing streets had changed little since 1649.

Map 4: Main shopping streets in Newcastle, 1778

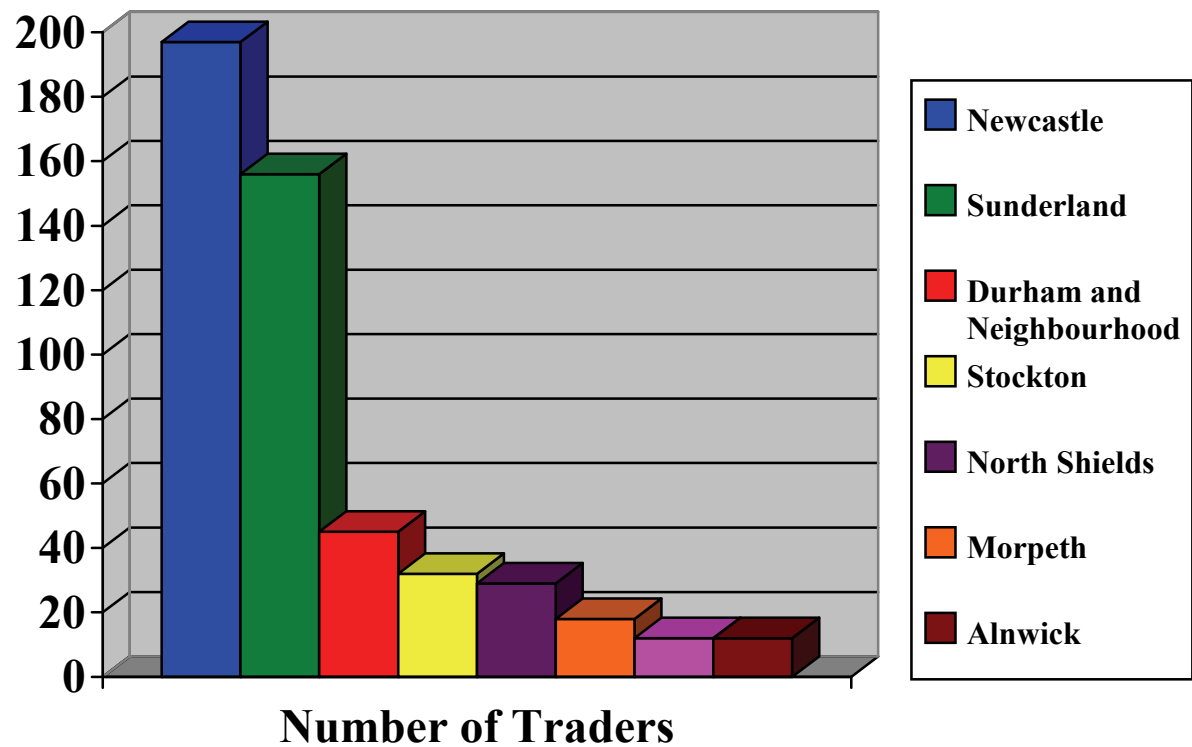


Source: Whitehead's, *First Newcastle Directory* (1778).

The principal difference between retailing facilities in 1649 and those in 1778 was the growth of shops. The areas that had been dominated by markets were now crowded with shops. Town histories published in the early nineteenth century confirm that Newcastle's markets and fairs continued to play an important role during the later eighteenth century, but shop-based trading had become a primary form of retailing.

### Newcastle: a regional distribution centre

As Newcastle developed a more complex retail system based upon shops, the town's position as a distribution centre within the region grew. We can only infer that the number of shops recorded in the Excise Enumeration figures represents how concentrated retailing was within Newcastle, but data towards the end of the period indicates the town's regional position more definitely. Figure 1, a breakdown of traders and retailers from north-eastern towns drawn up from William Bailey's 1781 *Northern Directory*, emphasizes Newcastle's position. Sunderland, a town whose population and trade had risen rapidly during the course of the eighteenth century, was the nearest rival town, but Newcastle remained dominant. The other towns of consequence shown each had less than a third of Newcastle's traders.

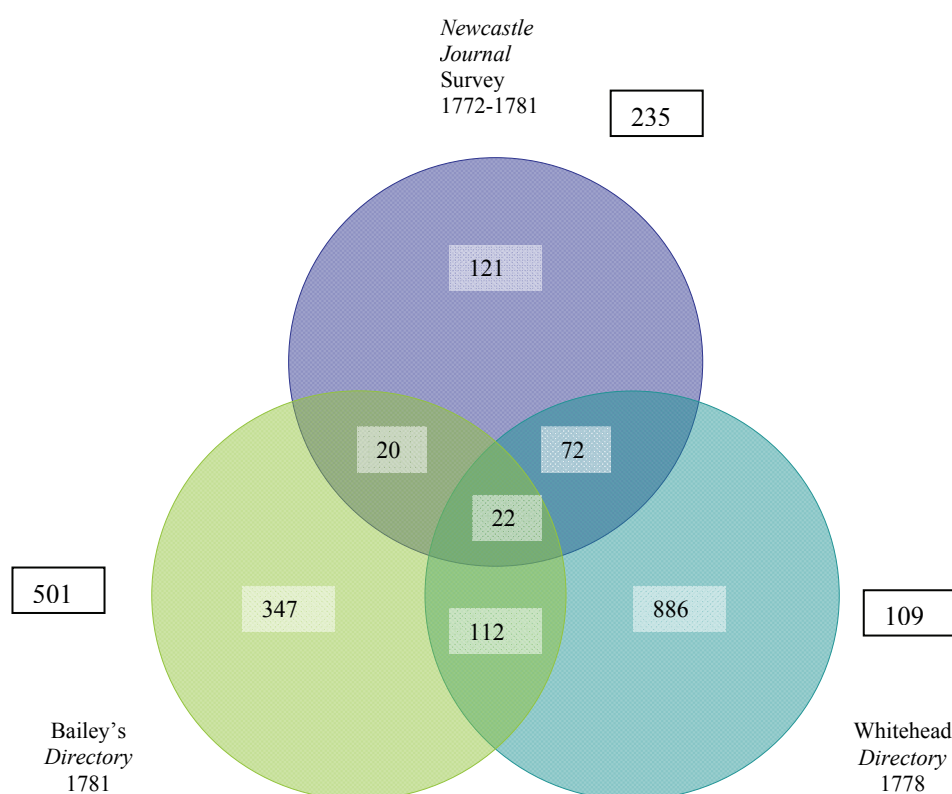
Figure 1: *Retailers and traders in the north-east's major towns, 1781*

Source: Bailey's *Northern Directory* (1781).

When Bailey's *Directory* is compared with entries in Whitehead's *Directory* and a 10-year survey of advertisements from newspaper the *Newcastle Journal*, Newcastle's dominant position as a distribution centre is reinforced.



Figure 2: Comparison of recorded traders and retailers



Sources: Bailey's *Northern Directory* 1781; Whitehead's *First Newcastle Directory* 1778; *Newcastle Journal* 1772-1781.

Figure 2 represents the total number of traders and retailers recorded from each source (written outside of the circle), the amount of overlaps between all sources (in the centre), and the number of overlaps between each pair of sources. The diagram indicates that no source is completely comprehensive, but does suggest the strength of Newcastle's position. The number of traders and retailers recorded in Whitehead's *Directory*, which covers only Newcastle, greatly exceeds the numbers recorded in the other two sources, which recorded retailers in Newcastle and other regional towns.

Qualitative material brings further detail to Newcastle's position. Although the value of newspaper advertisements is limited in quantitative terms, they can provide a useful qualitative account of the physical location and movement of retailers and traders. As a commercial and trading centre Newcastle attracted customers to its markets and shops, but the growing concentration of retailing in the town encouraged many producers to keep premises solely for retail in addition to their manufacturing units where they produced and vended their goods.

Paul Jackson, a potter who produced goods at his manufactory on Gateshead Common (located south of the river Tyne) advertised that he sold earthenware 'at his shop on the quayside' and also made and sold 'at his factory on Gateshead Common'.<sup>380</sup> Likewise, the potter John Warburton produced and sold from his manufactory at Carr's Hill, Gateshead, and sold from 'his shop on the Keyside'.<sup>381</sup> The actions of Jackson and Warburton, selling wares from their manufactories and shops on the Quayside, reveal a strong current of business sense. They felt their businesses could benefit from location on one of Newcastle's busiest trading streets.

<sup>380</sup> 4<sup>th</sup> Dec. 1773, *Newcastle Journal*.

<sup>381</sup> 14<sup>th</sup> May 1774, *Newcastle Courant*.

Other businesses went to greater lengths to utilize the advantages of a Newcastle outlet, such as James Davenport, a paper-hanging printer and retailer. On the 9 March 1745 Davenport announced that he sold ‘Several sorts of PAPER for Room-Hangings ... as good and as cheap as London’ from his shop at North Shields, a small town by the coast. By June in the same year, Davenport advertised that he also sold ‘at Mr James Steven’s at the Shop in the Flesh-market [Newcastle]’ suggesting that he was testing the extent of the Newcastle market. By 1771 his manufactory had to a central position at St. Nicholas’ Church Yard in Newcastle, which had become a centre of paper-printing and engraving.<sup>382</sup>

Whilst Newcastle’s retail market drew in traders and retailers who wished to benefit from a location in a trading centre, the town’s businesses were also connected to smaller rural shopkeepers within a certain distance of the town. For example Abraham Dent, a shopkeeper from Kirkby Stephen, had 20 suppliers from Newcastle.<sup>383</sup> The geographical area of Newcastle’s retail influence had expanded considerably since Gray’s time. Retailers supplied Kirkby Stephen 70 miles away in Cumbria and drew in traders from North Shields eight miles away on the coast.

### Conclusions

In addition to the north-east’s production-orientated economy, it is clear that the region was developing a more complex goods distribution system, bridging the gap between production and consumption. Newcastle appears to have been at the centre of regional retailing, providing a central market for distribution and purchase of goods. This position was reinforced throughout the eighteenth century.

Developments in the distribution system did not happen at a revolutionary pace. The transition from primarily market-based retailing, limited geographically, to a shop system which covered over 100 streets took more than a century. However, changes did take place simultaneous to developments in national retailing and it should not be concluded that the developments were insignificant. Retail and distribution systems had grown in such a way that by the early nineteenth century Newcastle was prepared for a number of more striking developments which included the opening of the Central Arcade, the indoor Grainger Market and Bainbridge’s, the towns first department store.

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<sup>382</sup> 9<sup>th</sup> March 1745, *Newcastle Courant*; 29<sup>th</sup> June 1745, *Newcastle Journal*; 18<sup>th</sup> May 1771, *Newcastle Courant*.

<sup>383</sup> T. S. Willan, *An eighteenth-century Shopkeeper* (Manchester, 1970), p.29.



## Consumption and material culture in early modern Berkshire, 1650-1750

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In *Production and Consumption in English Households, 1600-1750*, Overton and colleagues test theoretical models for the pre-industrial economy of early modern England. In particular, they investigate relationships between household production activities and patterns of consumption during a key intermediate stage in the transition from economic self-sufficiency to complete market dependence. They conclude that 'capitalism' did not develop in a uniform linear manner by contrasting Kent, which integrated fully into the metropolitan economy, with Cornwall, which experienced relative impoverishment and largely ignored the material goods that were being acquired in Kent. Given that Cornwall's remoteness appeared not to affect the availability of such goods, the authors compare this rejection of material objects to a wider rejection of English cultural values.<sup>384</sup>

Seventeenth-century hearth tax records for Kent, however, suggest that even here there were areas of *relative* poverty.<sup>385</sup> Indeed, Overton and colleagues acknowledge considerable local variation in the uptake of new consumption goods, noting items were most readily adopted in towns.<sup>386</sup> Within rural areas, however, they discern 'no obvious pattern to the distribution of new objects'.<sup>387</sup> This paper examines whether local 'cultures of consumption' of the kind postulated by Overton and colleagues *can* be identified *within* another rural county in southern England: Berkshire. By taking a local view, I hope to shed further light on the relationships between consumption and the development of capitalism which might otherwise be obscured.

Ecological variation in Berkshire has created different patterns of agriculture and settlement. The *Victoria County History* distinguishes four sub-regions:

... the Vale of the White Horse on the north, fertile and full of rich corn-growing land and meadow; the hill country of the Downs, with its poor and stony soil, chiefly fitted for the pasture of large flocks of sheep; on the south the vale of the Kennet, again suitable for arable cultivation, although wilder, more woody, and more sandy than the north; while to the east [is] the forest district, stretching from the vale of the Kennet to the Thames.<sup>388</sup>

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<sup>384</sup> M. Overton, J. Whittle, D. Dean, & A. Hann, *Production and Consumption in English Households, 1600-1750* (Abingdon, 2004) pp.176-7.

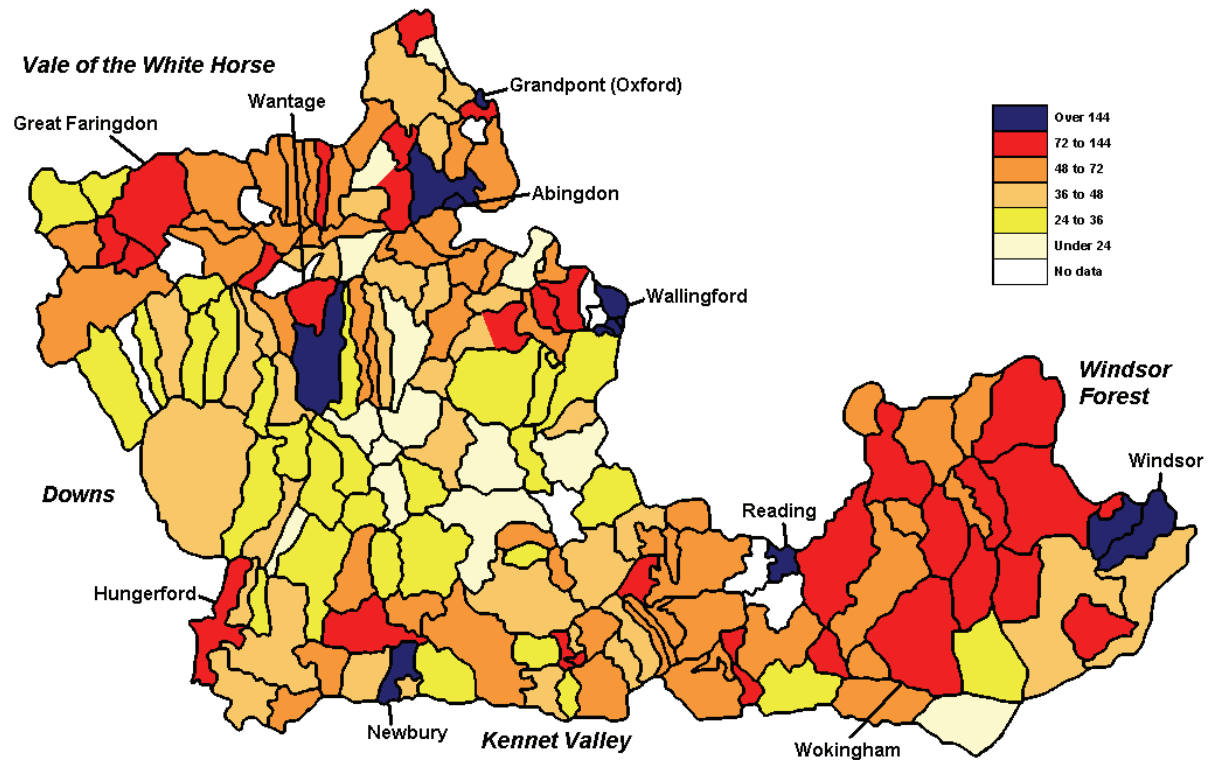
<sup>385</sup> D. Harrington, S. Pearson & S. Rose, *Kent Hearth Tax Assessment Lady Day 1664* (London, 2000) pp.xxxiii-xxxvii.

<sup>386</sup> Overton et al, pp.137-69.

<sup>387</sup> Ibid. p.157.

<sup>388</sup> P.H. Ditchfield, & W. Page, eds., *The Victoria History of the Counties of England: Berkshire* (London, 1906) p.167.

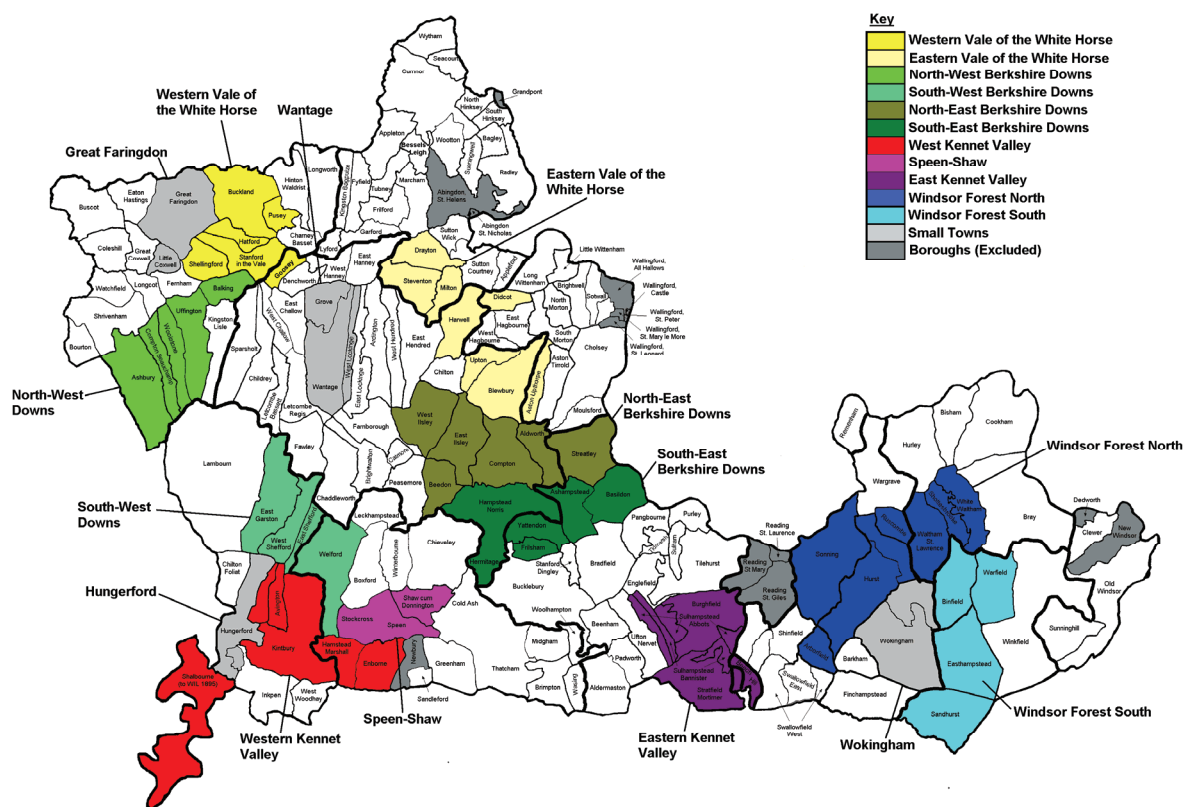
Figure 1: 1663/4 hearths per 1,000 acres



As in Kent, hearth tax records suggest variable levels of wealth across Berkshire. Figure 1 illustrates numbers of hearths per 1,000 acres in 1663/4.<sup>389</sup> The greatest densities of hearths and by extension tax-payers were, unsurprisingly, in towns like Reading and Newbury, but distinct regional differences are apparent elsewhere. The Downs had fewest hearths, suggesting lower levels of population and wealth. The Vale of the White Horse and Kennet Valley had higher densities of hearths, but the greatest concentrations outside the towns were in the Windsor Forest area to the east. Do these differences represent different ‘cultures of consumption’? To investigate this, following Overton and colleagues, we analyse probate inventories.

<sup>389</sup> National Archives E179/243/25.

Figure 2: Study areas



For this study, the Vale of the White Horse and Kennet Valley were subdivided into eastern and western regions, the Downs divided into quadrants, and Windsor Forest split between northern and southern zones. Rural parishes were selected from each subdivision, with one small town for comparison (figure 2). In total, 4,028 inventories from fifty-seven parishes were analysed using Overton's ITEM software.<sup>390</sup>

This methodology does have limitations. Parishes and geology are not coterminous. The chapelry of Wickham, for instance, projects from the downland parish of Welford into the Kennet Valley, whilst Uffington's chapelry of Baulking extends into the Vale of the White Horse. Despite blurred ecological boundaries, each area's characteristics were nonetheless discernable. The selected 'towns' similarly comprised smaller urban centres within larger rural parishes, diluting any particularly 'urban' properties, although their distinctiveness was again apparent.

<sup>390</sup> M. Overton, 'A Computer Management System for Probate Inventories', *History and Computing* 7, no. 3 (1995) pp.135-42; Overton et al, pp.19-21. I am grateful to Prof. Overton for use of the software.

Table 11: *Material wealth and house size*

	<i>n</i>		Median material wealth (£)		Median number of rooms	
	1650-99	1700-49	1650-99	1700-49	1650-99	1700-49
Western Vale	183	96	33.23	33.82	5	5
Great Faringdon	147	121	24.52	18.98	5	6
Wantage	174	83	28.14	19.83	5	5
Eastern Vale	255	122	23.88	29.62	5	6
NW Downs	139	104	31.00	38.46	5	6
SW Downs	135	113	28.39	17.70	5	5
West Kennet	235	111	46.17	17.90	5	5
Hungerford	136	61	30.44	19.10	5	5
Speen/Shaw	121	73	28.33	19.20	5	6
NE Downs	117	81	31.84	26.44	5	6
SE Downs	115	101	37.72	38.78	5	5
East Kennet	205	73	55.50	78.22	7	7
Windsor Forest North	374	156	36.42	29.95	6	6
Wokingham	106	33	55.04	23.60	7	5
Windsor Forest South	181	77	44.92	30.88	7	7

Table 1 provides median values of material wealth and number of rooms from the Berkshire inventories.<sup>391</sup> Material wealth was highest in east Berkshire and the Kennet Valley, although levels fell in most areas after 1700, with Wokingham and the west Kennet Valley being especially affected. The east Kennet Valley, however, became increasingly wealthy due to the value of farm stock from agricultural intensification. The western Vale of the White Horse and north-west Downs also saw higher material wealth after 1700 as specialized dairying and cheese-making developed for the London market.<sup>392</sup>

Before 1700, houses with most rooms were located in east Berkshire. The median number of rooms rose in some other areas after 1700, but house size in the south-west, where material wealth was lowest, remained constant.<sup>393</sup> Probate inventories thus confirm fundamental – and statistically significant – differences in wealth and house size between eastern and western Berkshire during the early modern period.<sup>394</sup>

By the seventeenth and eighteenth centuries, new types of furniture were also making homes more comfortable, supplementing the beds, tables, benches, stools, and chests already mentioned in inventories (table 2). Chests of drawers replaced chests for storage, particularly in the towns, Windsor Forest and the Vale of the White Horse, but less so in the west Kennet Valley and the Downs. New types of table, related to new social rituals such as tea-drinking, could also be found in the towns, Windsor Forest, and surprisingly the north-west Downs before 1700.

<sup>391</sup> Analysis of one Kentish parish showed that ‘material wealth’ – the total inventory value minus leases and debts – was generally representative of other wealth indicators; Overton et al, pp.138-9.

<sup>392</sup> J. Cottis, ‘Agrarian Change in the Vale of White Horse, 1660-1760’ (Unpublished PhD Thesis, University of Reading, 1984) pp.651-2.

<sup>393</sup> See also L.C. Orlin, ‘Fictions of the Early Modern English Probate Inventory’, in H.S. Turner ed., *The Culture of Capital: Property, Cities and Knowledge in Early Modern England* (London, 2002) pp.57-60.

<sup>394</sup> Significant at the 95% confidence level using the Mann Whitney test.

Table 2: *Furniture and tableware (%)*

	Chests of drawers		New tables		Plates		Hot drinks	
	1650-99	1700-49	1650-99	1700-49	1650-99	1700-49	1650-99	1700-49
Western Vale	5	28	7	17	8	35	1	4
Great Faringdon	6	27	16	20	18	36	0	3
Wantage	8	36	14	17	18	34	0	1
Eastern Vale	5	40	6	10	7	28	0	1
NW Downs	4	15	16	17	9	34	0	2
SW Downs	3	12	6	11	4	20	0	0
West Kennet	3	13	7	8	9	20	0	3
Hungerford	4	26	13	16	15	43	1	7
Speen/Shaw	6	29	12	19	16	33	0	4
NE Downs	3	20	7	10	8	26	0	1
SE Downs	1	23	5	10	6	31	0	5
East Kennet	3	27	5	10	12	29	0	1
Windsor Forest North	6	28	10	15	11	35	0	4
Wokingham	9	27	19	18	26	42	1	3
Windsor Forest South	9	26	13	4	18	29	0	3

New tableware, most notably dinner plates and knives and forks, also first appears in the towns and east Berkshire. Tea- and coffee-making equipment occurs earliest in Hungerford, Wokingham and the western Vale: only the south-west Downs has no hot drinks by 1750.

So-called ‘luxury’ items, such as mirrors, window curtains, and pictures, were again acquired earliest in the towns and east Berkshire, and less readily in the rural west. Only clocks break the pattern, occurring more frequently in the eastern Downs and east Kennet Valley. Furthermore, clocks usually appear in ‘backstage’ locations within the house, such as chambers, passages or staircases, rather than ‘frontstage’ halls, suggesting their main use was functional time-keeping rather than display.

Table 3: *Luxury’ items (%)*

	Mirrors		Window Curtains		Pictures		Clocks	
	1650-99	1700-49	1650-99	1700-49	1650-99	1700-49	1650-99	1700-49
Western Vale	6	18	2	3	3	2	3	18
Great Faringdon	10	26	4	7	3	11	5	13
Wantage	13	25	5	7	3	10	2	7
Eastern Vale	3	16	2	6	0	2	2	12
NW Downs	9	12	2	7	1	1	4	15
SW Downs	2	12	1	2	1	1	2	8
West Kennet	6	8	1	4	3	2	4	6
Hungerford	11	21	1	13	4	8	2	8
Speen/Shaw	10	32	2	12	2	11	2	11
NE Downs	4	14	1	6	0	4	3	22
SE Downs	7	19	1	7	1	4	3	23
East Kennet	5	21	1	5	1	3	6	22
Windsor Forest North	10	22	4	8	3	3	4	18
Wokingham	20	18	8	12	8	3	6	0
Windsor Forest South	14	18	4	5	2	1	9	14

Thus far, much of the Berkshire evidence supports Overton and colleagues’ research. According to their findings, the gentry pioneered items increasing comfort and convenience, such as mirrors and chests of drawers, whereas objects involving new social behaviour (especially eating and drinking) originated with the service professions, usually in towns.<sup>395</sup>

These patterns are also demonstrated in Berkshire by logistic regression analysis, where the

<sup>395</sup> Overton et al, pp.166-7.

outcome is the presence of particular *assemblages* of objects associated with these behaviours. The predictor variables are various occupation and status attributes, and urban residence. The statistics given are the ‘odds ratios’ (only recorded where significant at the 95 per cent confidence level), denoting the change in odds resulting from a unit change in the predictor variable.

Table 4: *Odds ratios’ predicting ownership of goods*

	<i>Comfort</i>		<i>Sociability</i>	
	<i>Chests of drawers and upholstered furniture</i>	<i>Chests of drawers, upholstered furniture and window curtains</i>	<i>New tables and hot drinks</i>	<i>New tables, hot drinks and plates</i>
URBAN	-	-	-	2.78
SERV/RETAIL/FOOD	-	-	3.53	4.89
GENTLEMAN	11.04	12.16	-	-
YEOMAN	-	-	-	-
HUSBANDMAN	-	-	-	-

The only statistically-significant variable for comfort and convenience was gentlemanly status: gentlemen were eleven times likelier to own *both* chests of drawers *and* upholstered furniture than any other occupation or status group. The odds increased further when window curtains were added to the equation.

New social behaviour demonstrates a very different pattern, with the service, retail and food-processing professions being three times likelier to possess new tables *and* hot drinks. The odds increased further when plates were added, whilst urban residency became statistically significant, with these items almost three times likelier to occur together in towns than in the countryside.

Where Berkshire diverges from Overton and colleagues’ findings is in the clear differences between different regions. Windsor Forest shared characteristics more frequently associated with urban places, having greater comfort and evidence for new social practices. By contrast, the south-west Downs became impoverished. The final section of this paper attempts to explain these different ‘cultures of consumption’.

We have already noted that material wealth was lowest in south-west Berkshire. If wealth determined the adoption of new items, then the low take-up in the south-west should reflect this. Following Overton and colleagues’ methodology, the distribution of objects by quartiles of material wealth calculated from the *entire* inventory sample was used to compare ownership rates for individuals of equivalent wealth across the different regions.<sup>396</sup> Although the wealthiest generally owned more new commodities than the poorest, adoption rates were lower in the south-west than in the east. The south-west’s poor material culture was thus not simply due to its relative poverty.

<sup>396</sup> Ibid. p.143.



Table 5: *Ownership of goods by quartiles of pooled material wealth (%)*

	<i>Mirrors</i>				<i>Chests of drawers</i>			
	<i>South-West Downs</i>		<i>Southern Windsor Forest</i>		<i>South-West Downs</i>		<i>Southern Windsor Forest</i>	
	<i>1650-99</i>	<i>1700-49</i>	<i>1650-99</i>	<i>1700-49</i>	<i>1650-99</i>	<i>1700-49</i>	<i>1650-99</i>	<i>1700-49</i>
Q1	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0
Q2	2.7	4.2	7.6	14.3	5.4	12.5	0.0	19.0
Q3	0.0	23.8	21.7	36.0	4.0	14.3	8.7	44.0
Q4	0.0	13.0	28.6	11.8	0.0	26.1	23.8	29.4

Overton and colleagues found that new objects were most closely associated with gentry and the service professions. Were these people simply present in greater numbers in the east than the west? To some extent this appears to be true, for the south-west Downs inventory sample includes few gentlemen, despite several houses with over ten hearths in the hearth tax. What may be more significant is *social polarization*, for there were also considerably more one-hearth houses and fewer houses with intermediate numbers of hearths in the south-west. In a highly stratified society, where status was openly acknowledged, the well-established family had little need to demonstrate its position by conspicuous consumption.<sup>397</sup>

Social emulation may also have been less important in sparsely-populated areas like the Downs.<sup>398</sup> Emulation is often cited to explain the adoption of new consumer goods, though it overlooks the full complexity of social relations and motives involved in individual consumption choices. While Overton and colleagues accept that gentlemen generally adopted new commodities before yeomen, who in turn preceded husbandmen, they argue against a simple process of diffusion, suggesting instead that new goods were a means to *establish* social differences rather than simply express them.<sup>399</sup> This appropriation of new fashions to establish identity may have greater relevance in more densely-populated areas like towns, where one's background may not have been familiar to one's neighbours.<sup>400</sup> Weatherill also notes that living close together could be stressful, resulting in greater attention to the living space and the addition of goods and furnishings to make this as aesthetically pleasing and comfortable as possible.<sup>401</sup> Higher population densities in east Berkshire may thus have encouraged the uptake of new goods, especially given its close proximity to London and the royal court at Windsor.<sup>402</sup>

But London's influence was also felt in other parts of Berkshire. Areas as diverse as the east Kennet Valley and western Vale of the White Horse intensified agricultural production for the London market, but these regions were not necessarily at the forefront of consumerism: there may have been more concern with investing income in leasing land, buying stock or creating thriving farms in these regions than in purchasing new consumption goods.<sup>403</sup>

<sup>397</sup> C.D. Edwards, *Eighteenth-Century Furniture* (Manchester, 1996) p.166.

<sup>398</sup> P.S. Barnwell, 'Houses, Hearths and Historical Inquiry', in P.S. Barnwell & M. Airs eds., *Houses and the Hearth Tax* (York, 2006) p.182.

<sup>399</sup> Overton et al, pp.174-5.

<sup>400</sup> L. Weatherill, *Consumer Behaviour & Material Culture in Britain 1660-1760* (London, 2 edn, 1996) p.77; Edwards, p.166; Overton et al, pp.166-9.

<sup>401</sup> Weatherill, pp.81-3.

<sup>402</sup> C.G. Durston, 'London and the Provinces: The Association between the Capital and the Berkshire County Gentry of the Early Seventeenth Century', *Southern History* 3 (1981).

<sup>403</sup> J. Dils, 'A Sideways Look at the Hearth Tax: Shrivenham, Berkshire in the Late 17th Century', *Oxoniensia* LXVI (2001) p.79.

In conclusion, I have demonstrated that the county-wide approach adopted by Overton and colleagues conceals great local diversity in the adoption of new consumption goods, not only between town and country, but also between rural west and east Berkshire. The reasons for these different 'cultures of consumption' were many and varied: wealth, occupation, status, social polarization, emulation, identity, population density, connections with London, production, and alternative sources of expenditure all played their part in facilitating or inhibiting the uptake of new goods, and the new social practices and relationships those goods represented. As historians we have the benefit of hindsight, but the people who lived and died in early modern Berkshire, and who acquired or ignored the new material objects, did not know that they had embarked on the road to 'capitalism': their consumption choices were based on the various factors affecting their daily lives in the different regions. The pathway to capitalism was less uniform and less linear than was thought.

# **Economic growth or stagnation during the interwar period: the performance of British European colonies**

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## **1. Introduction**

The overall objective of the paper is to evaluate the growth performance of Cyprus and Malta in the interwar (1921-38) period. Pamuk and Williamson (2000) assure us that with the exception of Mandated Palestine, the economic performance of Mediterranean states was poor. In order to evaluate their performance, Gross Domestic Product (GDP) estimates were constructed. Estimating the GDP of Cyprus and Malta will indicate whether the islands were typical lacklustre growth performers or non-typical successes stories. The economic history of the islands has not been introduced to new methods of quantification. In estimating GDP through the use of Historical National Accounts (HNAs), one attempts to ‘measure magnitudes [of growth] in terms of ... modern systems of ends, means and values’ in order to better understand the economic conditions of the time (Kuznets, 1966; p.23).

The estimation of GDP for this period will narrow a substantial gap in the economic history of the islands. The historiography of the islands for the interwar period has been focused on the political rather than the economic issues of the period. The strategic importance given to Cyprus and Malta resulted in the islands’ economic history being sidelined.

Both Malta and Cyprus were under British rule. The relationships of the islands’ subjects with the British colonial overlords went through several significant constitutional changes. However, the constitutional changes in Cyprus and Malta proved politically unrewarding for all sides. The role of economic turbulence in straining the politics of the interwar period has not been previously attempted.

## **2. An overview of the islands’ history**

Cyprus was occupied in 1878 under the Cyprus Convention, whereby the island remained nominally under Ottoman Suzerainty but all power was transferred to the British (Hill, 1952). Outdated Ottoman laws and high taxation were essentially maintained and superimposed by a relatively limited constitution (Georghallides, 1979). In addition, the occupation imposed heavy additional taxation on Cyprus. An annual payment of £92,799 pounds was to be commuted to the Sultan and raised by Cypriot taxation. Instead, the British treasury used the money to amortize its burden of defaulted Ottoman loans. The island was annexed in 1914 and declared a crown colony in 1925. Despite the annexation of Cyprus, the amount was still debited from Cypriot government expenditure. This was considered a severe constraint to development. The need to maintain a large surplus in revenue prevented any attempt to reduce taxation, and siphoned away any surplus that could be used for development work (Georghallides, 1979, 1985).

In October 1931 popular riots against British rule erupted in Cyprus. Such riots were unprecedented in the history of British Cyprus: the island was so trouble free prior to the riots that when the riots took place there was only one under-strength infantry company to suppress it. The cause of the riots is contested in Cypriot historiography. The colonial government insisted that their outbreak was purely economic in nature since rural Cyprus was experiencing a serious drought and the effects of the Great Depression. Greek-Cypriot historians argue that the riots were motivated by nationalistic sentiment, thus proximate cause of the riot was Greek-Cypriot protests for union with Greece (Georghallides, 1985). Thus there is an ongoing debate whether the violence was motivated by economic frustration or nationalistic aspirations.

Malta exhibited a different economic structure from Cyprus. The Maltese islands are much smaller than Cyprus and have no significant natural endowments, other than its natural harbour; even its agricultural area is fragmented by the necessity of terracing. Malta's dependency on substantial inflows of defence expenditure began during the rule of the Knights: defence expenditure allowed Malta to maintain a population above the limits set by her available natural resources.

The Maltese islands were guaranteed as a British possession by the Treaty of Paris in 1814. The occupation of Malta by Britain did not disrupt the inflow of military expenditure. Britain expanded the existing fortifications of the island and transformed the Grand Harbour to its principal Mediterranean naval base. The importance of Malta for Britain was essentially strategic; this was emphasized by the fact that even in 1938 the commander in chief was the islands' administrative governor (Fenech, 2005).

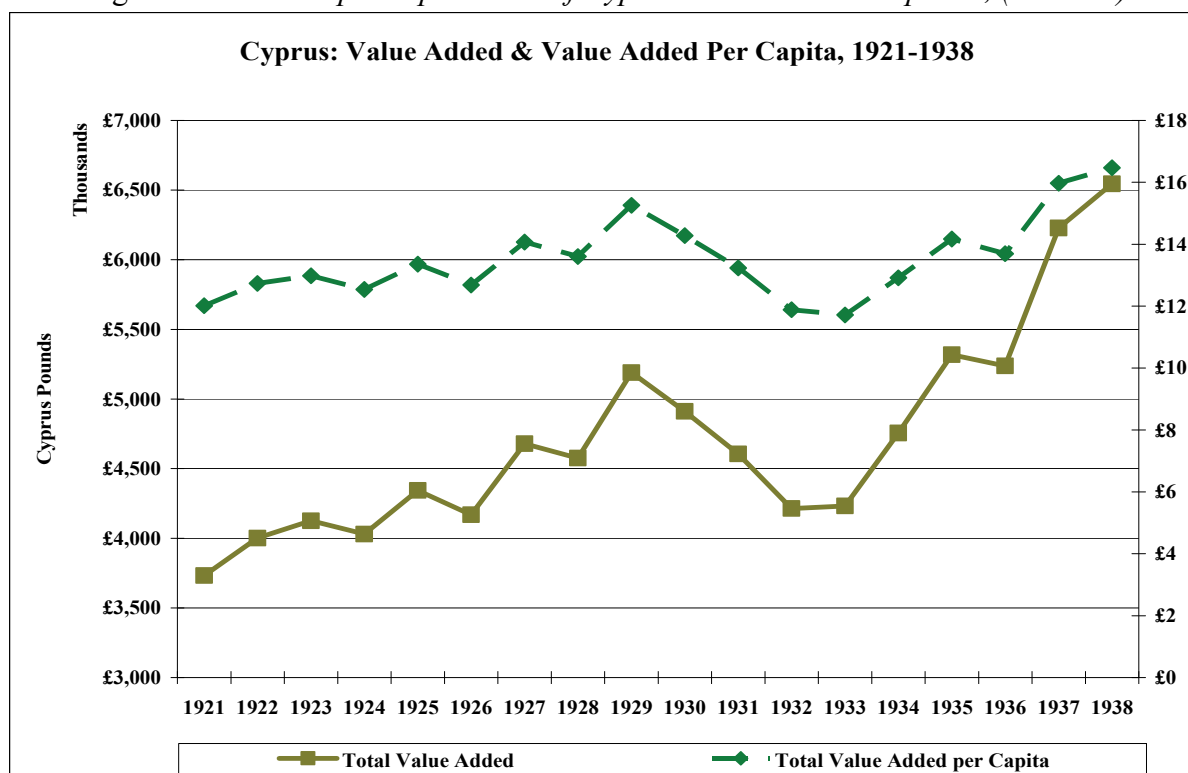
Malta's dependence on foreign inflows for the welfare of its residents resulted in violent cycles of economic expansion and contraction, largely caused by events outside Malta's control. The demobilization following the First World War was very traumatic: the reduction of the workforce in the Royal dockyard combined with rising prices led to a riot in 1919 (Castillo 2006). The riot convinced the British colonial office to provide limited self-rule on the islands, hoping that the Maltese would take responsibility for the island's development (Fenech, 2005). As a result a dual system of government was introduced in 1921. The experiment of dual governance proved unsuccessful: the military governor had too much control over domestic affairs for the Maltese government to be effective.

### **3. Methodology**

The GDP estimates of Cyprus and Malta for the period 1921-38 attempts to integrate established best practices in historical national accounts (HNA) construction, in order to achieve maximal comparability of the new estimates. The methodology used is based on the European System of Accounts (ESA 1995) system (Eurostat 1996). Any deviation from best practice took place due to data constraints, and followed general principles established by recent European HNA methodology such as Ivanov (forthcoming) Schulze (1997) and Kostelenos et al. (2007). In terms of HNA, current best practice is to produce a series through the output approach, which will be disaggregated as much as possible, while using separate deflators for each disaggregated sector. Where data was scarce, output was estimated based on the income approach.

### **4. Overview of the GDP estimates: GDP and GDP per capita**

Figure 1 indicates the estimated GDP and per capita GDP of Cyprus for the period 1921-38. It shows an increase of GDP during the 1920s; however the output was very cyclical. The great depression created a recession in Cyprus which was prolonged: per capita GDP in 1933 was 23.2 per cent lower than the 1929 level. The per capita output only recovered to its pre-depression level in 1937.

Figure 1: *GDP and per capita GDP of Cyprus in 1938 constant prices, (1921-38)*

Source: Own calculations.

Table 1 indicates that the growth rate of the 1920s was 1.9 per cent, and growth was slow after the 1921 slump (Angelides, 1996). The effect of the depression coincided with a serious drought: this explains the catastrophic reversal of GDP growth, with GDP in 1932-33 being lower than in 1921. The recovery after 1934 was very rapid and by the end of 1938 the per capita GDP rose beyond its 1929 peak. This led to a high average growth rate for the 1930s.

The results fit in well with the historiography of Cyprus' development. The results help explain the disagreement between the optimists and the pessimists of Cypriot economic development. Optimists were looking at the end of the 1930s and the rapid increase of output, while historians interested in the long-term welfare of the population were pessimistic due the slow recovery of the per capita income back to its pre-depression level.

The per capita income of Cyprus does not vindicate either side. Although the optimists can point out that the average growth rate (table 1) would double the income of Cyprus in 37 years, the pessimists can point out that the growth rate was less than other Mediterranean countries, and lower than post-Second World War rates of growth. The 1930s were particularly a tale of two-halves: a very sharp decline until 1933, and rapid growth in the second half of the 1930s, briefly checked by a recession in 1936.

Table 1: *Per capita GDP growth rates, Cyprus (1921-38)*

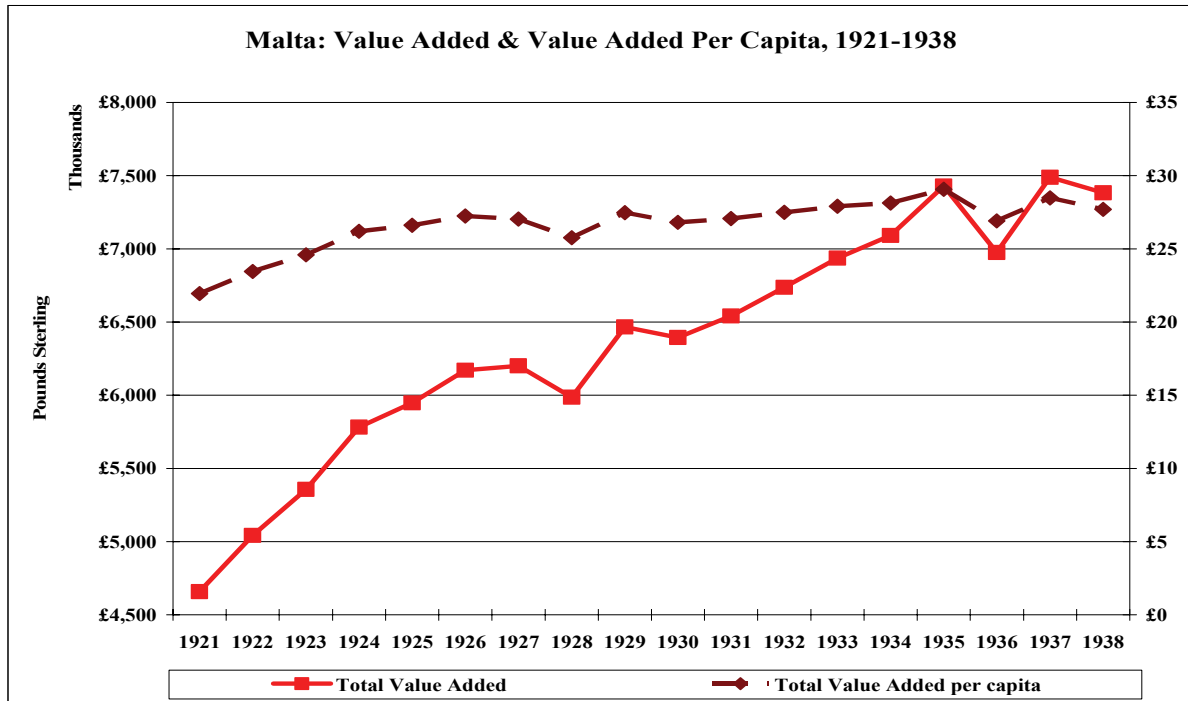
	Change in per capita GDP (%)
1921-38	1.87
1921-30	1.93
1930-38	1.80
1929-33	-6.40

Source: Own calculations.

Figure 2 displays the GDP and per capita GDP of Malta. There is a constant increase of output from 1921 to 1927, a strong recovery in 1929, followed by a downturn in 1928. Output continues to grow during the great depression, albeit at a slower pace than in the 1920s. The

great depression does not seem to affect Malta's aggregate output, which is not surprising due to Malta's overwhelming dependence on British defence expenditure. The recession of 1936 was deeper than anything Malta experienced during the great depression. Recovery is achieved in 1937, but output declined in 1938. Thus the late 1930s exhibit a volatility of output that was not previously present in the aggregate output of Malta.

Figure 2: *GDP and per capita GDP of Malta in 1938 constant prices (1921-38)*



Source: Own calculations.

The performance of Malta in terms of per capita GDP is less flattering. Malta had a very high population growth dulling the increases in output. Nevertheless table 2 indicates an annual increase of per capita GDP terms of 1.38 per cent for the period. Thus the economy in per capita terms remained largely stagnant in the 1930s. The overall per capita growth rate led to a doubling of income of every 51 years.

Table 2: *Per capita GDP growth rates, Malta (1921-38)*

	Change in per capita GDP (%)
1921-38	1.38
1921-30	2.25
1930-38	0.40
1929-33	-0.41

Source: Own calculations.

Malta avoided major downturns and maintained a constant increase in output even during the great depression, when the majority of European countries suffered very serious reversals in output. Thus Malta's growth performance was one of stability at the expense of prosperity: the per capita output in 1938 was just 2.4 per cent higher than in 1927.

## 5. Sectoral breakdown of the GDP estimates

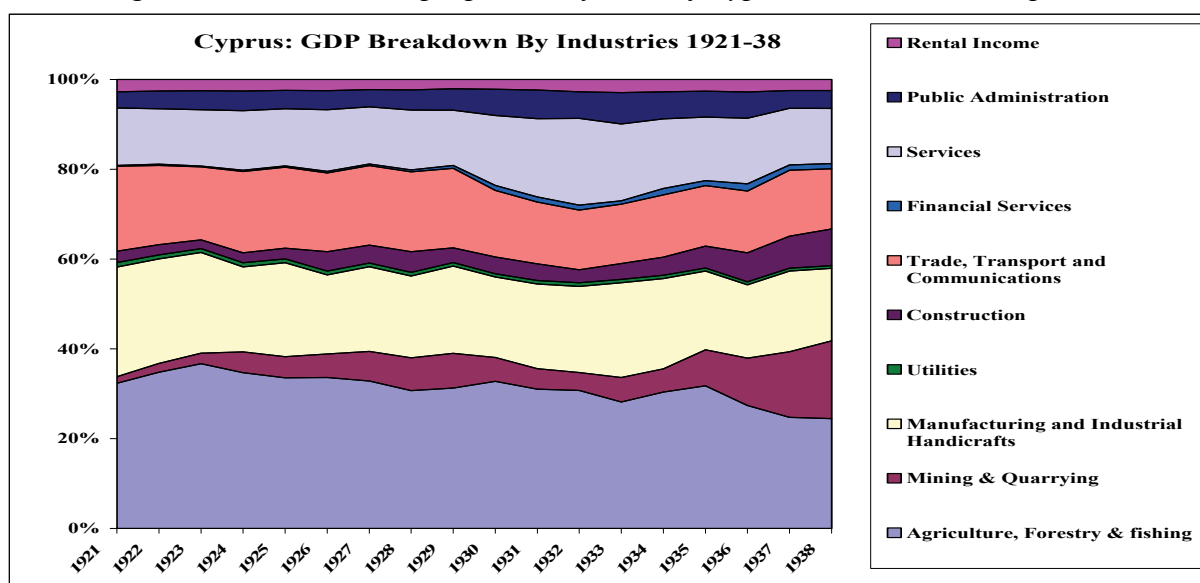
The GDP of Cyprus is disaggregated into its industrial sectors in figure 3. The primary sector was the largest sector followed by the services sector. It becomes clear that the economic growth of the 1920s took place across the board: there was no single industry that surged ahead from the others. That suggests that the growth in the 1920s took place without any



structural change of the economy: the economy continued producing in the same vein that it had previously.

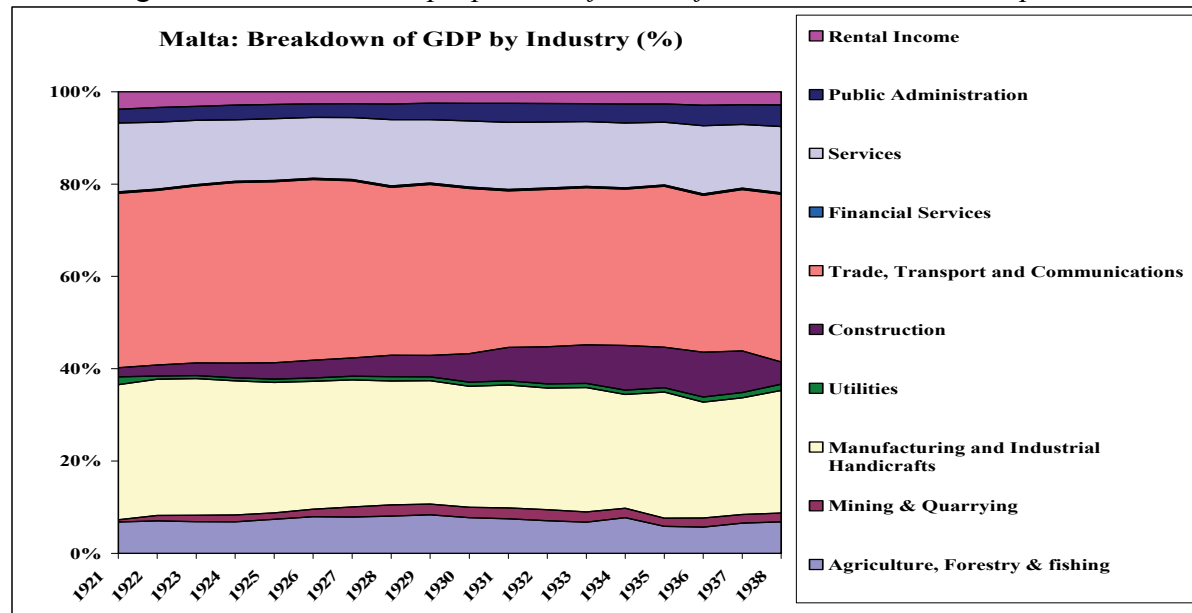
However a rapid structural change did take place in Cyprus during the 1930s. The great depression, combined with the drought that afflicted Cyprus, led to the decline of agriculture. Manufacturing was at that time largely dependent on the processing of agricultural products and was negatively affected by the relative decline of the agricultural sector. The recovery from the great depression did not come from the traditionally large sectors of the Cypriot economy. It was pushed forward by the dynamic growth of the mining and construction sectors. In 1921 the mining sector and construction industries produced 1.5 per cent and 2.5 per cent of the GDP respectively. By 1938 the sectors produced 17.3 per cent and 8.3 per cent of GDP. The rapid growth of these industries was due to the discovery of new seams of copper ore and the release of the pent-up demand for housing.

Figure 3: *Industries as a proportion of GDP of Cyprus in constant 1938 prices*



Source: Own calculations.

The breakdown of the GDP of Malta proves its unique economic structure. Figure 4 indicates that Malta was an underdeveloped state with an insignificant primary sector, producing less than 11 per cent of GDP. This was due to Malta's minute size and harsh geography: the island would not have been able to support its population if agriculture was its main occupation (Charlton, 1960). Service and manufacturing relating to the British navy dominated the islands economy: Malta clearly was a fortress island economy.

Figure 4: *Industries as a proportion of GDP of Malta in constant 1938 prices*

Source: Own calculations.

## 6. Policy impact of the Great Depression

Economic growth does not just depend on the global economic conditions: domestic governmental decisions within the islands had an impact on their rate of economic growth. However their options facing the turbulent conditions of the interwar period were constrained: British governors could not decide on matters of currency convergence, trade policy or budget deficit without first consulting the colonial office in London, who had to consult the treasury. Thus concerns of London could overrule the wishes of the local governor leading to calamitous results.

The problems facing both economies were significant, and needed a proactive administration that was keen to promote development. This was contrary to traditional ideas of the role of colonial administration, where stability and non-intervention in a colony's economy were paramount. This policy aggravated the tense situation in Cyprus during the great depression and led to the 1931 riots.

The government did try to address the major issues blighting agriculture, but such measures were too small and ineffectual to alter the combined calamities of drought and depression. The failure of the governor to consider the wishes of the local legislative assembly of greater government intervention in the economy acted as a catalyst to the anti-British movement for union with Greece.

The decision by London not to give back to Cyprus the accumulated surplus from the additional taxation mentioned in section 1 was the spark that led to the riots. The revenue of the government was facing a revenue shortage, but the Cypriot legislative council refused to approve any tax increases. Thus the government ruled through orders-in-council that were becoming increasingly difficult for the colonial office to sanction.

In frustration, the Greek-Cypriot elected members published a manifesto, arguing for cuts in British salaried expenditure, and explicitly linking the issue to union with Greece. The members argued that Britain had lost its legitimacy in ruling Cyprus, since it failed to provide economic prosperity for its population. The resulting riots in October 1931 permanently polarized the Greek-Cypriots against the British colonial government (Holland and Markides; 186).

Although the failure of any economic cooperation between the government and the legislature was due to nationalistic tensions, it is also clear that the background to the nationalistic riots was routed in economic disagreements. The perceived failure of the colonial

government to achieve economic growth acted as a catalyst to the outbreak of nationalistic violence in Cyprus.

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## New thoughts on the failure of the organic food and farming movement in postwar Britain

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As the distance between the present day and the post-Second World War period has widened, the scale of the changes that took place in British agriculture during the three decades after the end of the war have become more apparent. Much has been made of farmers' efforts to ensure that the British people were fed, as well as of the highly visible changes to agricultural practice that underpinned that effort – the proliferation of tractors, compulsory ploughing up of prized grasslands, mandatory use of inorganic fertilizers. However, as Brian Short, Charles Watkins and John Martin have emphasized, it was the enshrining of these trends, after the war, in national policy that confirmed the arrival of the age of industrial agriculture.<sup>404</sup>

The 1947 Agriculture Act is often cited as a mark of the official beginning of what has increasingly come to be viewed as an agricultural revolution. New industrial techniques for managing livestock and advances in both crop and animal breeding were developed by a commercially-driven agricultural science community. These were taken up by farmers, as were cheap chemicals for improving yields and controlling pests and diseases. All of this combined with new or improved financial incentives from the state to drain wetlands, remove hedgerows, enlarge and standardize field sizes. The result was a significant increase in agricultural productivity and rising farm incomes during the postwar years, with the former celebrated much more publicly than the latter.<sup>405</sup>

In short, British farmers abandoned mixed farming traditions and accepted mechanization, specialization, intensification and chemicalization with an enthusiasm that would previously have been unimaginable. This process of agricultural industrialization did not simply alter the nature of farming; it also had significant, often negative, impacts on water and soil quality, biodiversity, landscapes and food quality.<sup>406</sup> The postwar organic movement was one of a small group of weak voices that sought to draw attention to the negative consequences of industrial agriculture.

The origins of the British organic movement, as Philip Conford's work demonstrates, date not to the 1970s flowering of environmentalism but earlier, to the interwar years.<sup>407</sup> Organic farming developed in reaction to the emergence of industrial agriculture. Just months before adoption of the 1947 Agriculture Act, which confirmed that British farmers would benefit from ongoing state support in return for implementing a programme of industrialization, the organic movement's first broad-based, membership organization was established, the Soil Association.

The nascent organic movement had had a 'good' war. The public had shown a strong interest in organic ideas and techniques, with several books about organic agriculture becoming wartime bestsellers. The Ministry of Agriculture and its agencies largely tolerated,

<sup>404</sup> Brian Short, Charles Watkins, John Martin "The front line of freedom": state-led agricultural revolution in Britain, 1939-1945" *The front line of freedom: British farming in the Second World War*. British Agricultural History Society. 2007, pp.1-15.

<sup>405</sup> Paul Brassley, "Wartime productivity and innovation, 1939-45" *The front line of freedom*. pp.36-54. John Martin, *The Development of Modern Agriculture: British Farming Since 1931*. Macmillan. 2000, pp.58-9, 147-150.

<sup>406</sup> Jason Clay, *World Agriculture and the Environment: A commodity by commodity guide to impacts and practices*. Island Press. 2004.

<sup>407</sup> Philip Conford, *The Origins of the Organic Movement*. Floris. 2001, pp.15-25. Also Conford, "Somewhere Quite Different": The Seventies Generation of Organic Activists and their Context". *Rural History*. Cambridge University Press. 19,2. 2008, pp.217-34.

if grudgingly at times, the organic movement's promotion of composting as a method of maximizing soil fertility.<sup>408</sup> Furthermore, it was clear that economic and social restructuring would be a national priority once the war ended; organic supporters were eager to see priority given to the domestic production of high-quality, nutritious food in a new and better Britain.

Full of optimism, yet fearful of many recent and imminent changes to agriculture, the organic movement drew itself together and launched itself into public view. The Soil Association was not meant to be, and never was, an agricultural organization. Rather, it was an organization focused on health and the question of how to farm in ways that prioritize nutrition. Its membership, which never reached more than a few thousand in its first three decades, was much more diverse than a typical farming organization's and this was a point of pride. The early Soil Association had only weak links with the institutions and individuals who led British agriculture, but it had strong links with the alternative health community, particularly with the holistic Pioneer Health Centre in Peckham, south London.<sup>409</sup>

The organic movement of the late 1940s and 1950s was interested in quality not quantity. Its supporters believed that the quality of food consumed is the most influential factor in human health and that food quality is fundamentally determined by soil quality. This, in turn, led them to argue that the overriding priority of both health and agricultural policy should be protecting and maintaining soil quality by 'natural' methods, primarily composting. Inorganic fertilizers were suspected of disrupting the health of the soil and, thereby, threatening nutritional standards and human health. The organic vision of agriculture was one founded on meticulous management of the soil as the basis for ensuring healthy crops, healthy livestock and, thus, healthy people. This was a world away from government's and agricultural science's preoccupation with maximizing food production through increased mechanization and chemical-based solutions.

In its early days, the Soil Association showed every sign of wanting to influence agricultural practice and policy. Viewed in retrospect, its messages were clearly out of tune with the direction in which British farming was heading, but this was not so obvious at the time.<sup>410</sup> Looking back, the early Soil Association gives the impression of being an ambitious, reasonably professional body with a coherent and consistent set of messages and a commitment to presenting these to the farming community and wider public. From the late 1940s through the mid-1960s, the Soil Association mounted exhibition stands at all the major agricultural and gardening shows. It published a quarterly journal, its leaders participated in BBC radio broadcasts and its members wrote articles for regional newspapers and national magazines. The Soil Association's leading light, Lady Eve Balfour, made annual tours of the UK as well as tours of the United States, Australia, New Zealand and parts of Europe.

Despite its ambition and professionalism, it is abundantly clear that the Soil Association failed, until the late 1980s, to have any significant impact on either British farming policy or practice. Its most significant achievement during its 'wilderness years' of the 1950s-70s was simply that it survived until a group of young organic producers with links to the environmental movement took over.

Reasons for the failure of the early Soil Association are many. Virginia Payne emphasizes the negative impact of recurrent financial crises, while Tracy Clunies-Ross focuses on the perceived success, and resulting dominance of, industrial agriculture during the postwar years and the way in which this 'closed the door' to the arguments of organic food and farming movement.<sup>411</sup> My research confirms both views, particularly Clunies-Ross'

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<sup>408</sup> Amongst the best sources for assessing government wartime attitudes are columns in the agricultural press, notably Blythe's column in *Farmers' Weekly*.

<sup>409</sup> Enid Wilson *Memoir of Mrs Enid Wilson*. Unpublished memoir. 1976, p.88.

<sup>410</sup> See 1950s editions of *Mother Earth* for an indication of the early Soil Association's dynamism and ambition. Also Conford. "The Organic Challenge". *Front line of freedom*, pp.67-76.

<sup>411</sup> Virginia Payne. "A History of the Soil Association". MSc thesis. Manchester University, 1971. Tracy Clunies-Ross. "Agricultural Change and the Politics of Organic Farming". PhD thesis. University of Bath.



contention that the rise of industrial agriculture marginalized the organic movement. Despite my agreement with the view that the dominance of industrial agriculture made it difficult, if not impossible, for the organic movement to make headway in the postwar period, it is important to examine how the early Soil Association may have contributed to its own early failures.

Time and again, the early Soil Association exhibited what today might be termed a ‘big picture’ approach to agriculture. For organic supporters, farming was not simply the commercial endeavour of growing crops or raising animals, it was a vocation that demanded the right moral, even spiritual, outlook and an overtly ecological perspective. Although the Soil Association was eager to disseminate information about the finer points of composting and other ‘natural’ techniques, it showed little interest in examining the economic realities of conventional farming in order to identify opportunities for organic methods to be introduced. Writing in the summer 1948 edition of the Soil Association’s journal *Mother Earth*, editor Jorian Jenks expressed a typically expansive ‘organic’ view: “... wiser men of all ages have never ... lost sight ... that ... satisfaction, happiness, well-being ... is a condition resulting from *right relationships* with fellow-creatures”.<sup>412</sup> A year later he wrote: “In all this drive to speed up quantitative output, any suggestion that the farm is not a factory but a society of living creatures is brushed aside as ‘romanticism’”.<sup>413</sup>

Such an idealistic and moralistic view of agriculture appears to have been coupled with a neglect of, possibly even a disdain for, strategic planning and political campaigning. In her history of the Soil Association, written in 1971, Virginia Payne complains of a diversity of opinion and a lack of clarity about goals, arguing that “the wide variety of interests and opinions within the Association” has made it difficult for her to assess “what the Soil Association stands for and is trying to do”.<sup>414</sup>

Yet all indications suggest that those who founded the Soil Association genuinely wanted to influence agricultural policy and practice. However, a clear idea of *how* to influence policy and practice never developed. The Soil Association put a great deal of effort into educating the public, not least with its range of regularly updated pamphlets, but this was not matched by sustained lobbying of either the Ministry of Agriculture or the major agricultural institutions, such as the National Farmers’ Union. Efforts were made to secure the support of leading agricultural scientists,<sup>415</sup> but in some respects this serves to underline the early Soil Association’s political naivety; its leaders seem to have believed that agricultural science had the power to secure the success of organic food and farming, yet they do not appear to have felt similarly about political and agricultural leaders.

This neglect of or disdain for politicking has been alluded to, but not explored, by both Tracey Clunies-Ross, who concludes that the early Soil Association failed to engaged in organized campaigning,<sup>416</sup> and by Mary Langman. Langman was a founding member of the Soil Association and her unpublished writings about its history refer to the way in which the organization, particularly its leader Eve Balfour, had only vague ideas about how the changes organic supporters wished to see might come about. Langman writes that Eve Balfour’s “understanding of exactly how to influence policymakers ... [was] perhaps a little old-fashioned”. Elsewhere, she suggests that Eve Balfour “hoped for change to come about in a biological way, from the roots up”.<sup>417</sup>

The idealistic nature of the early Soil Association was also a significant factor, I argue, in the organization’s reluctance to understand and address British farmers’ desire to be part of

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1990.

<sup>412</sup> Jorian Jenks “Editorial Notes” *Mother Earth*. Summer 1948, p.2.

<sup>413</sup> Jenks “Editorial Notes” *Mother Earth*. Summer 1949, p.4.

<sup>414</sup> Payne. “A History of the Soil Association”, pp.57-9, 92.

<sup>415</sup> Notable was the 1948 visit to the Soil Association’s research farms by leading agricultural scientists.

<sup>416</sup> Clunies-Ross. “Agricultural Change”, pp.48-9, 239.

<sup>417</sup> Mary Langman/Charles Dowding. *Life of Lady Eve Balfour*. Unpublished. 2005, chapter 8, p.2.



a new, modern society, one based on industrial techniques that promised higher yields and reduced physical effort. Advertisements in *Farmers' Weekly* and *Farmer and Stock-breeder* clearly demonstrate that producers of inorganic fertilizers and pesticide spraying equipment presented their products as the tools of choice for modern, progressive farmers and that any farmer who resisted them was either over the hill, literally, or out of tune with the times. In response, the Soil Association argued passionately that its vision for agriculture was not anti-science or anti-modern and that its techniques were both progressive and ecologically sound, the latter something the purveyors of chemical-based approaches could not claim.

The silent voice in this debate is that of the 'typical' British farmer. We know what such farmers did during this period, they embraced industrial agriculture and for several decades reaped financial rewards for doing so, but they did so largely without articulating why. References in early issues of the Soil Association's journal *Mother Earth* offer some clues. In the harvest 1947 issue, farmers are described as agreeing with organic arguments "in principle", but "they tend to boggle at the economic problem involved in a change-over to fully organic methods. In particular, they feel that ... compost-making ... is too expensive for a land in which wages are high and still rising".<sup>418</sup> In the following issue, arguments against organic agriculture are discussed again:

... as the food situation becomes more acute, demands will go forth, not for the development of agriculture on natural lines by ... but for maximum quantitative output in the shortest possible time and at lowest possible cost. We shall almost certainly hear that organic methods are too slow and laborious ... and that every kind of artificial device must be used to 'assist nature'.<sup>419</sup>

Given the sustained support for industrial agriculture shown by the combined forces of the state, agricultural science and farming leaders, it can be argued that there were few avenues open to the Soil Association to attract farmers to its cause beyond those it pursued, such as exhibiting at major agricultural shows. Perhaps all it could do was lament the unwillingness of farmers to resist the temptations of industrial agriculture. "There is ... a strong tendency to rely for the bigger 'output' which is now required on an increasing degree on 'technical efficiency'," sighed the editor of the Soil Association's journal in 1948, adding that modern techniques represented "an attempt to by-pass the need for the application of personal, cultural skills. When a farmer grows a crop with the aid of a 'complete fertilizer' (actually a mixture of a few chemical compounds) he is in effect paying the chemist and manufacturer to do his thinking and fertility-culture ... for him".<sup>420</sup>

The Soil Association denied that its vision of farmers working *with* nature constituted the pursuit of agricultural perfectionism. Nevertheless, the organization's unwillingness to engage with the state of mind and economic aspirations of postwar farmers must be acknowledged. Much of the eulogizing about the wartime experience of British farmers is interpreted today as sentimental and, possibly, exaggerated, especially given farmers' fast-rising incomes during the war.<sup>421</sup> Yet there remains some truth to the image of British farmers emerging at the end of the Second World War exhausted and eager to adapt their practices if that meant reduced physical effort and a greater role in a modern, science-driven society. Farmers were tired of working longer and harder for less profit than those employed in factories and offices. They wanted to be part of the Britain that took annual summer holidays and bought shiny consumer goods.

The Soil Association's commitment to careful soil management, good husbandry and sympathetic adaptation of traditional techniques to modern needs was unpalatable to the vast

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<sup>418</sup> Jenks "Editorial Notes" *Mother Earth*. Harvest 1947, p.3.

<sup>419</sup> Jenks "Editorial Notes" *Mother Earth*. Autumn 1947, p.3.

<sup>420</sup> Jenks "Editorial Notes" *Mother Earth*. Autumn 1948, p.2.

<sup>421</sup> K.A.H Murray. *Agriculture*, Stationary Office, 1955. Also Martin, *Development of Modern Agriculture*, pp.58-9.

majority of British farmers. They may have listened to Eve Balfour in a 1952 BBC radio debate, arguing: “If it should be found that our present [farming] methods necessitated by economics are in fact bad for health, then surely the human race as a whole is faced with the necessity to alter its economic structure rather than to destroy its health”<sup>422</sup> – farmers may have listened, some may have agreed with her, but almost none altered the way they farmed.

The economic and social aspirations of British farmers after the Second World War is, I argue, a factor that existing accounts of the postwar organic movement fail to acknowledge sufficiently. Lack of progress by the early Soil Association was not simply the result of rejection of its arguments by leaders within the political class and agricultural science community. Farmers across Britain rejected organic agriculture, too.

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<sup>422</sup> “Summer Discussion” *BBC Home Service*, 31 July 1952. BBC Written Archive Centre. Lady Eve Balfour file.

# Anglo-Hungarian trade relations and the nationalization of British interests in Hungary, 1945-56

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## 1. Introduction

After the Second World War, the Soviet Union started to transform the social, political and economic structure of the countries within its sphere of influence. The process of sovietization, however, was much longer than many believe: Hungary, together with some other eastern European countries, could enjoy two or three more years of quasi-democracy. Indeed, it was not until December 1949 that the Hungarian economic system was entirely sovietized. During this period, Hungary could maintain economic relations with the United Kingdom: bilateral trade was developing steadily and British-owned enterprises could continue operation. This more or less friendly relationship came to an abrupt end in December 1949 when virtually all contacts were broken off. The two countries resumed trade and financial talks only in 1954, and a formal agreement was signed in August 1956.

This paper seeks to give an outline of Anglo-Hungarian trade relations between 1945 and 1956. Since the issue of trade relations was closely linked with the treatment of British property in Hungary, the attitude of the Hungarian government towards British-owned companies is also explored together with the attempts of the UK government to protect British citizens' interests in Hungary.

## 2. Anglo-Hungarian trade relations, 1945-50

In the interwar period, the United Kingdom was Hungary's fourth most important foreign trade partner after Germany, Austria and Italy. From the British perspective, the volume of trade was almost negligible: in 1938, according to a Foreign Office memorandum, British imports from Hungary amounted to £2.5 million, while British exports to Hungary were less than £600,000.<sup>423</sup> Hungarian official figures were different (imports from the UK: £1.6 million; exports to the UK: £990,000), because they also included trade with other countries in the sterling area.<sup>424</sup>

After the war, trade relations were soon resumed, and the UK became Hungary's third most important export market after the Soviet Union and Czechoslovakia. In 1946, Hungary exported poultry, pulses (peas and beans), seeds, glue, leather and metal products (totalling £680,000), and imported rubber, wool, cotton, machines and photographic films (totalling £67,000).<sup>425</sup> Hungary became an important supplier of agricultural products for Britain, while the UK was one of the primary sources of hard currency for Hungary. In August 1947, the two countries signed a food agreement for three years, which set the following quotas:<sup>426</sup>

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<sup>423</sup> 'Anglo-Hungarian Trading' Febr. 1948. National Archives, London (hereinafter: NA) FO 371/72384 16494.

<sup>424</sup> *Magyar Statisztikai Évkönyv*. (Budapest, Magyar Kir. Központi Statisztikai Hivatal, 1939), p.155.

<sup>425</sup> *Magyar Statisztikai Évkönyv*. (Budapest, Magyar Központi Statisztikai Hivatal, 1948), p.176.

<sup>426</sup> 'An Agreement for the Development of Anglo-Hungarian Trade in Foodstuffs', 8 Aug. 1947, Hungarian National Archives (hereinafter: MOL) XIX-J-1-f, 16. d. 2.

	1947/48	1948/49	1949/50
Eggs	3,500 tons	4,500 tons*	5,000 tons*
Bacon	500 tons	10,000 tons*	15,000 tons*
Lard	500 tons	**	**
Sunflower oil	4000 tons	4000 tons*	4000 tons*
Poultry	4,650 tons	4,650 tons	4,650 tons
Pulses (beans, peas)	5,000 tons	5,000 tons*	5,000 tons*
Tomato puree	4,000 tons*	**	**
	* Minimum	** To be stated later	

According to a Foreign Office document, the actual volume of trade between the two countries in 1948 was as follows: imports (to the UK): £2,364,060, exports and re-exports (from the UK): £1,793,486.<sup>427</sup> Again, Hungarian official figures were different: imports (to Hungary): 101.8 million forints, exports (from Hungary): 181.0 million forints.<sup>428</sup> (The exchange rate was approx. 50 forints to the pound.)

### 3. British-owned companies in Hungary

The largest British-owned enterprises in Hungary were subsidiaries of British companies like Shell, Dunlop, J & P Coats and Unilever. There were some other minor companies with British owners, for example, the British-Hungarian Jute Spinning Company (A & S Henry Ltd., Manchester) and the First Hungarian Wool Washing Co (National Securities Corporation). Besides these, there were approximately 140 Hungarian companies and 23 banks with British shareholders.<sup>429</sup>

The most important British company in Hungary was the subsidiary of Shell, which controlled 25 per cent of the Hungarian oil refinery sector, and it was the company which had the most conflicts with the Hungarian government. It is not at all surprising, since the oil industry was of strategic importance, and the Communist leaders of the Hungarian economic authorities wanted to get rid of foreign-owned oil companies as soon as possible.

The first conflict occurred in the summer of 1947 when Soviet interests were exempted from paying certain taxes. Shell was not granted such tax exemptions, and the Hungarian government used further discriminatory practices: it did allow Shell to export its refined products to any other country but the Soviet Union, allocated crude oil in a way which was very unfavourable to Shell, and did not settle its outstanding bills for months.<sup>430</sup> The management of Shell soon concluded that the Hungarians sought to drive their subsidiary into bankruptcy. This is well justified by a report from the archives of the Hungarian Communist Party, which explained that, from a professional point of view, British and American refineries should be favoured, but 'just the opposite needs to be done for political reasons. ... Obviously, the only solution to the problem is nationalization. If it cannot be implemented with Anglo-Saxon companies for foreign policy considerations, then rationalization must be carried out with the firmest state control'.<sup>431</sup>

The other British-owned companies did not have such powerful Soviet competitors, so they could operate relatively undisturbed – at least until March 1948 when 'supervisory administrators' were appointed to every company. Foreign companies were exempted, but only those companies were considered 'foreign' where more than 50 per cent of the shares were owned by foreign nationals. Still, government administrators appeared in the

<sup>427</sup> 'Anglo-Hungarian Trading 1948' Febr. 1948. NA FO 371/72384 16494.

<sup>428</sup> Archives of the Institute of Political History, Budapest (PIL) 274. f. 12/194. ő.e.

<sup>429</sup> British Legation Note to Hungarian Government No. 1082/1957. MOL XIX-J-1-k 37. d. 199.

<sup>430</sup> Alexander Helm (British Legation, Budapest) to Hungarian Government, Notes No. 187, 188, 189, 25 May 1948. MOL XIX-J-1-k 36. d. 199.

<sup>431</sup> István Feitl ed.: *A magyarországi Szövetséges Ellenőrző Bizottság jegyzőkönyvei 1945–1947*. [Records of the Allied Control Commission for Hungary, 1945–1947.] (Budapest, Napvilág, 2003), p.281.

subsidiaries of Shell, Unilever, Coats, Dunlop and A & S Henry, though withdrawn after British protests. Other firms were less fortunate, and the British Legation received more and more complaints that these 'commissars' were 'frittering away' the assets of some of the enterprises.<sup>432</sup>

By the spring of 1948, the most important sectors of the Hungarian economy had been nationalized. Coalmines and major power stations were taken into public ownership in June 1946, followed by banks in December 1947, but neither of these measures affected British interests. It was only the third nationalization law which showed that the Hungarian government, already controlled by the Communist Party, had decided to launch an offensive against foreign property. On 29 April 1948, all industrial enterprises with more than 100 employees were nationalized. 'Foreign' enterprises were exempted again, which meant that companies with British majority holding could continue business like before. Minority shareholders, on the other hand, were now completely at the mercy of the state as a majority shareholder and they could not even sell their shares to anyone.<sup>433</sup> Seeing the hopeless situation of British companies in Hungary, the Foreign Office decided to advise British owners in Hungary to 'seize the earliest favourable opportunity for cashing in and then get out'.<sup>434</sup>

In the meantime, the Hungarian government introduced new taxes (capital levy, excess profit tax), which were levied and collected in a discriminatory way. Besides legislative measures, the Hungarian police was also used to exert pressure on Western enterprises. Hungarian employees of British companies were often accused of fraud, embezzlement, industrial espionage, sabotage, etc., and sentenced to imprisonment. In the case of the Hungarian subsidiary of Unilever, for example, the British managing director was arrested under the charge of espionage, and expelled from the country.

#### **4. Financial and trade negotiations and the nationalization of British property, 1949**

In spite of the disputes, the two governments agreed to start financial and trade negotiations in January 1949. Although the Hungarians refused to include the issue of British companies on the agenda, the Foreign Office warned them several times that no agreement would be reached unless the Hungarians showed goodwill towards these firms. The Hungarians were well aware of this, as shown by a document of the Secretariat of the Hungarian Workers' Party saying that 'the policy of strangling [sic!] foreign companies ... should be exercised cautiously, considering our important economic interests and potential difficulties in our foreign trade negotiations'.<sup>435</sup>

As a result of the pressure from London, the Hungarian government purchased the subsidiaries of Unilever, the National Securities Co, and A & S Henry. The talks with Shell, however, were fruitless. The final offer of the Hungarians was £484,210 payable over 10 years, while the value of the assets of the company exceeded £2.3 million. Shell declared that 'in view of the actions taken by the Hungarian Government, we refuse to accept responsibility ... for the management of the Company in the future'.<sup>436</sup> Subsequently, the Hungarian government handled the company as if it had been nationalized. Dunlop also rejected the new Hungarian offer of £200,000 payable over seven years.<sup>437</sup>

In July 1949, the representatives of the British and the Hungarian governments drafted a tentative trade agreement. This gave another bargaining tool to the British; they told the Hungarians that their prospective sterling earnings would be enough to make satisfactory

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<sup>432</sup> Alexander Helm to Ernest Bevin, 5 May 1948. NA FO 371/72411 XCA19267.

<sup>433</sup> Ibid.

<sup>434</sup> Chancery (British Legation, Budapest) to Foreign Office, 25 June 1948, NA FO 371/72411 XCA19267.

<sup>435</sup> Report of the Economic and Financial Committee to the Secretariat, 19 Jan. 1949, MOL M-KS 276. f. 54. cs. 26. ő.e.

<sup>436</sup> British Legation to Hungarian Government, Note No. 302, 30 June 1949, MOL XIX-J-1-k 36. d. 199.

<sup>437</sup> István Roóz (Hungarian National Bank) to Dénes Szántó (HNB), 1 July 1949, MOL XIX-J-1-k 36. d. 199.



offers to the British companies. The final agreement, however, was not signed yet. In October, when negotiations were resumed, the Foreign Office was surprised to see that the Hungarian delegation consisted of lower-ranking ministry officials – the well-trained and experienced financial experts had been replaced by Communist *apparatchiks*. Still, the negotiations continued and the two parties agreed that Hungary would export goods to the UK to a total value of £12.7 million in 1949/50. £9.8 million of this sum represented food purchases, and the British government was even willing to raise the quotas for manufactured goods from £2.9 to £3.5 million. On the other hand, Hungary undertook to pay out a sum of £500,000 in three years for the purchase of UK interests in Hungarian companies.<sup>438</sup> The postponement of the negotiations was even advantageous for the Hungarians: the food agreement was extended to December 1949, which meant that Hungary gained extra revenue of £2 million. Moreover, the British government agreed to accept turkey shipments for Christmas before the agreement came into force.<sup>439</sup>

All seemed promising, and a final agreement was hoped to be signed soon. Then, on 21 November 1949, British subject Edgar Sanders, manager of the Hungarian subsidiary of an American company, was arrested by the Hungarian police. He was charged with sabotage, and British diplomats were not allowed to visit him in custody. A month later the Foreign Office suspended trade and financial negotiations until the British Consul could visit Sanders, and the Hungarians ensured that he received proper treatment.<sup>440</sup> They also suspended further poultry purchases for Christmas.

The Foreign Office did not understand why the Hungarians had taken this provocative step after the successful trade and financial negotiations. They did not know that the Hungarian government had long been preparing for a move which was to change the Hungarian economy profoundly; in this new economic system, trade relations with a Western country were regarded as an absolutely negligible issue. On 28 December 1949, all industrial and transport enterprises with more than ten employees were nationalized. It affected 2,600 companies, including all the 60 foreign-owned enterprises. The Foreign Office decided not to protest about the nationalization as such, but demanded ‘prompt, adequate and effective compensation’.<sup>441</sup> This was obviously hopeless, but still, the British Legation bombarded the Hungarian government with a series of notes protesting about the expropriation of British property.

## 5. Anglo-Hungarian economic relations 1950-56

As a consequence of the Sanders case and the nationalization decree, the resumption of the trade and financial negotiations seemed impossible. The British Ministry of Food was especially worried about the deterioration of Anglo-Hungarian relations as they needed Hungarian agricultural products, but the Foreign Office refused to start negotiations with Hungary before the unsettled problems were resolved.

For the next three years there was hardly any contact between the two countries. Hungarian exports to the UK ceased to exist almost entirely. In 1949, the share of the UK in Hungarian exports was 8.14 per cent, and its share in Hungarian imports amounted to 13.15 per cent, but between 1950 and 1953 no shipment was made from Hungary to Britain except for 507 tons of sunflower oil in 1952. At the same time, Hungary continued to purchase raw materials and industrial goods from private trading companies in the UK, though in much lower volumes than earlier.

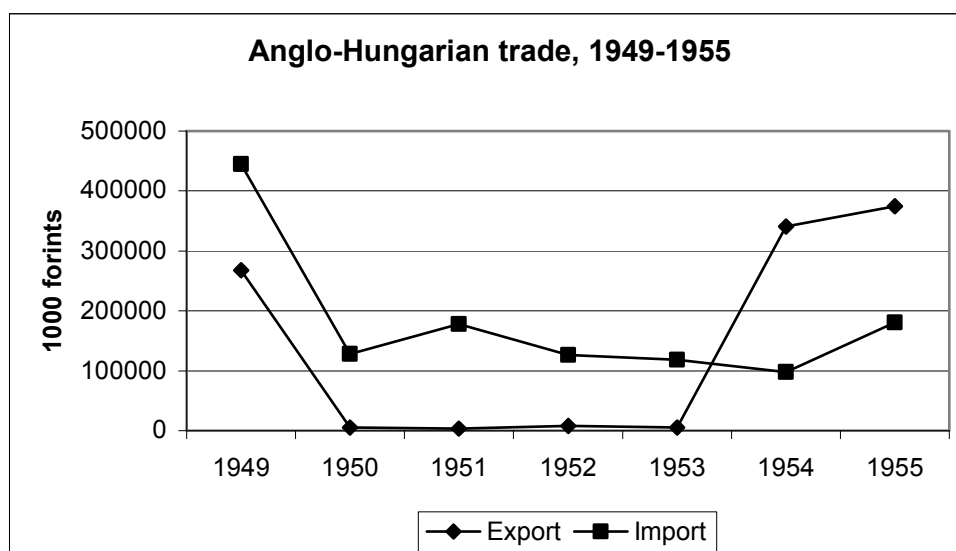
<sup>438</sup> Minutes of the meeting, 19 Oct. 1949, NA FO 371/78558 036104.

<sup>439</sup> Board of Trade memorandum to the Cabinet, 24 Nov. 1949, NA FO 371/78560 36393.

<sup>440</sup> Bateman to Sir William Strang, 21 Dec. 1949, NA FO 371/78560 36393.

<sup>441</sup> Wallinger (British Legation, Budapest) to Rumbold, 18 Jan. 1950, NA FO 371/87873 66121.





Source: *Magyar Statisztikai Évkönyv*. [Hungarian Statistical Yearbook], (Budapest, Magyar Központi Statisztikai Hivatal, 1957), pp.255, 258-9.

The first talks about the resumption of trade and financial negotiations only began in November 1953. Sanders's release from prison in August 1953 also contributed to the normalization of the relationship between the two countries. A Hungarian delegation travelled to London in March 1954, and after five months of negotiations, an 'agreed minute' was signed about the resumption of trade relations. The document lists the quotas for the products to be exported to Hungary (73 items including wool, cotton, chemicals, rubber, and steel) and imported from Hungary (109 items including 1,000 tons of bacon, fruits, vegetables, and industrial products).<sup>442</sup> In 1955, another Hungarian delegation left for London to discuss the quotas for the following year, but they were instructed 'not to sign any kind of agreement concerning nationalization and war damage claims'.<sup>443</sup>

The two governments signed a three-year trade agreement in July 1956, the terms of which were based on the 'agreed minute' of 1954.<sup>444</sup> The financial agreement signed in the same month stipulated that 6.5 per cent of the £12 million that Hungary expected to receive from UK exports should be allocated to settle prewar debts and compensate the former owners of nationalized companies and confiscated lands.<sup>445</sup>

## 6. Summary

Anglo-Hungarian economic relations between 1945 and 1956 can be divided into three phases, which correlated with the trends of international politics. After the war, both countries wanted to restore trade relations and British enterprises were encouraged to continue their operations in Hungary. It is interesting to note that parallel with the gradual sovietization of Hungarian political and economic life, trade relations between Hungary and the UK were actually developing until 1949. This dichotomy is especially striking in 1949: the volume of trade exceeded prewar levels and the Hungarian delegation was negotiating successfully in London (according to the reports, in a very friendly atmosphere), and, at the same time, the Hungarian government exerted an increasing pressure on Western enterprises, the newspapers were waging a hysterical press campaign against British-owned companies and the UK

<sup>442</sup> MOL XIX-J-1-f, 16. d. 3.

<sup>443</sup> Government resolution No. 4434/IX.23./1955. 20 Sept. 1955. MOL XIX-J-1-j 65. d. 198.

<sup>444</sup> MOL XIX-J-1-f, 16. d. 4.

<sup>445</sup> Lajos Arday: Magyar-angol kapcsolatok a századfordulótól az 1950-es évekig. [Anglo-Hungarian relations from the turn of the century to the 1950s.] In: Arday, Lajos: *Az Egyesült Királyság és Magyarország*. (Budapest, Mundus, 2005), p.27.

government, and the police was continuously harassing everybody who had any contacts with Great Britain.

The second phase of Anglo-Hungarian economic relations (December 1949-November 1953) was characterized by the complete breakdown of bilateral relations, and there were virtually no contacts between the two governments. During the third phase (November 1953-August 1956), there was a very slow improvement in Anglo-Hungarian relations: the lengthy negotiations bore fruit and a three-year agreement was eventually signed, the terms of which were beneficial to both countries.

## The British blockade and the neutral Netherlands, 1914-16

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When describing the economic measures taken by the British and their Allies during the First World War against their enemies, most informed scholars are content to use the terms “blockade” and “economic warfare” as a synonym.<sup>446</sup> Using the overbearing numerical superiority of the British Navy over the German *Hochseeflotte*, overseas imports were banned from reaching Germany causing mass economic upheaval and shortages in key raw materials, including food. During the course of the war, the Allies thus slowly but surely closed their grip around Germany’s throat, although there is some debate on whether it was the Allied Blockade itself or inept German reaction to it that caused most hardship.<sup>447</sup> In this paper, I aim to show that there were actually a number of different “blockade” policies which often operated near-simultaneously and were frequently at odds with each other. Moreover, I will illustrate how the Netherlands were affected by these policies and how they helped shape the economic pressure the Allies could bring to bear against the Germans in the first phase of the economic Great War, before the game-changing American declaration of war against the Central Powers.<sup>448</sup>

First and foremost, the Allies sought to prevent war materials from reaching their enemies. International law offered all combatants the option of preventing enemy and neutral ships from transporting these so-called *contraband* goods for the benefit of the enemy state or military.<sup>449</sup> The British government, however, decided to unilaterally expand its contraband lists, including in it various industrial raw materials and food within the first month of the war.<sup>450</sup> Although the early reports of mass German surrender due to lack of basic necessities,<sup>451</sup> which originally prompted these measures, were soon proven false, the prospect of hurting German war industry became an alluring one as the war drew longer and casualties began to mount. In order to successfully implement this *blockade*,<sup>452</sup> unofficial sanction from the Americans was sought and bought at a price: the exception of cotton from the American South (used by the Germans to manufacture explosives) from the contraband list, allowing it to pass through the British cordon of warships in the North Sea.

The British then proceeded to seize all Dutch ships carrying goods classified as contraband. Even if the goods were addressed to Dutch consignees living in Holland, the Allies (correctly) feared that German buyers were awaiting the arrival of these goods in the ports of Amsterdam and Rotterdam, eager to ship them via the Rhine to Germany. The Allies

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<sup>446</sup> A prime example can be found in Hew Strachan, *The First World War: a new illustrated history* (London, 2003), pp.189-91.

<sup>447</sup> For example, Avner Offer, *The First World War, An Agrarian Interpretation* (Oxford: Clarendon Press 1989), pp.54-69. Roger Chickering, *Imperial Germany and the Great War, 1914-1918* (Cambridge, 2004 (1998)), 42 mentions German ‘bureaucratic clumsiness’ as an important factor.

<sup>448</sup> This paper deals with several topics I hope to treat in significantly greater depth in my Ph.D.-thesis, due in 2010.

<sup>449</sup> Nils Ørvik, *The decline of neutrality 1914-1941. With special reference to the United States and the Northern Neutrals* (London, 1971 (1953)), pp.29-31; M.C. Siney, *The allied blockade of Germany, 1914-1916* (Ann Arbor, 1957), pp.2-3.

<sup>450</sup> John W. Coogan, *The end of neutrality: the United States, Britain, and maritime rights, 1899-1915* (Ithaca, 1981), pp.159-160.

<sup>451</sup> For example: BNA CAB41/35/28: *Cabinet letter* by British Prime Minister H.H. Asquith to king George V, 12 August 1914. These reports were mentioned in the press as well. See for example *The Times*, 11 August 1914, p.6.

<sup>452</sup> Although it was no blockade as defined in international law, since the British lacked the capacity to physically block all exits and entrances into German ports.

demanding Dutch government assurances that contraband would only be imported for Dutch use,<sup>453</sup> but Germany made it clear this would not be tolerated.<sup>454</sup> A solution was found, however, by Dutch businessmen. They founded the Netherlands Oversea Trust Company, which would do what the government could not: guarantee that all contraband imports passing through its office would be for neutral or Allied use only. The British were sceptical at first but were brought on board by promises from the Dutch Foreign Minister that we would secretly help the NOT. Because the British stopped all contraband not consigned to the NOT, its control over Dutch overseas trade soon became absolute. The NOT's assistance, however, came at a price: the British exempted foodstuffs and luxury goods from the Netherlands Indies, in which the NOT businessmen were highly interested, from contraband status, allowing them to be sold to Germany at enormous profits.<sup>455</sup> After March 1915, however, the blockade intensified and the Allies again expanded their contraband lists. After negotiations with the NOT, only Indian tobacco, coffee and cinchona (a vital ingredient in many contemporary drugs) could be imported and sold to Germany.<sup>456</sup>

NOT controls over transit trade of other overseas goods, however, were far from perfect, even with the unofficial help of the Dutch government. The NOT directors therefore decided to make their own job easier by limiting imports of several raw materials the Germans were highly interested in to prewar levels. This prevented the accumulation of stocks which quickly proved a tempting target for smugglers hoping to profit from high German prices. Moreover, the NOT took it upon itself to distribute the artificially limited imports amongst trusted buyers, to prevent one company from buying up the entire stock, or bidding wars from driving up the price.<sup>457</sup>

Dutch Indian tobacco, cinchona and coffee, however, remained "NOT-free" and could thus be re-exported from Holland to Germany. A clause in the NOT-agreement with the British, however, stipulated that these goods could only be sold at auctions, in order to encourage German buyers to compete with each other and thus increase the selling price. This tactic illustrates a dichotomy in British official thinking on "the blockade". Hardliners within the Admiralty, supported by the Jingo press, wanted the blockade to be enforced rigorously and wanted to apply the rationing system, devised by the NOT, to *all* neutral overseas imports. The Board of Trade, however, felt that it would be prudent to allow the Germans to import some militarily useless goods, preferably at high prices, in order to drain the German treasury and put pressure on the *Reichsmark*. This policy is evident in the British government's decision to allow anyone who wished, including Germans, to buy up excess British coffee from November 1915 onwards. Moreover, the Board of Trade encouraged re-exportation from the Empire to neutral countries to strengthen their own currency and correct their trade balance, knowing full well that most of these exports would be bought by Germans.<sup>458</sup>

<sup>453</sup> BNA ADM116/1233/15498: Foreign Office to British Envoy to the Netherlands, 25 August 1914.

<sup>454</sup> Dutch National Archives (NA) 2.05.23/766/17684bis: Telegram Dutch Envoy to Germany to Foreign Minister J. Loudon, 16 August 1914.

<sup>455</sup> S. Kruizinga, 'Neutrality in the balance: The origins of the Nederlandsche Overzee Trustmaatschappij (N.O.T.)', in *Leidschrift* (no. 3, 2005).

<sup>456</sup> Marc Frey, *Der Erste Weltkrieg und die Niederlande: ein neutrales Land im politischen und wirtschaftlichen Kalkül der Kriegsgegner* (Berlin, 1998), p.126.

<sup>457</sup> NA 2.06.097/1239: Minutes N.O.T. Executive Committee [UC] 2 June 1915, 1-3; UC 4 June 1915, 8-10; UC 25 June 1915, 97, pp.103-4.

<sup>458</sup> Richard A. Smith, *Britain and the Strategy of the Economic Weapon in the War Against Germany, 1914-1918* (PhD Thesis, University of Newcastle upon Tyne, 2000), pp.56-57-60.

	Exports Britain-Holland (£)	Re-exports Britain-Holland (£)
1 <sup>st</sup> quarter 1913	3,901,718	1,450,594
1 <sup>st</sup> quarter 1915	4,465,822	3,529,449
2 <sup>nd</sup> quarter 1913	4,089,848	1,302,619
2 <sup>nd</sup> quarter 1915	4,558,234	4,440,030

Source: A.C. Bell, *A history of the blockade of Germany and of the countries associated with her in the Great War: Austria, Hungary, Bulgaria, and Turkey, 1914-1918* (London, 1937).

Meanwhile, the Germans had responded to British economic pressure by increasing their trade with the Northern Neutrals. In 1915, the Netherlands became the Germans' most important trading partner.<sup>459</sup> However, the balance of payment was strongly in the former's favour. Seeking to find credits to pay off their neutral debts, Germans flocked to New York, the largest financial market still accessible to them. In order to extend their encirclement of Germany to the financial sphere, the British forced Dutch bankers (some of which were also NOT directors) to stop playing middlemen for their German colleagues looking for American money and stop German use of Dutch telegraph wires.<sup>460</sup> Thus, from July 1916 onwards, the Germans could only make use of the European neutral financial markets. They turned to Amsterdam, where bankers (who were well represented in and had profited enormously from the NOT) were flush with cash. However, the Dutch bankers also had their American and Allied interests to look after (NOT President C.J.K. van Aalst's company, for example, had offices in Japan, Singapore and other British Southeast-Asian dominions) and the British had threatened to cut these ties if the Dutch lent substantial sums of money to the Germans. However, this threat was made worthless by the fact that the British also needed Dutch money. To prevent the Germans from buying up all neutral supplies, they had agreed with the Dutch, by June 1916, to buy up about half the agricultural surplus at near-German (i.e. massively inflated) prices, and had sought Dutch credits to pay for them. Moreover, the British market was in dire need of sugar and had therefore, from August 1914 on, bought up almost the entire Dutch Indies sugar harvest, again needing Dutch credits to pay for them. Dutch banks were now in a unique position to play off both parties against each other, and forced the British to acquiesce to loans to Germany and Austria-Hungary equal in size to those to the Allies. These loans allowed the Germans to pay for the remaining half of Dutch agricultural imports. In return for half the crops, the British furthermore promised the Dutch to supply them with enough fodder and feeding stuffs, and the Germans promised ample supplies of coal and steel: the latter especially was a significant gain as Berlin had originally warned that selling agricultural supplies to anyone else but the Central Powers would result in a coal and steel embargo, both of which the Dutch urgently needed to support their industry.<sup>461</sup> Ironically, if the British had stuck to "financial warfare", German access to money markets would have been severely restricted and they would either have had to limit neutral purchases themselves to prevent bankruptcy, or increase export trade to the neutrals to steady their declining exchange rate, most probably at the cost of war production.

In other areas, however, the Dutch and other neutrals had no leverage against the Allies. Using their monopoly on the production of certain raw materials, they pressured several Dutch industries into working exclusively for their benefit. Overseas imports of oils, fats and soda, which the Dutch needed for their soap, candle and margarine works, were

<sup>459</sup> At least, according to German sources. Unfortunately, Dutch trade statistics up to 1918 are extremely unreliable. Bundesarchiv, Abteilungen Potsdam (BAB), *Reichsamt des Innern*, 18837: Deutsche Handelsstelle im Haag to Director of the Department of War Economics within the Ministry of the Interior, Hans Karl Freiherr von Stein zu Nord- und Ostheim, 8 March 1917, pp.474-80.

<sup>460</sup> Marc Frey, 'Deutsche Finanzinteressen an den Vereinigten Staaten und den Niederlanden im Ersten Weltkrieg', in *Militär-geschichtliche Mitteilungen* 53 (1994), 327-353, esp. pp.330-6.

<sup>461</sup> Diary C.J.K. van Aalst, N.O.T.-chairman and chief financial negotiator with both the British and the Germans, select entries for September-November 1916. This diary is in private possession of the author.



allowed to pass through the blockade only if the finished goods produced from them were exported exclusively to the Allies. Dutch margarine thus became a valuable addition to the British wartime diet, and Dutch exports of glycerine (created as a by-product of candle manufacturing) were substantial.<sup>462</sup> The Germans tried to emulate the British by only supplying kali and steel in exchange for certain Dutch finished products, but their Empire and near-exclusive access to the American market provided the Allies with a much broader portfolio of “exclusives” to pressure the neutrals. On the other hand, the NOT directors used their monopoly on overseas imports to discriminate British trade with the Netherlands in favour of Dutch colonial trade, or to promote the directors’ own economic interests.<sup>463</sup> This partially upset British gains made through their policy using raw materials for economic leverage.

In short, the Allied economic offensive against Germany featured several distinct components. Financially, the Allies sought to restrict German access to financial markets, threatening the Central Powers’ liquidity. This tactic was remarkably successful with respect to New York, but failed in Amsterdam. Furthermore, the Allies sought to end German overseas trade and to cripple, as much as possible, German overland trade with its neutral neighbours. This policy was partially successful, but clashed with “financial warfare”, most notably in 1915. In 1916, the British began to use the NOT’s own rationing policy to force the Dutch to sell them half of their foodstuffs and to force them out of lucrative markets. Due to the Allied near-monopoly on certain overseas supplies, this was quite successful. However, negotiations on individual rations were time consuming, and the British could not enforce their policy as strictly as some of the hardliners would have liked, out of fear of alienating the NOT too much: having grown tremendously in power, it was a political force to be reckoned with and its pro-Ally policy was deemed useful to upset pro-German forces working within the Dutch Government.<sup>464</sup> Interestingly, the neutral Netherlands had a decisive influence on Allied blockade policy. The NOT was emulated, at British behest, in Norway and Switzerland, and existing institutions in Denmark were remodelled after the Dutch Trust Company. Moreover, rationing, an invention of the NOT, was later applied by the British to all the “Northern Neutrals”.

Moreover, two factors that seriously hampered the German economy and Dutch-German trade had little or nothing to do with British economic measures. In the summer of 1916, crops had failed everywhere, and the bad weather responsible continued well into March 1917. German and Dutch crops alike were affected, with declining export volumes and rising prices as a result.<sup>465</sup> Moreover, in 1916, prewar stocks ran out and the first signs that the Dutch merchant fleet was simply not big enough to maintain trade on a prewar footing were beginning to show.<sup>466</sup> The Dutch Government requisitioned an ever greater number of ships to import enough grain from the United States, and the pressing need to restock certain

<sup>462</sup> For example: NA 2.06.079/1250, UC 2 January 1917: ‘An Agreement, made the 22nd day of December 1916 between His Britannic Majesty’s Government of the one part and the Dutch Glycerine Commission (Hereinafter called the Commission) on the other part’, attached to Botterell to Van Aalst, 28 December 1916, no. 5681.

<sup>463</sup> The British frequently complained about this to the N.O.T. See, for example, For example: NA 2.06.097/1238: UC 20 February 1915, 83-85; NA 2.06.097/1245: UC 23 May 1916, 20; UC 26 May 1916, pp.24-5.

<sup>464</sup> Oppenheimer MSS, box 1, Bodeian Library (Oxford), Report by Francis Oppenheimer, British Commercial Attaché to the Netherlands, ‘A Summary of the War Aspect – past, present, and future – of the Economic Relations between the United Kingdom and Holland’, attached to Townley to Balfour, 1 February 1917, no. 1040 Commercial.

<sup>465</sup> See for example the panicky tone in which *The New York Times* (13 April 1917, cf. 3 October 1916) presents statistics of potato, grain and cotton harvests all over the world. This point seems to have been overlooked by historians.

<sup>466</sup> The Executive Committee’s minutes abound with references to the scarcity of shipping and the need to economize Dutch use of shipping space.



important supplies (fertilizers, fodder, and industrial raw materials) in order to feed themselves. Dutch capacity to produce an exportable surplus dwindled, and Dutch-German trade suffered. At the end of 1916, Germans were beginning to feel serious economic pressure. The main causes, however, were the forced allocation of all resources towards war production (the so-called *Hindenburg programme*), food shortages caused by declining neutral trade (which would have happened with or without British interference), and a lack of certain consumer materials, mainly clothing, caused by Allied embargo. Interestingly, it seems that the most impressive result of the Allied blockading efforts seems to have been to “recruit” neutral industries for their own benefit and capture former enemy and even neutral markets, rather than to hurt the German war machine, and even this was upset by the fact that neutral institutions such as the NOT monopolized neutral imports for their own gain.

# The forgotten front: Portugal, economy and war, 1914-18

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It is a matter of common acceptance that the Portuguese participation in the First World War was a tearing event that divided Portuguese society and brought about the first major quake in the republican-liberal institutions. The consensus is patent in the focus of historical debate on the weight, meaning and impact of the War in the context of the crisis and the subsequent fall of the regime. What formal changes however did this antagonism – finally made official – bring about in the manner in which the Republic's political economy of war was thought and conducted, is the main aim of this paper.

## 1. Forewarned is forearmed

The summer of 1914 makes its appearance in the midst of a variety of political sensibilities and ideological inspirations. An atmosphere positively bubbling with debate, ideas and the critical analysis of the frailties and vulnerabilities as far as economical spur was concerned. The Republic had conducted studies and drawn its conclusions, yet these were of little consequence in terms of the growth of public wealth and reflected, moreover, in a rather fragmented and truncated version, the financial hardships and the political instability into which the regime was sinking.

A special note should be taken of the specificity and consequences of this picture in a setting in which, between criticism and concern, the misery of the working classes and their protests were soaring, and a strategic approach that sought to develop and expand national resources in a global way was still lacking. Here also the strategy to adopt remained ambiguous, as dissonant and scattered opinions emerged on the nature, adequacy and timing of the preparation for war. In March 1913, the president of the Democratic Party Directory, in a statement to the newspaper *O Século*, appeared confident that no conflict could possibly take place in Europe and argued against the need to take seriously '(...) that martial organization that is being proclaimed out there'.<sup>467</sup> We know very well how different it all turned out to be.

And so it was that on 4 August 1914 the news of Great Britain's declaration of war on Germany reached Portugal shrouded in sadness and dismay.<sup>468</sup> A new cycle had begun in which economic consolidation was one of the key combat fronts. 'New' also inasmuch as it involved a change of direction in the debate concerning the redefinition of the role and functions of the state as to the supervision, organization and management of the economic activity. It was therefore necessary to isolate and analyse the state's intervention in the productive apparatus, apart from its intervention in areas such as the social one, in which its action had been felt for a long time then.

It is important to place these arrangements in their due context: the contestation and criticism of the Republic's proven incapacity to bring forth viable proposals capable of solving, in the long run, the seemingly eternal economic and financial difficulties; a reality whose furtherance, under the sign of a war, and in the absence of an adequate response by the public powers, would eventually and necessarily reflect itself in the degradation of the people's conditions and living standards, thus increasing social tensions. It is worth drawing attention to the measure in which the Portuguese economic underdevelopment influenced and precipitated the brisk undertaking of a number of policies aimed at preventing and minimizing (at least theoretically) the chain of blows triggered by the war. What was actually at stake,

<sup>467</sup> *O Século*, 30 March 1913, p.1.

<sup>468</sup> *Jornal do Comércio e das Colónias*, 4 Aug. 1914, p.1.

during August 1914, was not so much the direct effects of the armed conflict as the disarticulation of the economic workings and the regular distribution circuits.

Furthermore, it appears to be fair to presume that the threat of war also and in the likeness of what had been happening in Europe, prompted a greater interaction and articulation of efforts not only among the various ministries but also and primarily among the political power, the banks, the representatives of commercial and industrial associations and local authorities. It is necessary to consider and estimate the effects and dimension of this expansion in the state's sphere of action, namely the results ensuing from its intervention, in a first moment, as regulatory body acting on the behalf of the financial market and the national supply. These transformations elicited the beginning of the rejection of the economic principles that formed the basis of liberal societies.

Between proposals and solutions, and in a time when the possible consequences of war for Portugal were a major concern, it was acknowledged as crucial that the government should be endowed with adequate tools for both the protection of national interests and the settling of any issues, either economic or financial. On 6 August 1914, the Prime Minister arrived in Lisbon from Buarcos. Bernardino Machado had been away to present to the President, Manuel de Arriaga, a bill that requested that Executive Power be endowed with the necessary requirements for the undertaking of '(...) immediate action in the case of any incidents caused by events taking place abroad'.<sup>469</sup> Actually, this amplification in the state's intervention was little more than an *ad hoc* response to the current circumstances, with no general plan or coherent strategy to back it up.

## 2. An economy in arms waiting for the war

It was in this context that the Minister of Justice approved, on 10 August 1914, a decree establishing penalties for traders who raised the prices of essential goods. Its main guidelines are clear and are satisfactorily summed up in the following passage: 'All who deal in essential alimentary goods are obliged to hand over, or otherwise be charged with disobedience, to their respective administrative authority, within eight days starting from the date of this decree, a list of the prices for which those goods were being sold on the first of the present month of August'.<sup>470</sup> By means of this measure, the Government tried to restrain speculation, in an attempt to safeguard the interests of the more unfavoured layers of the population.

The state launched the first course of action – the simplest of all – to intervene in the economy to protect it from the consequences of war: prohibition. Having come so far and keeping in mind the purposes and circumstances that surrounded the adoption of this position, it is important to conclude by stressing the role and significance of the Ministry of Justice, to which the Government assigned, in this first phase, and with the collaboration of the Ministry of Development and the Ministry of Finance, the conduction of the war economy and finance.

The Portuguese crisis acquired a new centrality under the sign of war – an aggravated and inevitable reflection of the frailties and dependences of a country whose merchant navy was capable of shipping only 1/10 of the freights necessary for the national supply, and whose economy was dependent on imports for basic food items and for energy and raw materials. Suffice it to show the sums and distribution, by country, of imports in Portugal during the year before the outbreak of war (and one should also bear in mind the setback resulting from the suspension of commercial transactions with Germany).

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<sup>469</sup> *Jornal do Comércio e das Colónias*, 7 Aug. 1914, p.2.

<sup>470</sup> *Diário do Governo*, I Série, n.º 138, 10 Aug. 1914.

*Imports for consumption (1913)*

Countries	Sums in <i>contos</i> <sup>471</sup> 1913	Percentage of the total in 1913	Percentage of the total in 1909
England	23,489	26.40	26.94
Germany	15,840	17.80	17.80
United States	9,892	11.12	10.08
France	7,594	8.53	8.90
Spain	3,843	4.52	6.58
Colonies	2,850	3.20	3.29
Brazil	1,651	1.86	2.02

Source: *O Economista Portuguez. Revista Financeira, Económica, Social e Colonial*, 24 September 1921, p.545.

It is worth noting how devastating and far-reaching were the consequences of the decrease in imports for the economy and the people's daily life. This reality was soon acknowledged and denounced by Lancelot Carnegie who, in a letter to the British Minister of Foreign Affairs, did not hesitate to identify it as the decisive factor that explained why the intervention of the Portuguese Government was '(...) at this early stage even more drastically than has been necessary in States which are more affected politically' by the conflict.<sup>472</sup>

However, as we well know, Portugal was living in a state of social misery very similar to what was the case before the war. The latter obviously aggravated the pre-existing hardships due to a deficient supply of a number of essential food items that constituted the basis of the poorer classes' diet, such as cereals and salted codfish. The majority of the population continued to grow their own sustenance and did not depend on imports. This is the reason why, in a first stage, the home economy was relatively spared the influence of the international conjuncture compared to the country's finances.<sup>473</sup>

*Indexes of the cost of living – Portugal, Great Britain, France and Italy (1913-1916)*

Years	Portugal - Retail prices of 25 alimentary goods, heating and washing, in Lisbon  (a)	Great Britain - Retail prices of 23 items, in London  (a)	France - Retail prices of 24 alimentary goods, heating and lighting in Paris  (a)	Italy - Retail prices of 7 items  (b)
1913	100	100	100	100
1914	110.2	116.8	116	113 (July)
1915	122.9	148.6	135 (b)	135
1916	151.1	181.3	159 (c)	151

(a) Considering the consumption rate (b) Average of the first and third trimester (c) Average of the first three trimesters.

Source: *Boletim da Previdência Social*, n.º 3, 1917, p.197.

In this respect it is crucial also to consider other dynamics, namely the creation, under the direct dependence of the Ministry of Finance, of a Committee for the Regulation of the

<sup>471</sup> 1,000 PTE = 1 *conto*.

<sup>472</sup> National Archives of the United Kingdom (NAUK), FO 368/1063, Letter 26 Aug. 1914 sent by Lancelot Carnegie to Edward Grey, p.1.

<sup>473</sup> NAUK, FO 368/1383, *Portugal. Report on the Commerce and Finance of Portugal*, London, Foreign Office and Board of Trade, 1915, p.13.

Exchange Market,<sup>474</sup> a body to which the Government assigned the task of determining the exchange rates, leaving out the sale of gold.

Mention must be made to the reinforcement of the state's bureaucratic apparatus and the multiplication of committees created, also at a municipal level, with the purpose of regulating, once and for all, the prices of essential goods.<sup>475</sup> The state's ambitions and field of intervention were widening, their responsibility and their mission being the divulgation through the distribution of pamphlets advertising the best methods and the more adequate crops for each region, so as to encourage the establishment of a balance in the home economy.<sup>476</sup>

On 9 March 1916 Germany declared war on Portugal.

### 3. War, at last!

Let us begin with the essential fact that, after a few years of doubts and dithering, a government of so-called 'Sacred Union' was constituted, incorporating representatives from the two main Republican political parties – The Democratic and the Evolutionist. Thus Portugal followed in the footsteps of the formula that the French President Poincaré had set up in August 1914, and finally recognized the opportunity and its obligation of constituting a National Ministry. The circumstances dictated the beginning of a new stage in the political economy of war; a new stage of which the novelties brought into the machinery of the state are the most prominent feature, and whose most visible aspect was indeed the creation of new ministries and the reformulation of previous institutions. There was a call, in short, for the creation of a centralizing body that connected the various and scattered elements of the country's economic organization.

One look at Portugal's financial situation made obvious the scarceness of resources. Early in the summer the Ministry of Finances left for London to negotiate a first loan worth two million pounds Sterling (1,400 *contos*), which was followed by many others. In 1925, after all debts had been discharged, the sum total of the Portuguese war debt was as high as 22,548,100 pounds (2,200,000 *contos* according to that year's rate).

The urgency of solving the problem of subsistence and the need to pay close attention to the relationship between the working class and the economic agents determined the creation, on 16 March 1916, of the Ministry of Labour and Social Security.<sup>477</sup> Yet it must be pointed out that, despite the novelty, it is not hard to find a continuity line between the strategic guidelines that were imposed on the new institution and those that for the previous months had oriented the work of the Ministry of Development.

It is therefore essential to consider the growing protests and the social discontent experienced during these months, and to estimate their effects, namely the outcome of the 'potato uprising' and the general strike in May and June 1917 respectively. Explosive months when the population of Lisbon demonstrated against the shortage of essential goods, hunger, speculation and hoarding, but first and foremost, against what it considered to be the absence of immediate answers by the government. Among all the problems stood out a policy for supply that was suffering from the scarcity and deficient coordination of transport, a vulnerability that led to the creation, under the dependence of the Ministry of Labour and Social Security, of a Supply Administration which was charged with the compilation of statistical elements concerning the situation of goods, rates, stocks, availability and prices.<sup>478</sup>

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<sup>474</sup> *Diário do Governo*, I Série, n.º 173 24 Sep. 1914.

<sup>475</sup> *Diário do Governo*, I Série, n.º 67, 6 April 1915.

<sup>476</sup> *O Jornal do Comércio e das Colónias*, 20 July 1915, p.2.

<sup>477</sup> *Diário do Governo*, I Série, n.º 51, 16 March 1916.

<sup>478</sup> *Diário do Governo*, I Série, n.º 87, 1 June 1917.

#### 4. Parenthesis

A military coup took place on 5 December 1918. The proposals then brought forward concerning what should be the economic path to follow incorporated a number of important innovations. Eventually they acquired a dynamic of their own, opposing the until then growing limitation on prices,<sup>479</sup> the end of the scale and a greater freedom of circulation and transaction, namely in agricultural products.

On the whole it is clear that the Portuguese economic elite stopped fearing the Interventionist State, appreciating its advantages as long as they were under control and properly structured. We know very well the ill feeling generated in Commercial and Industrial Associations, when it was announced, without conviction and the political will to defend it or put it truly into practice, the creation of a special tax on war profits<sup>480</sup>.

To conclude, let us take note of the specificity of an economic policy ever more intervening and which eventually acquired a dynamic of its own, marking indelibly the orientation and the manner in which the economic agents themselves regarded and conceived the state's role. An orientation that made their success dependent on the action of a strong intervening State capable of refraining the working class movement, of protecting the markets and keeping the means of production at a low cost.

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<sup>479</sup> Artur Belo, "As leis da fome" in *Jornal do Comércio e das Colónias*, 23 Aug. 1918, p.1. Between July and September of 1918, the newspaper *O Século* launches a powerful campaign in favour of culture and the investment of capital in the farming industry: *O Século*, 21 of July de 1918, p.1; *O Século*, 18 Aug. de 1918, p.1; *O Século*, 8 Sep. 1918, p.1.; *O Século*, 12 Sep. 1918, p.1.

<sup>480</sup> *Diário do Governo*, I Série, n.º 201, 26 Sep. 1918. The provision would be repealed a week later, on 4 October.



# Employing the enemy: the contribution of German and Italian POWs to British agriculture during and after the Second World War

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Historians emphasize the ‘substantial contribution’ of prisoner of war (POW) labour to British agriculture;<sup>481</sup> Italians were ‘more useful to Britain’s cause in the wheat fields than the battlefields’.<sup>482</sup> Official government publications are more cautious, referring to a time lag and the removal of security constraints to fully use POW labour.<sup>483</sup> Davis considers POWs a liability for captors during both World Wars; they crowded out native workers, were costly, inefficient, lacked motivation, and skills.<sup>484</sup>

This paper seeks to determine which of the above views is correct. Davis’s hypothesis is tested by assessing German and Italian POW contribution and productivity in British agriculture. New qualitative and quantitative evidence is used to establish POW productivity and output proxies and yield a first estimate for POW contribution to British GDP. The paper concludes that POWs made significant contributions to British agriculture, particularly in the postwar period.

## Manpower supply and POW employment in British wartime agriculture

Wartime agricultural labour was a constant problem for the Ministry of Agriculture and Fisheries (MAF). Call-ups, worker drifts to other industries and the failure to attain sufficient labour allocations from the War Cabinet created substantial rural manpower gaps.<sup>485</sup> POWs initially played a minor role as one of many supplementary wartime labour groups.

Beginning in 1943, they were increasingly tapped as a substitute for the Women’s Land’s Army (WLA) and schoolchildren. After the war, the reluctance of de-mobilized farm workers to return to agriculture and meagre WLA recruitment resulted in ever-growing demands for Germans on the land.<sup>486</sup> Moore-Coyler finds German POWs ‘indispensable’ in 1946, but also detects persistent press criticisms of POW labour. He lacks evidence to quantify their value, but acknowledges the government authorities’ success in marshalling and controlling the POW labour force.<sup>487</sup>

During and after the Second World War, 400,000 German and 154,000 Italian POWs were held in Britain.<sup>488</sup> Following Italy’s surrender in September 1943, Italians were offered the choice of becoming ‘cooperators’ or ‘non-cooperators’. The former performed work contrary to the Geneva Convention and under lower security constraints while receiving higher financial rewards than non-cooperators.<sup>489</sup> Italians were repatriated by 1946 and the Germans by 1948. After repatriation, 15,700 Germans and 1,400 Italians remained in Britain as civilian rural workers.<sup>490</sup>

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<sup>481</sup> Moore, ‘Turning Liabilities into Assets’, *Journal of Contemporary History*, vol. 32, 1 (1997), p.127.

<sup>482</sup> Wiley, ‘POWs in the Era of Total War’, *War in History*, 2006 13 (2), p.224.

<sup>483</sup> Parker, *Manpower* (London, 1957), pp.187, 384; Satow, *POW department in the Second World War* (London, 1950), pp.33-5.

<sup>484</sup> Davis, ‘POWs in Twentieth-Century War Economies’, *Journal of Contemporary History*, Vol. 12, 4 (1977), pp.627-9.

<sup>485</sup> Murray, *Agriculture*, (London, 1955), p.272.

<sup>486</sup> *Ibid*, pp.120, 122, 128.

<sup>487</sup> Moore-Coyler, ‘POWs’, in Short et al, *Frontline of Freedom (Exeter, 2007)*, pp.130-1.

<sup>488</sup> Moore & Fedorowich (eds.), *POWs and their Captors in World War II*, (London, 1996), p.19.

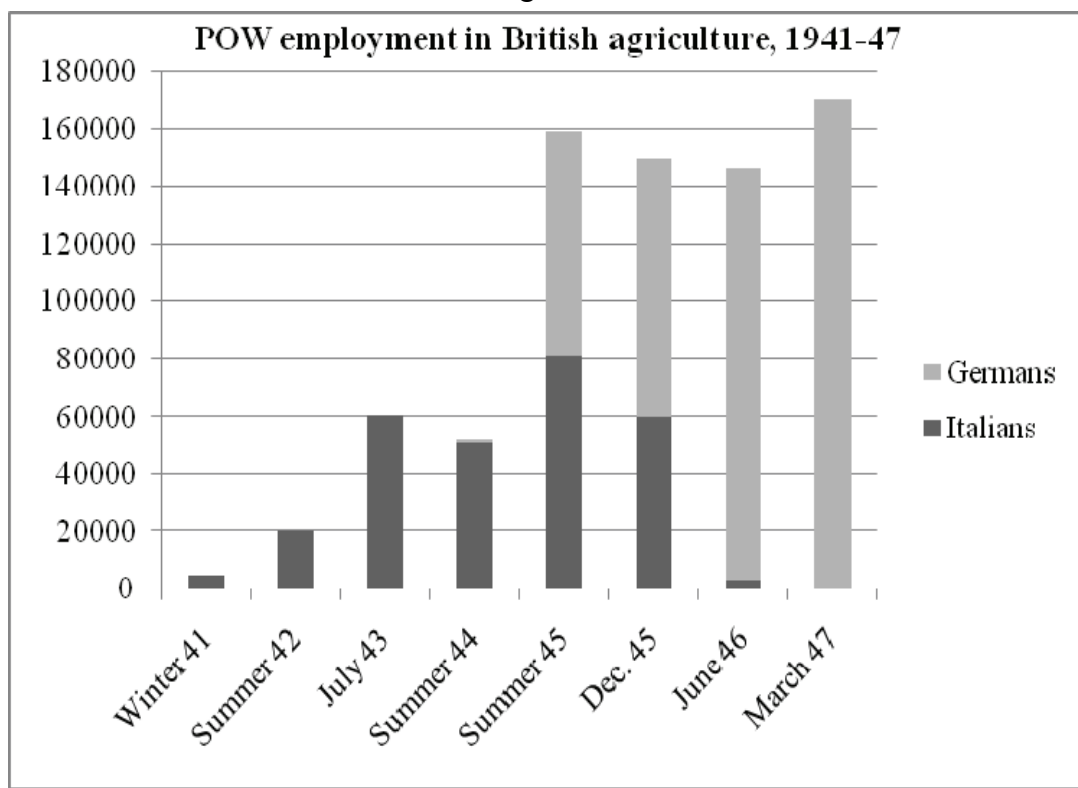
<sup>489</sup> *Ibid*, p.33.

<sup>490</sup> Isaac, *British Post-War Migration*, (Cambridge, 1954), p.183.

The agricultural POW workforce developed from being small and mostly Italian in 1941 to a sizeable and exclusively German workforce after the war (figure 1). At peak in summer 1946, German POWs represented 1.86 per cent of the aggregate labour force in Great Britain (figure 2). Agriculture was the main sector of POW employment, accounting for 40 to 60 per cent of the POW workforce during and after the war.

Most POWs worked on farms during the day and returned to camps in the evening. Those with records of good behaviour could be sited at 'hostels', guarded houses near employment sites or 'live in' individually on the farm as 'billetees'. The government favoured billeting because it saved guarding, accommodation, transportation and food costs, shifted responsibility to the farmer, and increased net working time.<sup>491</sup> Hostel and billee employment grew rapidly given these advantages over camp employment. Germans were employed from 1944 onwards as a potential replacement for Italians. They replaced Italians only gradually as they were initially considered more security-intensive, but given the scheme's success, German POW employment rapidly expanded.

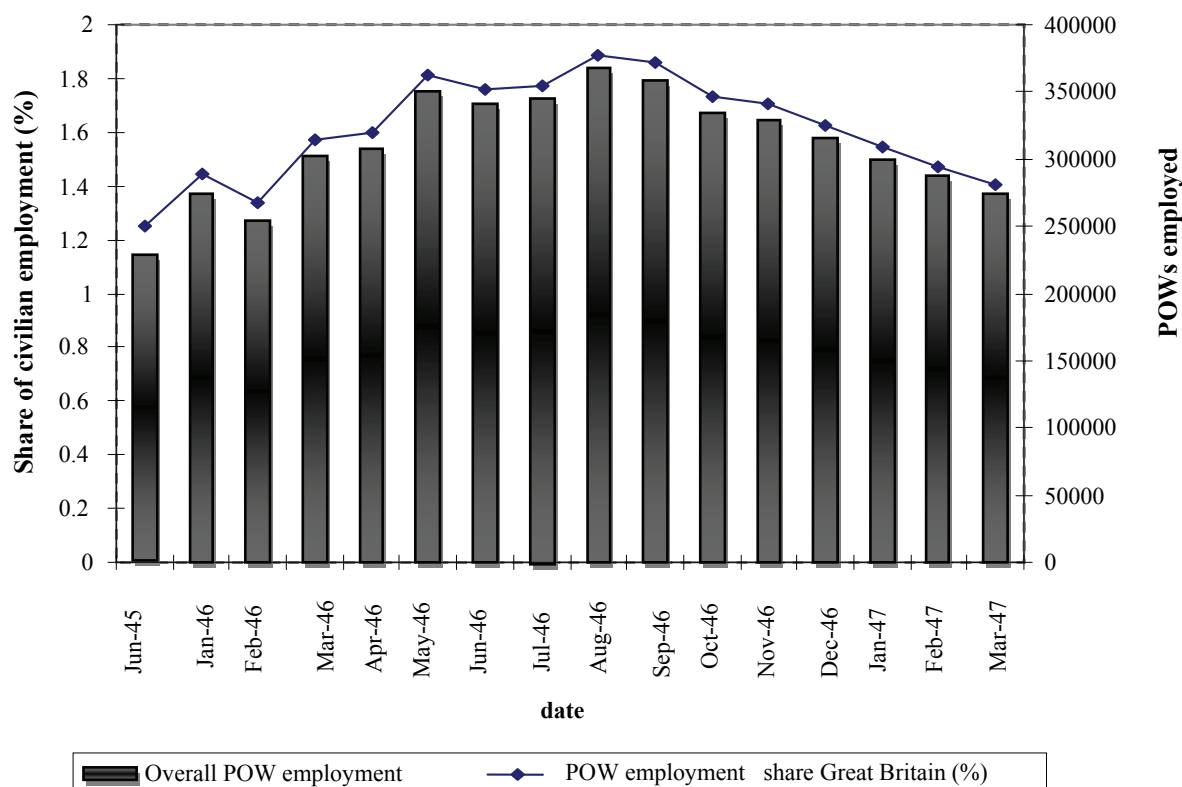
Figure 1



Sources: National Archives (NA), MAF47/132, LAB13/257, CAB114/26, WO165/59.

<sup>491</sup> NA, MAF47/56, 'agricultural labour supply, Great Britain, June 1944'.

Figure 2  
*Aggregate POW employment in Great Britain in absolute terms and as a share of civilian employment*



### POW productivity in British agriculture

Qualitative assessments of POW labour vary substantially. While one farmer claimed in 1941 that his two Italians were worth ten casual civilian workers,<sup>492</sup> Lord Somerleyton stated in 1944 that two boys could do the job of 30 Italians.<sup>493</sup> Such disparate assessments arose because POW output changed significantly over time and differed by POW sub-group. The British press biases Italian POW productivity downwards but also reveals high volatility in output.

The first Italians in 1941 were compliant, skilled and on average 65 per cent as productive as British civilians.<sup>494</sup> The average was raised to 75 per cent in late 1942, but output varied between 25-100 per cent.<sup>495</sup> Italians were most productive in small groups and as billetees. Shirking reduced Italian output in 1942 and both German and Italian output responded negatively to ration cuts and adverse war events. Some Italians outperformed British workers, but some regions also reduced POW wages given low output.

The cooperator status for Italians introduced in April 1944 entailed a wider use of Italians. Cooperators were more productive than non-cooperators and could be used more extensively without the constraints of the Geneva Convention. However, cooperator conversions remained below expectations and non-cooperators frequently refused to work, reducing the expected output gain. Germans were more productive than Italians. They also required supervision and discipline, but were more willing to work. As soon as security restrictions constraining their use were relaxed after VE Day, employment increased rapidly.

<sup>492</sup> Sponza, *Divided Loyalties*, (Bern, 2002), p.198.

<sup>493</sup> *Farmers Weekly*, 15 December 1944.

<sup>494</sup> NA, WO32/10734, 'note on relative value of Italian POWs', 18 December 1941.

<sup>495</sup> Library Archives Canada (LAC), RG24/6577, Massey (High Commission Canada) to External Affairs, 27 Nov. 1942.

German billetees were most productive, but unescorted Germans in large groups also showed good results.

Quantitative evidence on POW output comes from three different sources. First, the MAF's manpower division worked with constant POW productivity. Before POWs arrived, it estimated their output at four-fifths of civilians and used 75 per cent for 1942,<sup>496</sup> 1944,<sup>497</sup> 1945 and 1946. The estimate also was the basis for 'man-equivalents' that were calculated to forecast labour requirements. For instance, 71,000 POWs in 1945 were worth 54,000 'man-equivalents', implying a productivity of 76 per cent compared to civilians. However, the MAF's assessment seems arbitrary because all supplementary labour groups were valued at 75 per cent and because proxies did not change over time whilst POW productivity did.

Second, the difference between POW and minimum civilian wages presents a more dynamic POW output measure. Evidence comes from the Agricultural Wages Board (AWB) which reviewed and set rural minimum wages. POW wages were raised in October 1945 because POW output exceeded wages and because farmers paid fewer overheads for them.<sup>498</sup> Although the equation of POW and minimum wages in April 1946 evoked a storm of protests from farmers and unions, wages remained at that level afterwards. POW wage shares fell from 80 per cent in 1941 to 70 in 1944 and then rose from August 1945 to 100 per cent in April 1946 (table 1). The wage gap captures a rise in POW productivity over time and implies that the MAF's 75 per cent proxy initially over- and eventually understated POW output.

Thirdly, Williams provides another alternative dynamic POW output proxy. He assumes that relative weekly earnings in 1945/6 and 1948/9 reflect output to attain conversion factors and finds billeted more productive than non-billeted POWs. POW productivity relative to full-time regular civilian workers rose over time from 40 for non-billeted and 65 for billeted in 1944/5 to 70-80 per cent in 1947/8. Williams explains the variation with growing experience and declining hostility and irresponsibility.<sup>499</sup> POWs changed from one of the least productive supplementary labour groups to the most productive postwar. Williams did not determine varying factors for all labour groups and did not distinguish between cooperators or non-cooperators. Moreover, he himself finds his measures arbitrary and various authors have criticized them as excessively low.<sup>500</sup> Still, Murray considers William's figures as a good overall approximation.

Table 1: *POW and rural civilian wages 1941-46 (Shillings)*

<i>Date</i>	<i>Min. wage/ week</i>	<i>Min. wage/hour (48h week)</i>	<i>POW wage/hour</i>	<i>POW wage share (%)</i>	<i>wage/output (%)</i>
July 1941	48	1s.	9½ d.	79.0	94.74
Dec. 1941	60	1s. 3d.	1s.	80.0	93.75
Dec. 1943	65	1s. 4¼ d.	1s.	73.85	101.56
Aug. 1945	70	1s. 5½ d.	1s.	68.57	109.00
Oct. 1945	70	1s. 5½ d.	1s. 3d.	85.71	87.50
Feb. 1946	70	1s. 5½ d.	1s. 3d.	85.71	87.50
Apr. 1946	70	1s. 6d.	1s. 6d.	100	75.00

Sources: Ministry of Labour Gazettes 1943-46 for civilian wages;  
NA, MAF47/138 for POW wages.

<sup>496</sup> LAC, RG24/6577, *ibid*.

<sup>497</sup> NA, MAF47/56, Hudson to Anderson, 13 January 1944.

<sup>498</sup> *Ibid*.

<sup>499</sup> Williams, 'Changes in the productivity of labour in British agriculture', *Journal of Agricultural Economics*, vol. X (1954), 4, pp.333-4.

<sup>500</sup> Brassley, 'Wartime productivity and innovation, 1939-45', *Frontline*, pp.36-7, Clarke, 'WLA', *ibid*, pp. 113-4.

Billetee shares of POWs employed are used to determine productivity aggregates applying Williams' methodology. They are multiplied by 40 and 65 per cent for non-billets and billeted until 1946 and by 70 and 80 per cent for 1947. The proxies then undergo sensitivity analysis to incorporate dynamic POW productivity (table 2). POWs were 40-70 per cent as productive as civilians according to the aggregated Williams figures. The results are lower than the wage gap proxies and suggest that POW productivity was only half as high as the MAF thought but rose by 1947.

Table 2: *Billetee shares and relative POW productivity*

<i>Date</i>	<i>Billetee share (%)</i>	<i>B1</i>	<i>B2</i>	<i>B3</i>
Winter 41	0	40.00	40.00	50.00
Summer 42	5.00	41.25	41.25	51.25
July 43	9.18	42.30	42.30	52.30
Summer 44	28.57	47.14	47.14	57.14
Summer 45	14.02	43.50	43.50	53.50
Dec. 45	12.00	43.00	71.20	53.00
June 46	12.92	43.23	71.92	71.92

Note: Column B1 uses a 70-80 per cent estimate from 1947 onwards. B2 uses 70-80 per cent from 1946 and B3 uses 50 and 75 per cent for non-billeted and billeted until Dec.45.

In light of divergent productivity estimates from Williams, the MAF and AWB, sensitivity analysis yields a plausible productivity range (table 3). P1 assumes that POW output remained at the minimum value of 47 per cent, from 1944 to 1947. P3, the upper bound proxy, is fixed at 75 per cent throughout the entire period. P2 assumes a varying and increasing productivity. For 1944, Williams' minimum value is taken. The B3 value for 1945 from table 2 is taken to adjust for increasing output of Germans and cooperators. For 1947, the aggregated Williams' figure of 71 per cent is used. The 1946 figure is interpolated to attain lower bound and smooth productivity estimates.

Table 3: *Sensitivity analysis of POW productivity proxies*

<i>Proxy</i>	<i>Productivity average (%)</i>	<i>Source</i>
P1	47.0	Williams
P2a – 1944	47.0	“
b – 1945	53.50	MAF
c – 1946	62.25	Interpolation
d – 1947	71.0	Williams
P 3	75.0	MAF

### POW output in British agriculture

Equipped with revised productivity figures, POW output can be ascertained using rural employment shares. POW employment was initially small but became significant postwar. POW shares catch up with WLA shares by 1943, exceed it by 1945 and by June 1946, one in five rural workers is a POW. Official figures severely understate actual POW employment. Internal government figures are twice as high as official estimates, even if averages are taken into account. Also, June and September are peak harvest dates, so civilian rural employment is inflated. Conversely, the new figures denote summer averages and thus avoid upward bias.

Table 4: *POW and civilian employment in British agriculture, 1941-47*

<i>Date</i>	<i>POW s</i>	<i>Civilians</i>	<i>New POW share (%)</i>	<i>MAF POW share (%)</i>	<i>WLA share (%)</i>
Dec.1941	5,000	729,000	0.70	n/a	3.22
Summer 42	20,000	824,000	2.43	n/a	7.16
July 43	61,000	843,000	7.24	n/a	9.53
Summer 44	52157	862,958	6.04	2.93	9.04
Summer 45	100683	886,686	11.35	6.51	7.36
June 1946	146677	888,864	19.17	9.91	
March 1947	170,880	891,479	19.17	9.91	
Av. 41-47	79,485	846,570	9.40	n/a	
Av. 44-47	117,599	882,497	13.32	7.41	

Sources: MAF, *Agricultural statistics*, (London, 1949) pp.30-31.; *Statistical Digest of the War*, (London, 1951), p.16. WLA data is only available until 1945 and MAF data on POWs only after 1944.

Next, the revised employment shares are adjusted for the POWs' relative productivity according to the 'man-equivalent' methodology. Aggregate civilian employment is adjusted downwards by an average of 82.45 per cent obtained from MAF man-equivalent calculations. The POW labour share range in table 5 indicates that POWs contributed on average five to eight per cent to the net rural labour force 1941-1947. Lower bound estimates suggest that the POW workforce grew at least from less than one per cent in 1941 to a tenth in 1947. According to the intermediate proxy, one in six rural workers was a POW in 1946. From 1944 to 1947, when POW labour was more productive and more sizeable than in previous periods, POWs on average represented 7-11 per cent of the net rural labour force.

Table 5: *Man-equivalent adjustments using P1-P3, Great Britain, 1941-47*

<i>Date</i>	<i>Total workforce adjusted</i>	<i>POW share P1 (%)</i>	<i>P2 (%)</i>	<i>P3 (%)</i>
Dec.1941	601,061	0.39	0.39	0.62
Summer 42	679,388	1.39	1.39	2.21
July 43	695,054	4.14	4.14	6.58
Summer 44	711,509	3.46	3.46	5.50
Summer 45	731,073	6.49	7.37	10.33
June 1946	732,868	9.43	12.46	15.01
March 1947	735,024	10.96	16.49	17.44
Av. 1941-47	697,997	5.18	6.53	8.24
Av. 1944-47	721,694	7.10	9.23	11.30

Finally, net contributions are converted into monetary estimates to compare them with British national income. For simplification, it is assumed that the labour force shares adjusted for productivity reflect output, i.e. one net worker produces one net unit of output. The POW labour shares translate into a contribution to agriculture of £35 to £55 million during 1945 and £51 to £81 million in 1946.<sup>501</sup> Using Feinstein's British GDP estimates at 1938 factor costs, POWs contributed 0.60 to 0.92 per cent to British GDP in 1946 through agriculture alone.<sup>502</sup> Adding the building sector, for which monetary POW output figures exist for 1946,<sup>503</sup> to

<sup>501</sup> MAF, *ibid.*

<sup>502</sup> British GDP was £8,770m (1946). Feinstein, *National income, expenditure and output of the UK, 1855-1965*, (Cambridge, 1972), table 6.

<sup>503</sup> German POWs contributed £16m to British building output in 1946. Fleming&Rowden, *Ministry of Works*



POW output, yields a national income contribution of 0.76, 0.94 and 1.1 per cent. Using GDP in market instead of constant prices produces an only slightly lower range from 0.77 to 1.03 per cent. Physical values of output might reflect wartime contribution of POW labour more adequately, but in their absence, monetary values seem a plausible substitute. Also, the POW contribution is understated because several sectors with POW labour usage, for example, brick, paper canned food and fertilizer industries, have been omitted.

### Conclusion

Contrary to Davis's assertions, POWs were not a liability in British agriculture. Farmers initially saw POW labour with scepticism, but towards the end of the war and after it, their demand for them appeared insatiable. Crowding out did occur, but it was rare and happened because German POW output exceeded that of civilians. Productivity varied by region, POW type, period and depended on many other factors. Language difficulties, inexperience and reluctance to work certainly reduced POW output. But Davis ignores the dynamics, scale and scope of POW labour. Prisoners became more skilled over time and language barriers fell. Postwar employment occurred on a much larger scale, average productivity was higher as Italians were replaced with more productive Germans, and costs in terms of guarding lower.

New evidence shows that POWs were 47-75 per cent as productive as civilians and constituted 10 per cent of the British rural labour force 1941-7. Adjusting for productivity, they seem to have contributed five to eight per cent to net rural output. Sensitivity analysis reveals that POWs contributed one per cent to British GDP in the rural and construction sectors in 1946. German and Italian POWs were substitutes in industries that civilians were reluctant to work in. Their work in the 'wheat fields' enabled the release of civilian workers to war-relevant industries. They filled a significant manpower gap in an industry that was notoriously short of labour and could be compelled to work while civilians and even demobilized farm workers were reluctant to do so.

# Managing technology to achieve industrialization: the Korean nylon producers in the 1960s-70s

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## Introduction

Capturing the challenges firms face in developing economies, Nathan Rosenberg argued that technology transfer is not a once-and-for-all affair, ‘which happens at a single point in time’, but ‘an ongoing activity’, the success of which depends on ‘the domestic capacity to alter, modify, and adapt in a thousand different ways’.<sup>504</sup> Transfer of technology across firms and geographical boundaries requires active and conscious efforts, and is neither costless nor rapid. Challenges in technological transfers appear to be more comprehensive than previously assumed, and abstraction of the process – in an effort at alternative conceptualization to account for the experience of developing economies and highlight the salient characteristics – has revolved around capturing the broad range of technological issues for latecomer economies. This conceptualization has resulted in what is referred to in the literature as ‘technological capabilities’,<sup>505</sup> or the development and acquisition of capabilities at three stages (production, investment, innovation) to manage technology and claim mastery.

This experience in technology transfer was certainly true for the Korean textile industry as it first imported foreign technology in the 1960s. This was the industry that spearheaded Korea’s economic take-off in the 1960s. In fact, few industries better represent the rapid, compressed character of Korea’s development than the textile industry, which pioneered both import substitution and export-oriented phases of industrialization. In order to maintain competitiveness once industrialization was under way, the Korean firms had to face a range of technological issues which went beyond importing, transferring, and assimilating. Characterizing this as ‘managing’ captures the complex dimension of dealing with technology. In the case of the Korean textile industry, the technology- and capital-intensive part was located upstream with the synthetic fibre producers, not the firms downstream in fabric and textile goods production. What became to be identified as a Korean pattern of promoting exports with efforts to localize production of all but basic inputs forced the synthetic industry to experience import substitution and export promotion simultaneously, and the tensions between import-substituting fibre producers upstream and export-oriented textile producers downstream pushed the fibre producers towards becoming more competitive by developing their technological capabilities (figure 1). But compared to the other industries in which Korea later developed comparative advantage, surprisingly little has been said on the synthetic fibre industry despite its historical relevance in Korea’s industrialization. It is this synthetic fibre industry which is the subject of my research.

The research makes use of case studies to evaluate firm efforts to absorb foreign technology and develop indigenous capabilities. Assessment of managing technology involves looking at the range of capabilities in production, investment, and innovation, relying on evidence in corporate, industrial, and government sources. The proposed paper compares the two leading nylon producers based on their technological capabilities, and argues that while the technology inflows in the synthetic fibre industry conform to the

<sup>504</sup> Rosenberg, Nathan. 1982. *Inside the Black Box: Technology and Economics*. Cambridge: Cambridge University Press. p.272.

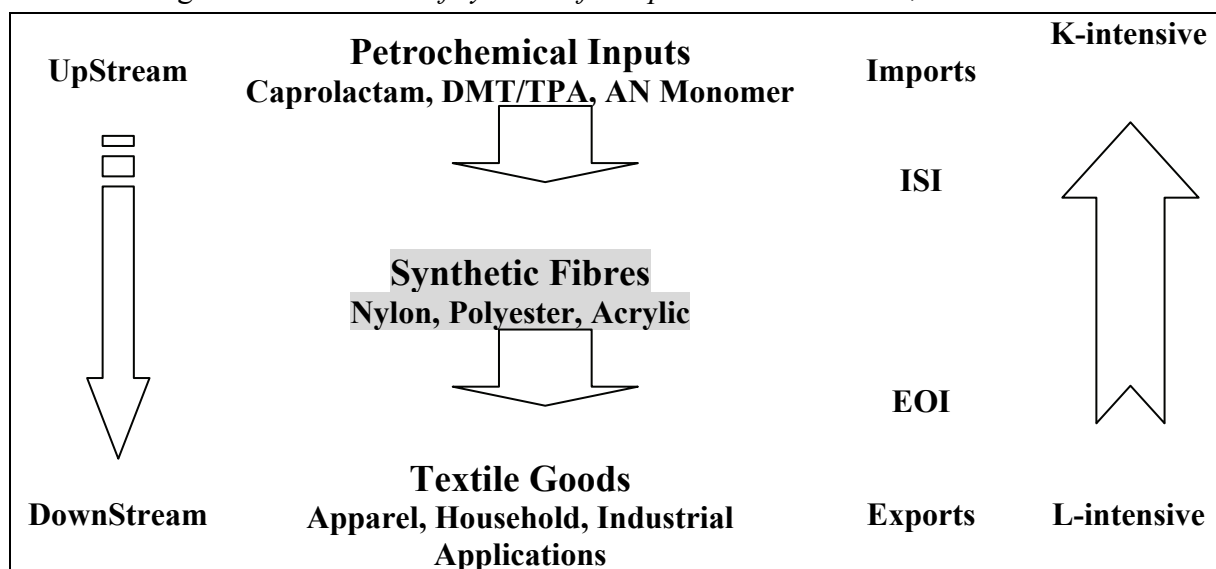
<sup>505</sup> Westphal, Larry E., Linsu Kim, and Carl J. Dahlman. 1985. “Reflections on the Republic of Korea's Acquisition of Technological Capability,” in *International Technology Transfer: Concepts, Measures, and Comparisons*. Nathan Rosenberg and Claudio Frischtak eds. New York: Praeger. An in-depth review of the literature on technology in the Third World is provided in ch. 1 of my thesis.

established channels of transfer in Korea – that is, through capital goods imports rather than technology assistance and FDI – the few recorded instances of technology assistance and joint ventures may have been more relevant in upgrading the firms’ technological capabilities. In nylon, Kolon pioneered synthetic fibre production with the establishment of a plant in 1963. Dongyang did not enter the market until 1965 but soon caught up and by 1971 outpaced Kolon’s production capacity, forging ahead as the leading nylon producer (figure 2). Once established, both continued to expand their output capacity, and relied on foreign resources (capital and technology) to achieve growth and economies of scale. At every stage, the firms faced tradeoffs between adopting the best technology available versus minimizing their dependence on foreign resources, and this resulted in different outcomes across firms. In the 1960s-70s, the firms were also more successful mastering the ‘know-how’ than the ‘know-why’ in technology.

### Primary sources<sup>506</sup>

Owing to the extent and intensity of state involvement in the economy, corporate activities are well documented in government records at the National Archives and Records Service since 1962. For this paper, the following primary sources have been consulted: firm applications for foreign capital and technology inflows under the Foreign Capital Inducement Act (FCIA); contemporary research papers by the Korea Development Institute; the Korea Chemical Fibers Association’s *Chemical Fiber Handbook* since 1976, and quarterly publication *Chemical Fiber* since 1968. Corporate sources publicly available are minimal compared to government sources, and research relies mainly on corporate history publications for cross-referencing with government sources: Kolon (*40-Year History*, 1997), founder’s memoirs (1977); Dongyang Nylon (*30-Year History*, 1996); founder’s memoirs (2000).

Figure 1: Illustration of synthetic fibre production in Korea, 1960s-70s<sup>507</sup>



<sup>506</sup> The data and analysis in this paper are based on the sources cited above.

<sup>507</sup> This pattern of industrialization is dealt with in ch. 4 of my thesis.

Figure 2: Nylon filament output capacity, 1963-80 (metric tonnes per day)

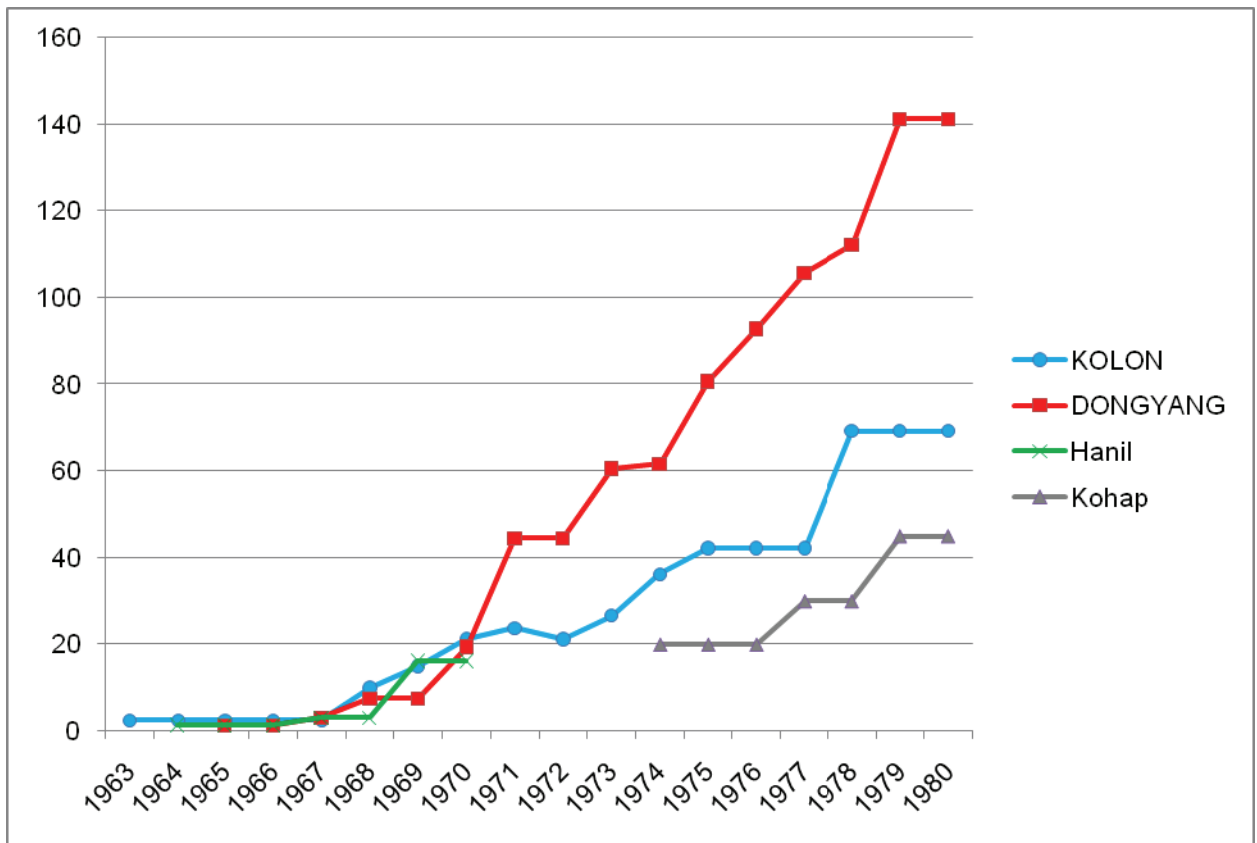


Table 1: *Foreign capital inflows for nylon production, 1960-80*<sup>508</sup>

TYPES	YEAR	FIRMS	SOURCES	PURPOSE	TERMS (US\$ 1,000)
Loans	1960	KOLON	DLF	Establishment	3,200
Joint venture	1962	KOLON	Chemtex (US)	Establishment	575 (Chemtex 50%)
Tech. Assistance	1963	KOLON	Toray (Japan)	Establishment	
Loans	1966	KOLON	AID	Expansion	5,810
Loans		DONGYANG	Vickers Zimmer (Germany)	Establishment	2,080
Loans		DONGYANG	Itoh C. (Japan)	Establishment	6,140
Loans		KOLON	Mitsui (Japan)	Expansion	4,278
Loans	1967	DONGYANG	Heberlein & Co. (Switzerland)	Manufacturing facilities	207
Loans	1968	KOLON	EXIM Bank (US)	Expansion	3,420
Loans	1971	KOLON	Chemtex (US)	Expansion (tyre-cord fabric)	4,040
Loans		KOLON	Mitsui; Associated Japanese Bank (GB)	Import of caprolactam	3,000
Joint venture		KOLON	Toray (Japan)	Expansion (tyre-cord fabric)	1,989 (Toray 45%)
Tech. Assistance		DONGYANG	Teijin (Japan)	Expansion (tyre-cord fabric)	100 (3 yrs)
Loans	1972	DONGYANG	Marubeni Benelux (Belgium)	Import of caprolactam	3,000
Tech. Assistance		DONGYANG	Teijin (Japan)	Manufacturing of shrinkproof nylon filament	250 (3yrs)
Loans	1974	DONGYANG	Bank of Montreal (Canada)	Expansion	14,000
Loans	1975	DONGYANG	Marubeni Benelux (Belgium)	Expansion	5,000
Loans		DONGYANG	IFC	Expansion	6,900
Joint venture		DONGYANG	IFC	Expansion (tyre-cord fabric)	2,100 (IFC 9.87%)
Loans		DONGYANG	Marubeni (Netherlands)	Expansion	7,400
Loans		KOLON	Chemtex (US)	Expansion	14,100
Loans	1976	KOLON	Canadian American Bank S.A.	Expansion	10,000
Loans	1978	DONGYANG	Bank of Montreal (Canada)	Expansion (tyre-cord fabric)	15,400
Tech. Assistance		KOLON	Mitsui Toatsu Chemicals (Japan)	Manufacturing of nonylphenol	50 (+ 2.3% net sales; 10 yrs)
Tech. Assistance		DONGYANG	Kanebo (Japan)	Manufacturing of low-shrink nylon filament	300 (3 yrs)

**Characteristics of firms' management of technology:****Pioneer (Kolon) and Latecomer (Dongyang)**

First, the timing of market entry mattered in the firms' choice of technology. As an importer of stretched nylon in Tokyo in the early 1950s, Kolon was well-placed to experience firsthand the popularity and potential for nylon and to capitalize on the demand for this 'miracle fibre'

<sup>508</sup> Korea's FCIA regime, which regulated the inflows of foreign capital and technology, is dealt with in ch. 2 of my thesis.

in the Korean market. Kolon's founding family at the time was a commercial agent for exports of stretched nylon filament yarns into Korea, but by 1956 their interests evolved to stretching the filament themselves, leading to the establishment of Korea Nylon in 1957. By and large the most successful in the nylon business, Kolon soon became interested in backward integration into local production of nylon filament, and formed a joint venture in 1962 with the US engineering firm, Chemtex, for the construction of a nylon filament plant.

Dongyang, on the other hand, did not consider producing nylon until the mid-1960s, and even then, was more interested in petrochemical processing than synthetic fibres. But Dongyang's ambitions of refining oil, or producing lubricant, or polyester rather than nylon, or backward integration into supplying caprolactam for nylon were all deemed premature at the time and were thwarted by the market, competitors and the government. For instance, in weighing synthetic fibre production, Dongyang felt that polyester had better future prospects, but realized the firms downstream had neither the technology nor the experience to use polyester. It was risky to consider the superiority of the fibre only, when the production of fibres was tightly linked with the downstream manufacturing sector in fabrics and textiles and related dyeing and blending processes. Production in fibres could meet its promises upstream if the downstream sector could also grow in conjunction ('like flowing water'). Unfortunately, the reality of Korean textile production left a lot to be desired in the early 1960s: the downstream sector was much too small, and its level of technology much too low, for Dongyang to pursue prematurely a large-scale plant in polyester. Of the man-made fibres, nylon had the best and most realistic prospects for the Korean economy at the time. Not only did nylon meet the clothing needs in Korea, but in other developed economies, it was also being commercialized beyond apparel end-uses for industrial applications such as tyre-cord fabrics, ropes, fishnets, and the Korean entrepreneurs anticipated wider uses if they could assimilate the manufacturing technology.

Second, Japan was the influential foreign source for technology, management and capital. Given the proximity of the Japanese market, the compatibility between the firms, or Japan's own recent experience in initiating the synthetic fibre industry, it is not surprising that the Korean firms found Japanese sources or suppliers to be low-cost, low-risk choices. If Kolon or Dongyang had any intention of restraining Japanese influence, they soon found out their options were limited. Kolon's joint venture with the US engineering firm, Chemtex, in 1962 was the first of its kind in Korean corporate history, but although Chemtex was helpful in raising capital in the United States, the establishment of the first nylon plant in 1963 was beset with problems – not only from the lack of experience in Kolon's plant personnel but also Chemtex's own shortcomings in designing the plant and subsequently helping Kolon with its operation. To overcome these difficulties, Kolon sought production technology and management expertise from its long-time supplier, Toray, via a technical assistance agreement. Kolon's ties with Toray went back to its commercial days in Tokyo, and were further cemented as a joint venture in 1971, as Kolon sought expansion into industrial applications of nylon as well as polyester.

The latecomer, Dongyang, was acutely aware of path-dependency problems with Japanese firms and its market entry strategies reflect such concerns. Dongyang struggled with what they perceived as newcomer disadvantage (versus the incumbent Kolon), and this made it more circumspect in the selection of foreign suppliers and technology for the construction of the nylon filament plant, which related directly to production costs and quality of the products. Dongyang scrutinized the value of each candidate (for example, Snia Viscosa (Italy), Vickers Zimmer (Germany), BASF (Germany), Kureha (Japan), Unitika (Japan), Ubeko (Japan), and narrowed the field down to Vickers Zimmer (Germany) and Unitika (Japan). Compared to its competitors, Unitika produced a superior quality nylon, particularly in industrial applications, and Dongyang also valued the Japanese firm's accumulated know-how in production. Unitika's main drawback for Dongyang, however, was that it was a Japanese firm, in other words, potentially a competitor in export markets. Dongyang



speculated that if partnered with Unitika, the relationship would eventually create many obstacles in importing technology or expanding existing plants and facilities. The other candidate, Vickers Zimmer, was an engineering firm specializing in technology assistance. It may not have had the management experience of Unitika but boasted a higher level of technology, and Dongyang came to settle on Vickers Zimmer as its main foreign source of technology.

Third, what is of more interest is how the Korean firms took ownership of managing technology, when their options were under heavy constraints. Table 1 conforms to the general pattern reported for Korean firms during industrialization: an overwhelming preference for purchasing capital goods (with commercial loans) over technical assistance and joint ventures as means of acquiring foreign technology. But the mix and match of the three types of inflows through the 1960s-70s suggest that where necessary or advantageous, the firms employed the range of options available, and this did not result in the same outcome across firms. Kolon chose to forge long-term relationships with Chemtex and Toray, both of which were critical in its expansion to industrial uses of nylon, polyester, and eventually plant exports.

Dongyang, on the other hand, developed a divide-and-rule strategy to manage and master technology. Dongyang minimized its reliance on Vickers Zimmer by assigning to the German firm only the core part in plant design while it made great efforts to increase the involvement and participation of Dongyang in the minutest of the plans, for example, by seeking ways to allow the local personnel to absorb and learn the contents through joint participation and interaction. Dongyang did not rely on whole or turnkey purchase of the plant and technology, and the firm combed through specialist machinery makers for each and every part of the plant, asking for quotes from each maker, instead of relying on Vickers Zimmer to take care of everything. Dongyang's US\$14 million expansion project in 1974 (increasing daily output from 60 to 82 metric tonnes, inclusive of industrial applications in tyre-cords and fishnets) was also a typical case of ownership by divide-and-rule. Purchase of machinery and technical services was divided across three Japanese suppliers (with Marubeni in charge of the core polymerization and spinning stages, and Itoh C. and Murata Machinery of drawing and twisting parts), and each of these suppliers oversaw a number of 'subsuppliers worldwide'. When Dongyang sought technical assistance from Teijin (Toray's main competitor in Japan), the contract terms were very specific, for example, in the 1972 agreement for improvements in nylon manufacturing, the terms were limited to 'processes beginning with feeding nylon 6 polymers into melter, ending with draw-twisting'.

The more relevant point from table 1 may be that technical assistance and joint ventures are advantageous in initiating higher-risk ventures, whereas commercial loans funded operation of plants, purchases of petrochemical inputs and equipment, i.e., continuation or expansion of projects. In other words, technical assistance and joint ventures were sought out when Kolon and Dongyang could not gain access otherwise to technical information and expertise which could not grow from their existing stock of resources or mere capital imports.

## **Conclusion**

While it is true that the hierarchical relations with the government have created a highly constraining, mediating, and regulatory environment for the firms, the dynamic nature of technology implies that no uniform, singular or optimal path of development exists for firms, and this creates a breathing space and room for manoeuvre vis-à-vis the government. Empirical evidence for the development of technological capabilities is found mostly at the firm-level, not the government-level. Even aggregate indicators for science and technology would not reveal much about the acquisition of technological capabilities beyond initial conditions for such development. Therefore, a firm-level approach through case studies would have more value in assessing technological capabilities, so long as they are feasible, that is, given the availability of primary sources.

This paper compared the two leading nylon producers during Korea's industrialization based on the development of their technological capabilities, and the research suggests that while the technology inflows in the synthetic fibre industry conform to the established channels of transfer in Korea – that is, primarily through capital goods imports – the few recorded instances of technology assistance and joint ventures may have been more relevant in upgrading the firms' technological capabilities. For now, this is a preliminary conclusion pending the second case study into the polyester producers, two of which are Kolon and Dongyang, but it shall be of interest whether the patterns and characteristics observed for Kolon and Dongyang apply also for their ventures into polyester.

# The Portuguese Marconi Company in the worldwide communications network

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## 1. Introduction

The present PhD research is devoted to the study of the Portuguese Marconi Company's history (*Companhia Portuguesa Rádio Marconi* – CPRM) and Portuguese wireless communications' development in international context, not only observing its business and commercial development but also considering the economic, political, social and technological impact of the Marconi network in Portugal's international communications map. It therefore aims at studying the evolution of Portuguese wireless communications during the twentieth century, considering its business activity within public service as an actor of economic development. This implies an analysis of CPRM's entrepreneurial history in international context as well as key transformations at a scientific and technological level throughout that century. It is also important to identify the relevance of wireless communications on the world map and, consequently, the strategic value of the Portuguese network as well as the role of Marconi's Wireless Telegraph Company (MWTC) in articulating Portuguese and British wireless connections in their imperial territories.

This analysis offers a deeper understanding of the scientific and technical impact of the Marconi Company in Portuguese wireless communications development as it imported knowledge, technology and training. Overall, the final goal of this study is to understand CPRM's relevance in general economic activity in Portugal during the twentieth century.

The Portuguese Marconi Company was constituted on 18 July 1925, as arranged by a previous contract signed in 1922 between the Portuguese Government and Marconi's Wireless, which was a British company founded by wireless inventor Guglielmo Marconi in order to establish a world wireless network using his system.

The transition process from 'invention' to 'commercialization' concerning Marconi's world wireless network, which occurred in the first decades of the twentieth century, should also be taken into consideration for the study of the MWTC's participation in first building the Portuguese network. G. Marconi himself took part in this process of wireless introduction in Portugal, whether it was through his scientific influence, his political persuasion or his publicizing abilities.

## 2. Invention, technology and economic relations

The Portuguese economic *scenario* of the first 1900s revealed a strong (though already traditional) dependency on foreign investment in strategic sectors of activity such as telecommunications, which were largely dominated by British capital. This was the case of submarine telegraphy cables landing in Portuguese territories, most of which were the property of the 'Great Eastern' group, and of telephone networks, established since 1882 in the two main cities, Lisbon and Oporto, and operated by the Anglo-Portuguese Telephone Co. In addition, it would soon be the case of international wireless communications.

Besides the sector's own fragilities, in Portugal this was a period of political instability in which the national treasury was approaching bankruptcy and social discontentment was reinforcing protests against the monarchic regime, leading it to its fall on 5 October 1910 and to the rise of a republican regime. Among republican parties in government, several projects for economic development were then proposed, including a plan for building Portugal's wireless network, which was still at a very early stage of development and only operated for military purposes. Moreover, rivalry between wireless and cable companies was rapidly increasing as wireless was proving its potential overseas whereas cable companies were still

ruling over international communications and not willing to give their hegemony away; this competition was rather intense while disputing the Azores for cable landing *versus* wireless station building, given the islands' geographical position in the Atlantic, and it would naturally explain why it was a battling issue in the state's network priorities in early parliamentary debates.<sup>509</sup>

In 1910 there were no more than five wireless coast stations working in Portuguese territory, operated by the Eastern Telegraph Co., only communicating for short distances and among the Azores islands where cables were landed. Meanwhile, Marconi's Wireless' agents were already in field for negotiations with the Portuguese authorities for the establishment of an international and colonial network in articulation with the project for building the British 'Imperial Wireless Chain'. Geographical convergence and extension of both British Possessions and Portuguese Colonies in Africa and India were on the basis of Marconi's integrated plan to construct a worldwide profitable network.

After drawing a first proposal to the British Colonial Office in 1906, which was rejected for being 'too ambitious', and a second one in 1910, MWTC submitted a new scheme in 1912 under which stations in Egypt, Aden, India and South Africa would be operated by British officials. In July 1913 the contract was signed, although stations' completion was delayed for the postwar period.<sup>510</sup>

While negotiations with British authorities and other countries in Latin America were running, Portugal was also keeping the attention of Marconi's agents, namely Luigi Solari, an Italian navy official and Guglielmo's old friend who was working on the establishment of Italy's network. According to a plan designed in autumn 1909, and next to London, Rome, Paris, Berlin, New York, San Francisco, Tokyo, Rio de Janeiro and Buenos Aires, Marconi's worldwide network included Portugal's capital city, Lisbon and, from there, connections to the Azores islands, and colonies of Cape Verde, Angola (western Africa), Mozambique (eastern Africa) and Goa (India).<sup>511</sup>

On 22 February 1912, a provisional contract was signed for Marconi's Wireless supply and building of wireless stations in Lisbon, Azores, and Cape Verde, once the Portuguese Government had no financial conditions to assure further connections. But the contract would still be under parliament's fire as the choice for contracting a British company was considered as a diplomatic pressure for Portugal's future support of Great Britain's position in the next Wireless Telegraphy Conference that would be held the same year.<sup>512</sup> Probably, Guglielmo Marconi's visit to Lisbon in May the same year, where he informally talked about his wireless invention in a public session to businessmen and industrialists, had the means to reinforce such choice. A few days after Marconi's visit, the British press announced the Portuguese contract was assured, underlining the British Government's suggestion '(...) that it would be advisable to have a complete homogeneous circle of installations, in order to facilitate an interchange of communications between the British and Portuguese Colonies'.<sup>513</sup> The contract was finally approved on 10 July 1912, even though the national treasury would have no means to carry out its part on the investment and future war conditions would force the postponement of the deal until 1922.

### 3. A postwar deal

Wireless experiments held during the First World War, especially for military performance, had a tremendous impact on the communications industry as new improvements allowed a

<sup>509</sup> *Diário da Câmara dos Senhores Deputados*, (7 July 1908), pp.3-4.

<sup>510</sup> Daniel Headrick, (1991), pp.20 and 131.

<sup>511</sup> See Solari (1939), p.294.

<sup>512</sup> *Diário da Câmara dos Deputados*, (25 March 1912), p.3.

<sup>513</sup> "Portugal and Wireless - Agreement with Marconi Company for linking up Portuguese colonies", *The Financial News*, (28 May 1912).

more efficient application of electric waves in telephony and the introduction of short wave beam systems in long-distance communications.

In August 1922, the Portuguese government proposed<sup>514</sup> a renewal of the former contract, only this time extending its concession to Angola, Mozambique and other colonies, allowing Marconi's Wireless to operate wireless service with Portugal and her colonies and from there to other countries. Also foreseen in contract clauses was the obligation of Marconi's Wireless to constitute a Portuguese company in order to explore this communications network. On 8 November 1922, the contract was signed.<sup>515</sup> For the next years, work for station building would be interrupted due to an innovation under way that would, at a certain level, reduce operating costs and therefore enhance wireless efficiency. On 17 December 1924, MWTC's Managing Director proposed some technical changes to the Portuguese Minister of Trade and Communications, as G. Marconi had recently developed a short wave beam system which could be installed in Portugal's network even before it was opened. It was then suggested to introduce this new system in connections between Portugal and South America, Angola and Mozambique and from there to Lisbon, which would make it possible to increase daily traffic capacity with less power consumption, therefore saving on material costs. At the same time, the company's starting capital could be reduced from the original £750,000 to £300,000 and State's share of profit would naturally be enlarged.<sup>516</sup>

Moreover, this new advantage seemed to owe some of its virtues to the Portuguese territory:

Senatore Marconi's new Beam system with its great simplicity and much higher standard of efficiency also has the advantage of requiring a shorter period of time for its completion.

(...) some of the most important of Senatore Marconi's experiments, which have resulted in these revolutionary improvements, were carried out by him on his yacht 'Elettra' from Madeira, Azores and Cape Verde.<sup>517</sup>

The Managing Director then concluded that the Portuguese communications network could assume a significant role in international communications as Lisbon would be turned into '(...) one of the most important telegraph centres in Europe. It should be capable of communicating direct with North and South America.

#### 4. Portuguese Marconi Company in the world wireless network

On 18 July 1925, the Portuguese company was finally founded having MWTC's as its most important shareholder. However, while station works were being delayed due to technical changes, political instability led to parties' divisions and growing criticism against the right-wing Democratic Party in leadership was slowly restricting government's action. On 28 May 1926, a military *coup d'état* put an end to this sixteen-year Republic and deployed a Dictatorship that would be progressively consolidated in a fascist-type regime, the 'New State'. This same year, on 15 December, CPRM's first stations were opened, connecting Lisbon to the Azores, Madeira, England and North America. During 1927, new circuits were opened with European countries, South America and the colonies. The Portuguese network was established next to the Imperial Wireless Chain, as British wireless connections were opened in 1926 and Marconi's Companies were already operating stations in Argentina, Brazil, USA and Japan.<sup>518</sup>

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<sup>514</sup> *Diário da Câmara dos Deputados*, 134, (16 August 1922), p.4.

<sup>515</sup> *Diário do Governo*, II Série, 264, (16 Nov. 1922).

<sup>516</sup> *Arquivo da Companhia Portuguesa Rádio Marconi –Concession of Companhia Portuguesa Rádio Marconi*. Jul. 1912 Jan. 1973, (5). Copy of letter n.139, of 17 December 1924, sent by MWTC's Managing Director of the Portuguese Minister of Trade and Communications.

<sup>517</sup> *Ibid.*

<sup>518</sup> See Romano Volta "Un modello di moderna visione industriale" in Falciasacca and Valotti (2003), p.36.



However, and even though the company set up an advertising campaign stressing its lower cost and faster service in comparison with other communication means, there would still be serious obstacles to face, namely towards cable companies and state's lack of support. Foremost, in 1929, when the British Government authorized the constitution of Imperial and International Communications, Ltd. to hold cable and wireless companies (changing its designation to Cable & Wireless Ltd in 1934), Portuguese Marconi was somehow affected once Marconi's Wireless was amalgamated in this new holding company.

On one hand, rates agreements could benefit CPRM's traffic but, on the other, it could also mean traffic conditioning to cable companies' interests. In February 1929, the CPRM's Managing Director, Sidney John Slingo, travelled to London in order to take part in the agreement meetings and define future communications service in Portugal.<sup>519</sup> However, and until the late 30s, wireless circuits would still be a second option even for colonial traffic until the government's policy for telecommunications slowly changed in favour of the Portuguese company. Although, politically, the New State was defined by its autarchic and nationalist principles, inviting CPRM to assure communications over cable companies in colonial and international network, the company would still have to negotiate its share in traffic with Cable and Wireless. Moreover, Portuguese Marconi frequently complained against traffic diversion through the Ministry of Navy's stations, which represented a significant loss in its commercial service, another issue that was resolved only 1941, when commercial traffic exclusivity was guaranteed to CPRM. This first decade of 'traffic blocking' had severely affected CPRM's revenue, only presenting its first positive profit results in 1937, when assuring European traffic during the Spanish Civil War.

In the late 30s, the company's growth was finally demonstrating positive results increasing profit to 685,638.87 PTE<sup>520</sup> in 1937, compared to a loss in revenue of PTE. 351,117.08 in the previous year.<sup>521</sup> In this same year, the Board of Directors of the company was assumed by a former Director of the Portuguese Telegraph and Post Administration, Alfredo Vaz Pinto who, in many ways, represented a State's political control over CPRM's activity.

During the Second World War, despite an increasing lack of equipment supplies, company's traffic revenues showed a rather positive result, which can be explained by the articulation with cable service (which was frequently limited by war conditions), the fixation of a single rate for colonial traffic and the introduction of radiotelephony service. In 1940-41, for instance, traffic revenue increased 42.5 per cent, although service expenditures were also 16 per cent higher than before. As shown by table 1, this period corresponded to constant growth in net profit:

Table 1: *CPRM's net profits during the Second World War (in PTE)*

1939	1940	1941	1942	1943	1944	1945
5,412,799.21	8,012,319.45	16,234,975.66	22,096,430.47	22,869,757.99	29,834,242.64	29,996,134.10

Source: CPRM Reports and Accounts of the years 1939 to 1945.

The end of war in Europe found the company already prepared with its postwar programme. Albeit, the Portuguese PTA,<sup>522</sup> expected to concentrate telecommunications service in one single company which should be able to operate national, colonial and international communications, submitting it to public administration. This plan was never achieved and CPRM would enter its 'golden years' along with the western economy, where fast changes in

<sup>519</sup> Companhia Portuguesa Rádio Marconi – *Actas das Reuniões do Conselho de Administração*, 66, (28 February 1929).

<sup>520</sup> PTE = Portuguese *Escudo*. In 1940 Exchange rate was 100 PTE= 1 £ and it was maintained at this currency until 1948.

<sup>521</sup> Companhia Portuguesa Rádio Marconi, (1938) p.3.

<sup>522</sup> Arquivo da Fundação Portuguesa das Comunicações – “Marconi e Cabos Submarinos, 1937-49”, Memorandum concerning the Portuguese Telecommunications Network, 11 February 1948.



technological development and new communications solutions would allow the company to expand its core business.

Although the immediate postwar years affected general traffic revenue (especially in 1948 and 1949, due to the international financial crisis), and taxes on extraordinary war profits were quite demanding, CPRM was already carrying out its plant renewal programme with a provision standing at almost 30,000 PTE (£3,000) in 1946 and 41,000 in 1947, establishing new colonial and international circuits and investing in modern equipment.<sup>523</sup> During the 50s, company's lead to State's accusations against its 'excessive profits' and forced it to reduce telegraphic rates to the colonies.<sup>524</sup> This decade was actually remarkable for the company's general traffic increase, as the introduction of Telex service and the execution of plant renewal programmes had a considerable impact in its revenues.

Meanwhile, communications in national territory were also under a modernization programme, following up with international development in research, technical improvement and new systems development. In global network, Portugal looked for other partnerships besides British communication companies, namely the USA, France, Italy and Germany. In 1956, when the first telephone submarine cable opened to transatlantic service, economic relations among companies were about to be altered as the consortia era was approaching.

From this point on, CPRM assumed another share of the telecommunications market in Portugal, being the only company in condition to support large investments in new systems. So, contract renewal was signed in 1966, extending the company's rights in order to operate Portuguese international communications via satellite and to take part in telephone cables consortia such as SAT-1 and UK/PORT systems. Through CPRM, doors were opened for Portugal's modern telecommunications network.

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<sup>523</sup> According to the Company's Reports and Accounts of the years 1945 to 1950.

<sup>524</sup> Portaria n.º 13 759, *Diário do Governo*, n 254, I Série, (6 December 1951).

# The Building Society promise: building societies and home ownership in England c.1880-1913<sup>525</sup>

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These societies have taught a healthy frugality [its members] never else would have known; and enabled many an industrious son to take to his home his poor old father – who expected and dreaded to die in the workhouse – and set him down to smoke his pipe in the sunshine in the garden of which the land and the house belonged to his child.

George Jacob Holyoake (1879)<sup>526</sup>

## 1. Introduction

The recent proliferation of microfinance institutions in the Third World has generated much interest in the history of microfinance, yet relatively little attention to date has been given to what were the most significant financial mutuals in Great Britain during the nineteenth and twentieth centuries, and the pre-cursor for subsequent microfinance initiatives around the world: the building societies.

The importance of the building societies to British economic history stems from both their economic and social significance as a movement. The building societies were part of a larger phenomenon of institutional self-help during the nineteenth century, growing from humble beginnings to become the dominant player in the British mortgage market by the interwar period. The promoters of the building societies projected their societies as powerful tools for social reform, providing an encouragement for thrift among the industrious classes and facilitating widespread property ownership through house mortgage lending. Yet, modern historians have cast doubt on this caricature of the building societies as a benevolent working-class movement. For example, Enid Gaudie stated that the formal and professional business structure of the permanent building society alienated working-class people from joining them, and ‘rather threw the building societies increasingly under the control of middle-class investors’.<sup>527</sup> Mark Swenarton and Sandra Taylor concluded that home ownership was largely unattainable by people on working-class incomes, and that they were at any rate excluded from housing finance because of the ‘exclusive status requirements’ of the building societies.<sup>528</sup> In short, building societies could not, and would not, serve borrowers of modest means.

Identifying the class characteristics of those assisted by building societies to become property owners has implications for several debates. One of these is the extent to which private collective action can resolve the effects of market failure. The ‘housing problem’ was one of the most serious issues in Britain before the First World War, affecting not only the ‘casually employed’ or poorer labourers, but ‘thousands of skilled artisans’, who, ‘despite regular employment, sober habits and adherence to the precepts of Smilesian self-help, were forced by the housing shortage to live, more often than not, in just one room in wretchedly unsanitary surroundings’.<sup>529</sup> Eventually, government intervention was seen as necessary to resolve the problem, but that it was delayed for so long was in large part due to the unshakeable faith of contemporaries in Smilesian self-help to resolve such problems. For their part, building societies did little to temper these beliefs, and actively resisted government

<sup>525</sup> A more substantive version of this paper is available online as a University of Oxford Discussion Paper in Economic and Social History: <http://www.nuffield.ox.ac.uk/economics/History/Paper72/72samy.pdf>.

<sup>526</sup> *Building Societies Gazette* (BSG) (1879), p.55.

<sup>527</sup> Gaudie (1974), pp.206-7.

<sup>528</sup> Swenarton and Taylor (1985), p.391.

<sup>529</sup> Wohl in Chapman (1971), p.22.

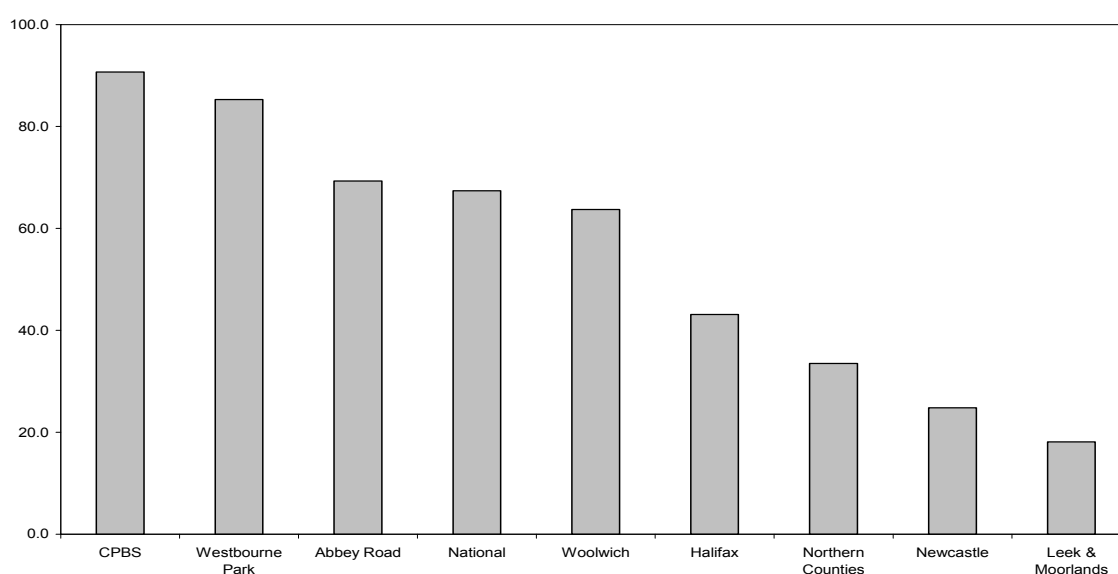
intervention by claiming that they were already supplying decent housing for working-class households and helping many of them to become home owners.<sup>530</sup> Given the low level of owner occupation in prewar Britain, the question of whether the building societies helped (or could help) working-class borrowers become home owners has further implications for our understanding of the barriers to home ownership in Britain, and the ability of private institutions to improve the distribution of housing (and wealth) among the population.

## 2. Data and methods

The question at the heart of this paper therefore is the extent to which building societies provided loans to working-class borrowers for home ownership before the First World War. The first figure below shows for several of the largest building societies in the movement, the percentage of their loan portfolios made up of ‘small’ loans (i.e. loans less than £500 in value). The wide dispersion of societies across this spectrum (from 18 per cent of loans in the Leek & Moorlands [now Britannia] Building Society to 91 per cent in the Co-operative Permanent [now Nationwide] Building Society) shows from the outset that different building societies were catering for different kinds of people. The question of interest then is who were at the lower end of the movement’s social spectrum, and how can we explain their representation in particular building societies. This is treated here in an empirical manner by analysing the lending records of a building society which might be expected to have a more modest clientele, namely, one with a high proportion of small loans. The case study chosen for this purpose was the Co-operative Permanent Building Society (hereafter CPBS), established in 1884 as an offshoot of the English cooperative movement to help ‘as many working men and women as possible ... own their own homes’.<sup>531</sup>

Ample records exist for this and many other societies to study the class profiles of their members. In this study, a database of borrowers and loans was constructed from the mortgage registers and minute books of the CPBS, and then linked to the British censuses of 1891 and 1901 to obtain information about the borrowers’ occupations and the structure of their households. Due to the large number of borrowers in the society, a sample of 888 borrowers between 1884 and 1913 was taken, of which 662 (75 per cent) were successfully matched to the census. Altogether, these primary sources help to investigate the socioeconomic profile of the borrowers more closely.

Figure 1: *Percentage of loans less than £500 by selected building societies*<sup>532</sup>



<sup>530</sup> Cleary (1965), p.165.

<sup>531</sup> Mansbridge (1934), p.34.

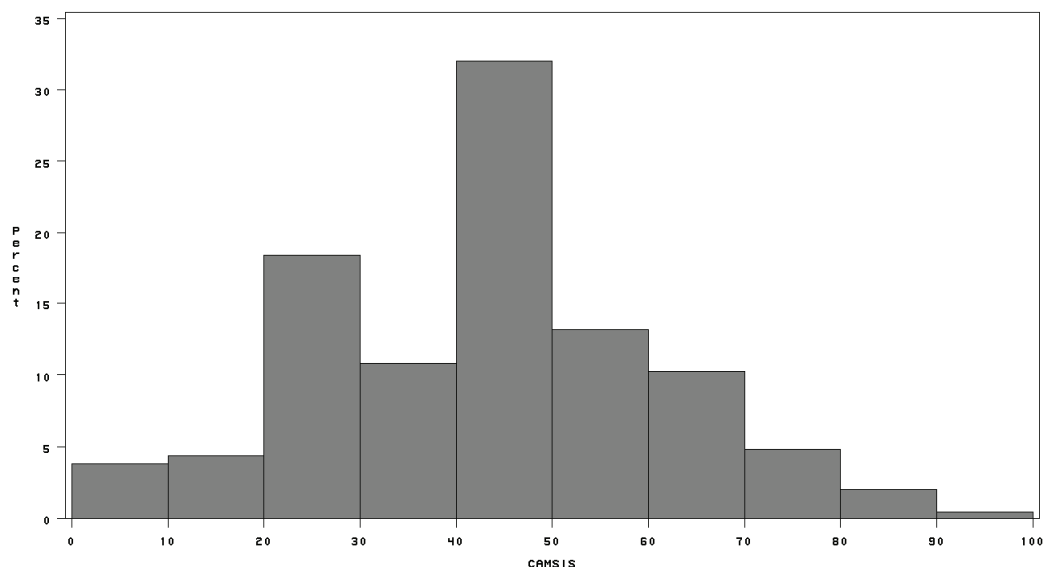
<sup>532</sup> Source: Chief Registrar of Friendly Societies (1913), p.xii.

### 3. Findings

To whom then did the Co-operative Permanent Building Society actually advance loans for the purchase of house property? The linkage of borrowers to the census reveals that the overwhelming majority were drawn from the working classes. To help show this, Cambridge Social Interaction and Stratification (CAMSIS) scores, a social prestige measure of occupations, were used to chart the distribution of the borrowers according to their occupations. CAMSIS rates occupations on a scale of 1 to 99, with low scores given to occupations with low social prestige (such as labourers, factory workers, farm hands etc.) and higher scores given to more prestigious occupations (clergymen, lawyers, doctors). A table of the CAMSIS scores for different occupations is reproduced in the appendix.

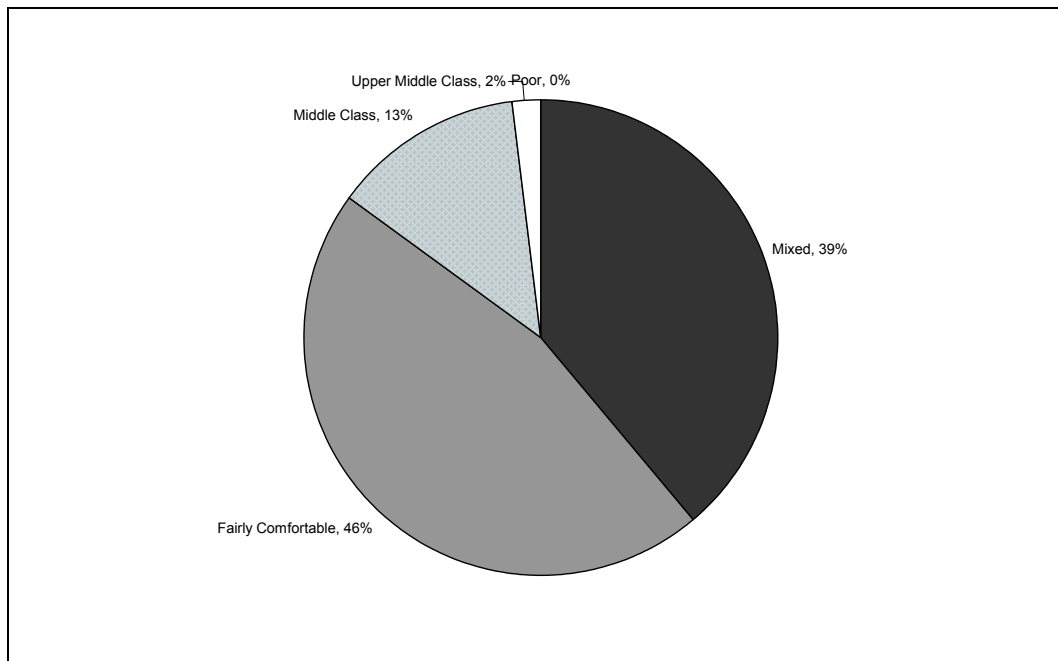
Figure 2 presents a histogram of the borrowers' CAMSIS scores. What is most striking about the graph is the large representation of people in both skilled and unskilled working-class occupations (for whom home ownership is usually thought to have been beyond reach), and the low representation of people in those classes commonly believed to have been the only ones capable of affording home ownership. To wit, a third of the borrowers had CAMSIS scores of 31 or less, where the highest ranked of these occupations were bricklayers, compared to only 9 per cent of borrowers with scores greater than those of clerks (i.e. scores greater than 66). Clerks themselves made up 7 per cent of all borrowers, leaving 84 per cent of borrowers with lower CAMSIS scores than that of clerks. Among them were 'general labourers', 'coal hewers (below ground)', 'dairymen', 'wharf dock labourers', 'blacksmiths' and 'gardeners', i.e. a mix of both skilled and unskilled workers.

Figure 2: *Distribution of borrowers' CAMSIS scores*



Such a profile of the borrowers is reinforced by the working-class nature of the neighbourhoods in which their properties were mortgaged. From the census linkage, approximately 65 per cent of the borrowers lived on streets where all of their neighbours were themselves classified as 'workers', and engaged in occupations similar to those of the borrowers. Further, for those properties mortgaged in London, linkage to Booth's poverty map shows that few were located on middle-class or upper middle-class streets, rather, 85 per cent were on streets classified as 'Mixed' or 'Fairly Comfortable' in socioeconomic status (see figure 3).<sup>533</sup>

<sup>533</sup> 'Fairly comfortable' streets were those described with 'people on fairly-paid and stable working-class incomes,' while those on 'mixed' streets included the same people plus 'poor people earning low and unstable incomes'.

Figure 3: *Percentage of properties in London per Booth's poverty map categories*

The high representation of both skilled and unskilled working-class borrowers begs the question of how such people were able to afford, and be granted, loans for home ownership given the low level of working-class incomes during this period. Further analysis into this question reveals that three factors were especially important in this regard:

1. the household structure of the borrowers, which enabled them to use secondary incomes to supplement the income of the principal earner;
2. the design of the loan contracts, especially in providing loans over long repayment periods at reasonable rates of interest, thus minimizing the level of monthly repayments required; and most importantly
3. the unique agency network of the CPBS which enabled it to effectively screen, monitor and incentivise its borrowers to minimize defaults.

### 3.1 Household characteristics

The census returns of the borrowers show that the majority of them were not reliant on the income of a single breadwinner to repay their loans. Over half of the borrowers (59 per cent) used either one or a combination of secondary incomes derived from working family members (43 per cent of all borrowers),<sup>534</sup> and/or from subletting the mortgaged property or accepting rent-paying boarders in their houses (24 per cent).<sup>535</sup> In fact, almost a third (32 per cent) of the borrowing households had two or more extra streams of income to supplement the income of the principal wage earner.

### 3.2 Design of loan contracts

The interest rates charged and the long repayment periods allowed on the loans were particularly important in making home loans affordable (even attractive) to a working-class clientele. The interest rates charged by the society on its loans fluctuated only marginally between 5 and 6 per cent between 1884 and 1913,<sup>536</sup> a level that was commensurate with other

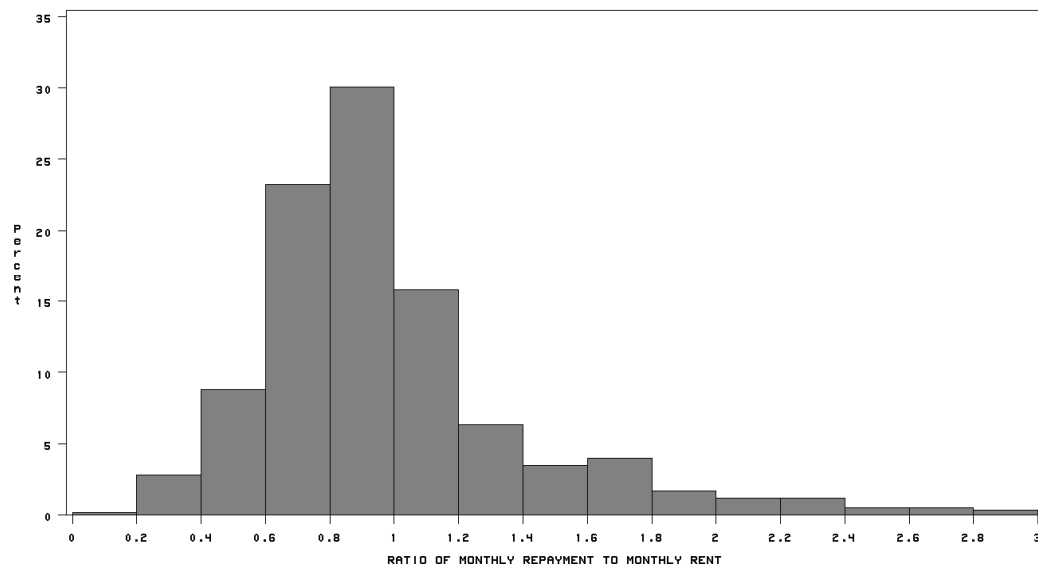
<sup>534</sup> The participation of working children in household wealth accumulation has been well documented in the social history literature for Britain (e.g. Thompson (1988), p.82).

<sup>535</sup> The practice of subletting was 'typical' among working-class families to minimize the rent paid by the principal tenant, as described by Mrs Pember Reeves in 1913 (quoted in Burnett (1978), p.147).

<sup>536</sup> Mansbridge (1934), p.64.

lenders of the time.<sup>537</sup> But more important still were the long loan terms over which repayments were spread, significantly reducing the monthly outlay on the loans. While there are no statistics relating to the duration of mortgages before the First World War, the CPBS was unique among building societies in terms of the high proportion of loans it offered on long loan terms. To wit, over half of the mortgages (54 per cent) were for repayment over 20 years or longer, with over a quarter being for 25-year terms. In contrast, most other societies offered 15-year repayment terms at most, with some occasionally lending over 18-year terms.<sup>538</sup> The reduction in the monthly repayments involved on a 25-year loan versus a 15-year loan was not trivial, amounting to more than a quarter of the monthly repayment on a 15-year loan. More significantly, this had the effect of bringing the monthly mortgage repayments in line with the monthly rents being paid on the properties. In fact, the majority of loans (63 per cent) involved monthly repayments that were lower than the monthly rents being paid for the properties (see figure 4), giving prospective borrowers a strong incentive to take out mortgages to own the homes they would otherwise rent at a higher cost.

Figure 4: *Histogram of monthly repayments to monthly rents*



### 3.3 An innovative 'information machine': the agency network

The agents used by the CPBS gave it a key advantage in overcoming the information asymmetries that give rise to adverse selection and moral hazard in lending. Agents were commonly used by the larger building societies to attract investors and to find suitable borrowers for house purchase outside their native towns, though what was distinctive about the agency network set up by the CPBS was who it appointed as its agents. As stated earlier, the CPBS was an offshoot of the cooperative movement, a large body of retail grocery stores set up throughout England and Wales to provide a fairer deal to working-class consumers. It was the local cooperative retail stores that the CPBS used as its agencies (see figure 5), an arrangement regarded by several of the society's biographers to have been the chief factor behind its success.<sup>539</sup>

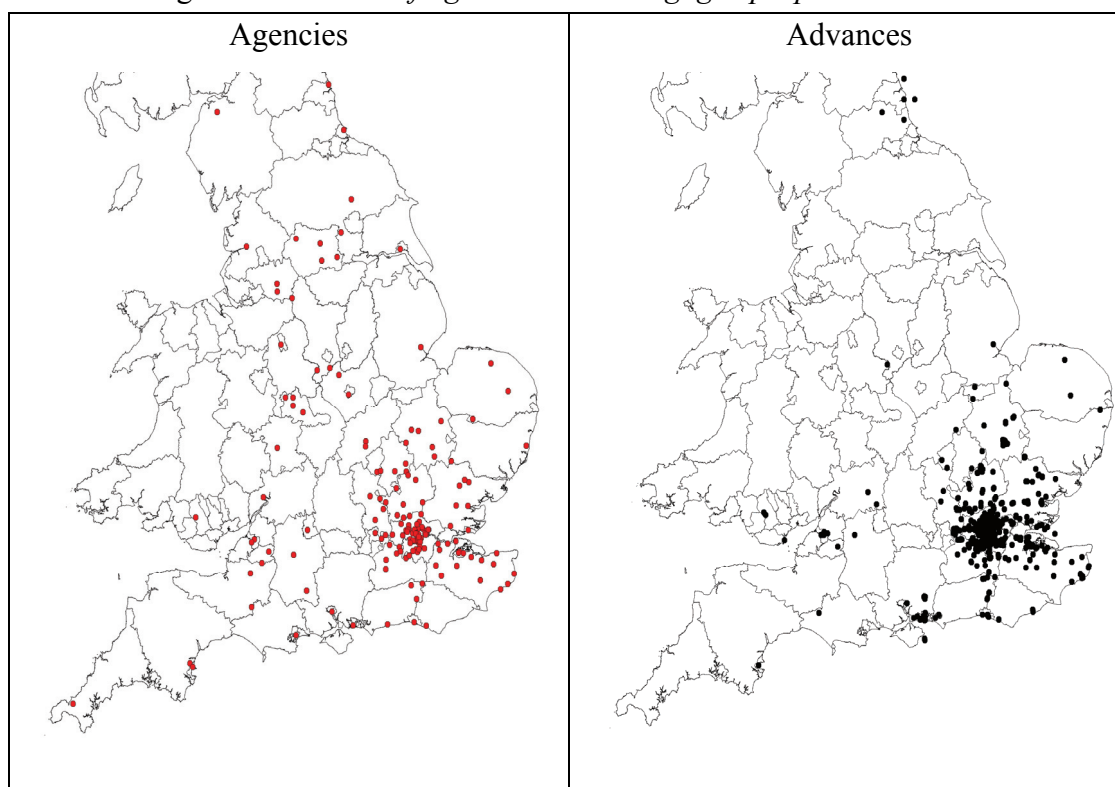
<sup>537</sup> Such as solicitors (the dominant providers of mortgage credit in the prewar period) who made their funds available at 5 to 5.5 per cent (see Offer (1981), p.144).

<sup>538</sup> On the basis of other case studies done by the author.

<sup>539</sup> e.g. Mansbridge (1934), pp.111-2.



Figure 5: Location of agencies and mortgaged properties in 1904



The local cooperative retail stores are important here as they were highly efficient ‘information machines’ for the society about its members. As George Jacob Holyoake wrote in 1879 about the ‘social life in the store’:

as the majority of all cooperators are themselves or their families in daily intercourse with the store, [the store] is **the place where useful information can be diffused** [emphasis added], and the greatest number of impressions, good or evil, permanently given.<sup>540</sup>

The store managers therefore had a wealth of information about their customers from their daily and personal interactions with them. They would have known their occupations, their family sizes, how many people in their families were earning incomes, their spending and savings habits, and their character in terms of their trustworthiness with repaying the loan. In short, the stores had a sufficient set of information to judge their customers’ suitability for a building society loan.

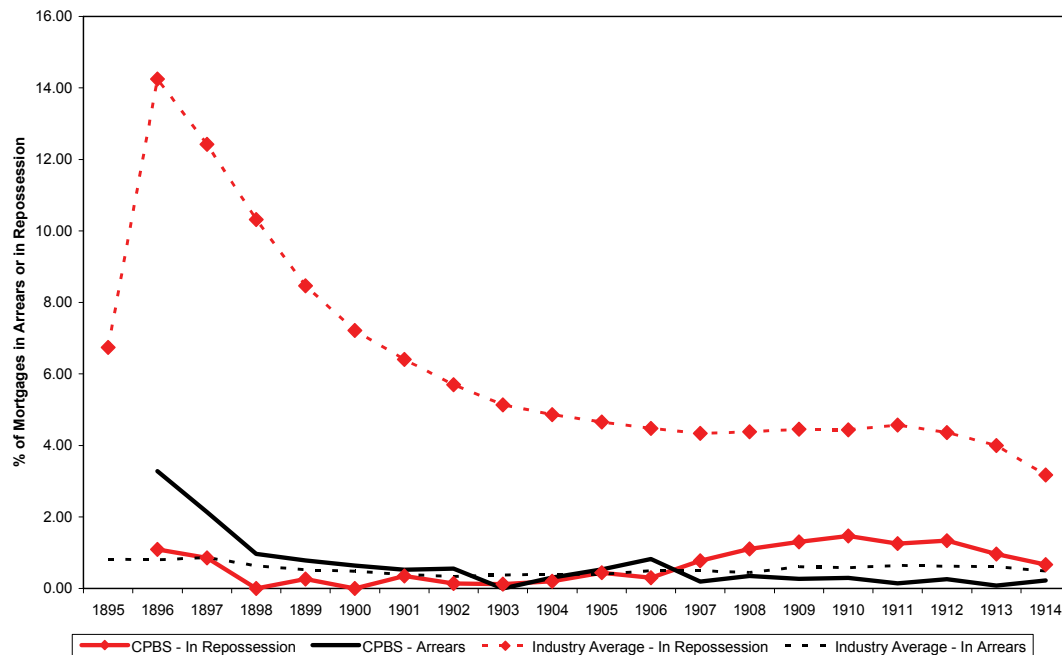
The agency network also helped to secure the borrowers’ commitment by taking advantage of the pre-existing bonds between the borrower and the agent. The close relationship between them meant that the costs to the borrower of defaulting on the loan were not isolated to a property being repossessed or earning the rebuke of a distant band of middle-class businessmen sitting in the board-room of a far-away building society. To default on the loan had more personal consequences, such as losing the respect of the agent and subsequent alienation from the community store and its membership.

The effectiveness of this system can ultimately be seen in the lower incidence of arrears and repossessions in the society compared to the industry average (figure 6). The rate of repossessions by the CPBS was especially lower than the norm, showing not only that the arrears problems in the CPBS were less serious than in other building societies, but also that

<sup>540</sup> Holyoake (1879), p.119.

the CPBS had a stronger commitment to nurse its borrowers through their difficulties, a virtue no doubt inherited from its cooperative roots.

Figure6: *Arrears and repossessions in the CPBS vs. the industry*



#### 4. Conclusion

The question considered in this paper is how far down the social ladder did building societies reach to lift people to the status of home owners. While it is clear that there was great heterogeneity in the movement, what is significant about these findings is that there was a building society which did provide housing finance to working-class people, and that home ownership was not therefore beyond the reach of even unskilled working-class households. Then as now, borrowers overcame the binding financial constraints of low and variable incomes by generating secondary incomes from working spouses or children, or from opening their doors to rent-paying boarders or sub-tenants. Yet despite this ability to increase their capacity to repay a loan, what these households also needed was a financial institution that would lend to them: a society with sufficient information to acknowledge their credit worthiness and to provide them with loans on easy and reasonable repayment terms. In the CPBS, they found such an institution, an ‘institutional innovation’ that used an extensive network of cooperative retail stores to successfully manage the risks inherent in lending to lower-income groups. By careful selection and management of their mortgage business, the self-described ‘ardent social reformers’ running the society honoured their promise to see as many working men and women as possible own their own homes, and in so doing helped thousands of them to attain home ownership at a time when the dream of home ownership was largely considered to be beyond the grasp of working-class people.

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### Appendix: CAMSIS table of occupations 1867-1913

Male Occupation	CAMSIS	Female Occupation	CAMSIS
CLERGY	99	PROFESSIONALS	99
LAWYERS	96	FARMERS	98
DOCTORS	94	FARMERS WIVES	92
OFFICERS	93	INDEPENDENTS	86
INDEPENDENTS	87	GOVERNESSES	85
LARGE FARMERS	86	MUSIC TEACHERS	83
TRADE ELITE	84	CLERKS	82
MANUFACTURERS	82	TEACHERS	81
MANAGERS/ADMINISTRATORS	80	MILLINERS	75
MEDIUM-LARGE FARMERS	79	SHOPS	71
TEACHERS	79	OTHER CRAFTS	68
GOVERNMENT	78	NURSES	67
PROFESSIONALS	77	BARMAIDS	67
CASH CLERKS	76	WAITRESSES	65
DEALERS	76	INNKEEPERS	65
FARMERS	73	NON-FOOD SHOPKEEPERS	62
REPRESENTATIVES	71	DEALERS	62
		FOOD SHOPKEEPERS	58

SHIPS OFFICERS	71	BOOK BINDERS	56
BUILDERS	68	TAILORESSES	54
EMPLOYERS	67	CHILDRENS NURSES	52
CLERKS	66	HOUSEKEEPERS	51
NON-FOOD SHOPKEEPERS	66	MILLERS/FOOD WORKERS	51
SMALL EMPLOYERS	64	DRESSMAKERS	51
CLOCKMAKERS	60	SEAMSTRESSES	51
FOOD SHOPKEEPERS	58	LADIES MAIDS	48
BUTCHERS	58	GARMENT TRADES	43
CABINET MAKERS	58	FACTORY HANDS (NOT TEXTILE)	40
ENGINEERS	54	HOUSEMAIDS	39
MANAGERS (PRODUCTION)	54	COOKS	36
BAKERS	54	SPINNERS	36
TRANSPORT OWNERS	53	MAIDS	33
BREWERS	51	WEAVERS	32
SMALL-MEDIUM FARMERS	50	TEXTILE FINISHERS	30
WAREHOUSEMEN	50	COMBERS	29
SMALL FARMERS	50	WINDERS/PIERCERS	28
INNKEEPERS	50	KNITTERS ETC.	28
COOPERS	50	TEXTILE WORKERS	27
PRINTERS	49	FARM WORKERS	27
OTHER CRAFTSMEN	49	SERVANTS	26
JOINERS	48	PARLOURMAIDS	25
HAT/GLOVE MAKERS	48	SHOE/LEATHER WORKERS	24
TAILORS	48	LAUNDRYWOMEN	21
SOLDIERS/SAILORS	48	METAL TRADES	21
PAINTERS	47	FARM SERVANTS	21
MILLERS	46	MISCELLANEOUS	
FARM BAILIFFS	46	UNSKILLED	19
PERSONAL SERVICE WORKERS	46	LABOURERS	14
PLUMBERS	45	LACE WORKERS	8
CARPENTERS	44	AGRICULTURAL	
SHIPWRIGHTS	44	LABOURERS	5
WOOD CRAFTSMEN	43	STRAW PLAITERS	1
TINPLATE WORKERS	43		
COACHMEN	42		
SECURITY WORKERS	42		
TEXTILE FINISHERS	41		
LEATHER WORKERS	40		
MECHANICS	39		
CUTLERS	38		
SEAMEN	38		
KNITTERS	38		
SPINNERS/ROPE MAKERS	35		
FISHERMEN	34		
WATERMEN	34		
BUILDING TRADES WORKERS	33		
COMBERS	33		
CURRIERS/TANNERS	32		
GARDENERS	32		
MASONS	31		
RAILWAY WORKERS	30		

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ENGINE DRIVERS	30
SHOEMAKERS	29
PAPER/CHEMICALS WORKERS	29
BRICKLAYERS	27
SAWYERS	27
MISCELLANEOUS NON-SKILLED WORKERS	27
WEAVERS	25
SMITHS	25
CARTERS	24
COLLIERS	23
ANIMAL WORKERS	22
COAL MINERS	22
MOULDERS	21
NAILERS	18
FARMERS SONS	16
METAL WORKERS	14
FACTORY HANDS	12
FARM/FOREST WORKERS	11
OTHER TRANSPORT WORKERS	11
MINERS/QUARRIERS	11
CERAMICS/GLASS WORKERS	6
LABOURERS	1

# Office rents in the City of London: 1867-1959

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The City of London is home to one of the largest and most established office markets in the world, the operation of which contributes significantly to the functioning of this location as a financial and commercial centre. Hence, its operation and performance over recent decades has been extensively studied. However, in contrast to other aspects of the City and its economy, knowledge about the history of its office market is limited. Several studies have explored physical and architectural aspects, particularly in relation to the emergence of the purpose built office block upon the City's landscape and the gradual displacement of other, competing land uses.<sup>541</sup> Yet few have sought to more explicitly consider rents or prices within a formal demand and supply framework, an omission that this research seeks to rectify.

An obstacle to such analysis is the lack of price or rent series for years prior to 1960. Scott (1996) provides data on investment yields and returns for UK commercial property from 1920, but this data is national in coverage and not disaggregated for specific locations, though he does give a descriptive account of the City office market prior to 1914. Apart from this, the only other known historical series for UK offices are those presented by Turvey (1998). He tracks rents in the City office market over the period 1867-1910 and levels of vacancy for a shorter period within that time frame, relating movements in the two series to one another. Thus, this study is of particular interest, but there remains a considerable time gap between it and other office rent evidence.

Hence, primary data collection was undertaken for this research, resulting in an independently derived rent index spanning 1867-1959. This paper will set out the method used to construct this series and then outline the sources from which a database of rents was assembled. After this, the nominal and real growth trends shown by the index will be presented and placed in the context of broader economic conditions over the periods concerned. A final section then briefly discusses the quantitative modelling planned for the final stages of the project.

## Index construction method

Tracking the prices or rents of commercial properties is not a straightforward process. Buildings are heterogeneous and they may also vary in quality over time, making the use of average price measures unreliable. Meanwhile, property transactions are infrequent and irregularly spaced in time. To overcome these difficulties, it is common to use either valuation based indices or transaction based techniques that can control for quality and transaction timing. In this case, in the absence of regular and frequent rental valuations, the latter approach has been adopted.

The specific method used is repeat measures regression. This was proposed by Bailey, Muth and Nourse (1963) and has since been widely used to model both real estate prices and rents.<sup>542</sup> One of its primary advantages is its parsimony in specification and data requirements, particularly when compared with hedonic regression. The idea behind the method is to observe changes in rents for space that has let more than once. If no alterations are made to the space or the form of lease between lettings, then that rent change should purely be a function of time plus a random error component, with no quality distortion. Thus, the movement in rents over time can be estimated as follows:

<sup>541</sup> For instance, Keene (1997), Summerson (1990).

<sup>542</sup> Recent applications to the creation of long run historical series include Eichholtz (1997), Eichholtz & Theebe (2006), and Wheaton et al. (2007), in addition to Turvey (1998).



$$\ln(R_2 / R_1) = \sum \beta_t D_{t,i} + \varepsilon_i \quad (1)$$

where  $R_1$  and  $R_2$  are yearly rents for the first and second lettings of office space, respectively, and  $D_t$  are dummy variables that take the value of -1 for the period where the first letting occurs, +1 where the second letting occurs, and 0 for any other period in each case. The coefficients on these dummies then capture the levels of a log rent index.

However, problems with this specification were identified by Shiller (1991) and by Goetzmann (1992). First, it can only estimate an equal-weighted index. Second, the logarithmic formulation of the dependent variable leads to rent movements being underestimated. Third, OLS estimation of the model disregards potential sources of heteroskedasticity and correlation between errors, the latter arising where units are let more than twice and have rents contributing to more than one pair in the panel.

For these reasons, Shiller (1991) proposed a modified version of the repeat measures model, which is utilized here. The dependent variable represents the first time period and takes the value of zero except where the first letting occurs within that period, in which case the rent figure is used instead. The independent variables then represent subsequent periods and are populated by rents where lettings occur and by zeros otherwise. These rents take a negative sign in the case of the first transaction and a positive sign in the case of the second deal. Index levels are derived by taking the reciprocal of the coefficient for each period.<sup>543</sup>

This formulation yields a value weighted index from which an arithmetic average of price change in each period can be computed. Here, it is also estimated using feasible generalised least squares owing to the known presence of frequently re-let units in the dataset.

The modified model does not address all criticisms of the repeat measures method. For instance, in sale price studies, the extent to which repeatedly traded properties are representative has been questioned. Another issue is how successfully the method controls for quality. Physical changes between lettings may be spotted with the help of supporting data on the assets in question, but, even where there are no alterations, buildings inevitably age and this introduces an element of quality change that cannot be eradicated.

Therefore, the computed rent index will include depreciation. However, the significance of this depends on factors such as maintenance by owners, the pace of technical change and the rate of stock replacement. In the case of London's offices, Ball (1996) notes that, between the Edwardian building boom and the early 1950s, rebuilding was limited and the adoption of new construction technologies was slow. Meanwhile, the properties contributing to this study were not only maintained, but also periodically refurbished in order to keep them competitive.

## Data sources

The dataset was compiled from the rent rolls, deed books and lease registers of five property investment companies whose archives are held at the Guildhall Library in London. Some of these companies invested predominantly in offices whilst others owned a mixture of office, retail and residential assets, but, in all cases, only their office holdings in the City of London were studied. The names of the companies, together with the number of transactions obtained from their records, are listed in table 1.

The table shows that over 9,000 separate transactions were recorded, with each entry consisting of an annual rental amount, the name of the tenant, the date on which the lease either commenced or was signed, and the office number or a description of the space being let. From this data, over 5,500 rental pairs were formed. Other information was gathered to ensure that pairs were not formed across events such as major refurbishments. Although the total number of pairs appears large, they are not evenly distributed through time, with most

<sup>543</sup> The use of rents in the regression matrix does raise an errors-in-variables issue, but this can be tackled by the use of dummy variables as instrumental variables – see Shiller (1991: p.115).

rent evidence relating to the period 1906-60.<sup>544</sup> However, sufficient data was available to estimate the rent index at an annual frequency from 1867.

Table 1: *Data sources and number of transactions*<sup>545</sup>

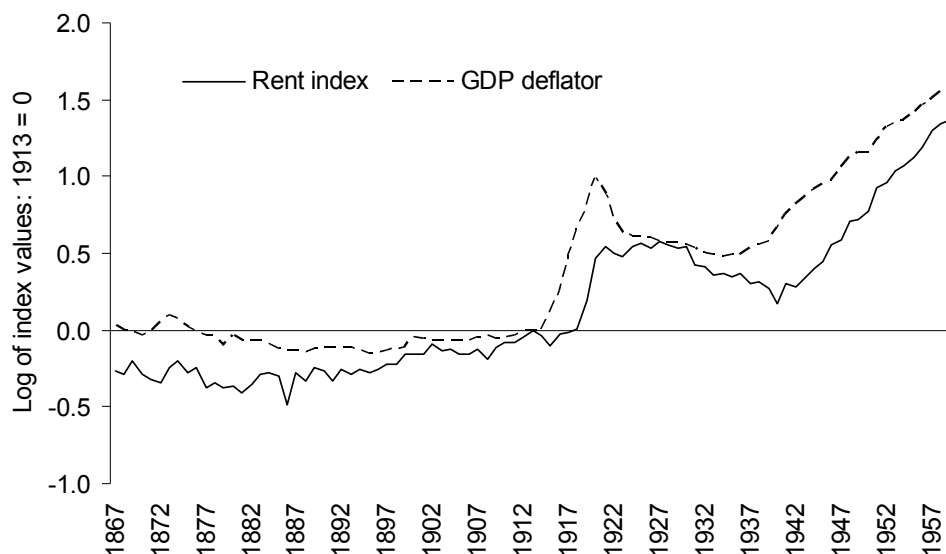
Companies studied	Documents	No. of assets	No. of lettings	No. of pairs
City & West End Properties	Ms 14,424 – Ms 14,425	24	4,894	3,220
Consolidated London Properties	Ms 14,459	12	1,799	1,064
Gresham House Estate Company	Ms 19,599 – Ms 19,602	6	1,444	729
City Offices Company	Ms 24,190, Ms 24,192	8	962	498
Broad Street Estates	Ms 19,610	1	42	21
Totals		51	9,141	5,532

It is important to stress that individual transactions were needed for this research rather than just totals of the rent received by each company in each year. In any year, this latter figure would reflect both rents on new leases and rents prevailing on existing contracts, which would have been agreed in different (earlier) market conditions.<sup>546</sup> Furthermore, total rent received is also influenced by the extent to which properties were vacant. Thus, it does not reflect the market rent level at different points in time. This explains the use of individual transactions to estimate the series presented below.

### Index results

The nominal values of the constructed rent index are shown in figure 1. Logarithms of the index values have been charted to provide a clearer representation of growth rates over time. Meanwhile, real values of the rent index are shown in figure 2. To convert the index to real terms, a GDP deflator was calculated from expenditure side estimates of GDP at factor cost presented in Mitchell (1988). Although more recent work has produced balanced estimates of GDP for certain sub-periods, this data provides a consistent deflator for the whole period spanned by the rent series.

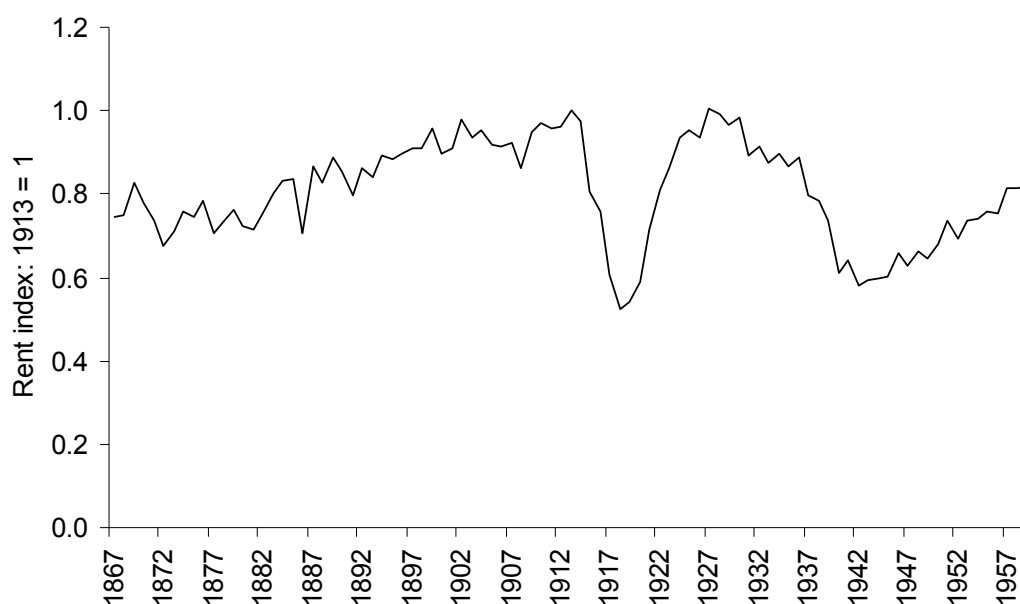
Figure 1: *Rent index and GDP deflator, 1867-1959 – converted to log values*



<sup>544</sup> More information on the temporal and spatial distribution of the data is given in Devaney (2007).

<sup>545</sup> References are the manuscript numbers given in the Guildhall Library catalogue.

<sup>546</sup> Throughout the period studied, most office lease contracts were short (between 1 and 10 years), but rents were fixed for the duration of the lease.

Figure 2: *Real values of the rent index, 1867-1959*

Several interesting trends are apparent from the charts above. First, through the late nineteenth century and Edwardian periods, office rents grew gradually in both nominal and real terms against a backdrop of very little inflation. Rental growth is slower than that found by Turvey (1998), but is perhaps more plausible in the light of descriptions of the market given by Turvey and by Scott (1996). They each note a great increase in supply in the late Victorian years to meet the increased demand for office space as London reached its ascendancy as a global commercial and financial centre.

This growth then ended with the onset of the First World War. Inflation rose dramatically and office rents initially fell, with nominal declines in 1914 and 1915 and large declines in real terms across 1914-18. However, after the war, rents recovered whilst deflation was taking place in the wider economy. Even so, the real value of the index in 1913 was not matched again until 1927 and, thereafter, both nominal and real rents declined in the weaker economic and trading environment of these years.

Falls in rents continued into the Second World War, with low points in 1940 (nominal rents) and 1942 (real rents), which are unsurprising given the added threat to offices and their tenants from the Blitz. In fact, several properties contributing to the dataset were destroyed in this period. From 1945, though, rapid growth in nominal and real terms can be observed, this time against a backdrop of strong inflation, a reduced office stock following wartime destruction, and constraints on stock replacement owing to postwar building restrictions.

These trends are summarized in table 2, which presents annualized rental growth rates for the whole period and for selected sub-periods based on those used by Matthews, et al. (1982) in their study of the British economy. The table shows that, whilst the City has seen moderate nominal rental growth (at 1.8 per cent p.a.) there has been virtually no real rental growth across the period as a whole. This, on its own, is a significant finding, particularly given the historical and contemporary status of the City as a prime location for office investment.

The sub-periods, though, show that real rental growth has differed markedly in different economic environments, with gradual growth in a stable inflationary era (1867-1913), decline in a deflationary era (1924-37) and rapid growth in a highly inflationary era (1951-59). Meanwhile, the transwar periods stand out as times where rents have lagged strong inflationary trends, resulting in high nominal growth, but declines in real terms.

Table 2: *Annualized rental growth – nominal and real terms*

	Nominal growth	Real growth
1867-1913	0.6%	0.6%
1913-1924	5.1%	-0.6%
1924-1937	-1.9%	-1.2%
1937-1951	4.6%	-0.6%
1951-1959	5.6%	1.3%
Whole period	1.8%	0.1%

### Further analysis

The discussion above has begun to link changes in the rent index to broad demand and supply influences. The final stage of the research will seek to formalize this through statistical modelling. Studies of contemporary office markets have identified changes in GDP and financial sector employment as important proxies for demand, which, together with supply, influence take up, rents, and levels of vacancy.<sup>547</sup> However, Michie (1992) demonstrates that the historical City was far from being just financial in nature and that its economic structure has not been static. Hence, it is not certain that similar relationships will be found with the historical rent data.

The modelling exercise also faces challenges presented by data availability and quality. National level data for demand proxies such as GDP are available for much of the period being studied, but City specific data is often not available or not appropriate, an example of the latter being census occupation data, which is based on residence and cannot capture the City's commuter workforce. Meanwhile, historical data on the supply of offices at any level of aggregation is almost non-existent. Despite this, it is expected that some useful results can be obtained. This contention is supported by initial visual comparisons and correlations between rents and different demand proxies, which form the start of the modelling process.

### Acknowledgements

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## Killing Raiffeisenism with kindness? Credit cooperatives in Ireland, 1894-1914

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Raiffeisen banks were introduced throughout the world, many replicating the success they had enjoyed in Germany. Cooperative banks, or their direct descendents, are still found in continental Europe and in the United States. However in Ireland and the United Kingdom there has been a very poor tradition of cooperative banking and the cooperative banks that were established did not gain a significant foothold.<sup>548</sup> Not until the 1960s did cooperative banking, albeit in the form of credit unionism, successfully establish itself in Ireland, and today credit unionism in Ireland has one of the highest penetration rates in the world.<sup>549</sup>

Raiffeisen societies were introduced to Ireland by the Irish Agricultural Organisation Society (IAOS) in 1894. They were intended to be a direct imitation of the German system of Raiffeisen cooperatives, and remnants of this system survived until the 1940s.<sup>550</sup> The IAOS believed that access and the cost of credit were hindering rural development in Ireland and it was of the opinion that Raiffeisen societies would be an appropriate tool to address this problem.

This paper will look at the introduction of Raiffeisen cooperative banking in Ireland and analyse why it did not experience sustainable growth as it did elsewhere. The paper will argue that its failure was not due to a lack of ‘cooperative spirit’ in Ireland but rather to an incomplete imitation caused by the ideological intractability of the cooperative propagators and myopic government support caused by changes in the political economy of cooperation in Ireland.

Three distinct forms of credit cooperatives were formed in Germany in the nineteenth century. Schulze-Delitzsch, Raiffeisen and Haas models of credit cooperation each had a distinct take on the formation of credit cooperatives. Schulze-Delitzsch was the first to establish a system of cooperative banking in 1850 and was subsequently followed by Raiffeisen<sup>551</sup> in 1862 and Haas.<sup>552</sup> All strands of credit cooperation offered credit and savings services to members, but differed in the way that they implemented their services. The Haas system of credit cooperatives were similar to those of Raiffeisen, and all three experienced sustained growth for most of the nineteenth century and early twentieth century until their growth was hindered by hostility from the national socialist regime in Germany.

<sup>548</sup> Stephen Valdez, *An introduction to western financial markets* (London, 1993), p.16.

<sup>549</sup> Patrick Honohan, ‘To what extent has finance been a driver of Ireland’s economic success?’ (2006), p.63.

<sup>550</sup> IAOS reports 1899-1940; and Patrick Bolger, *The Irish co-operative movement: its history and development*, (Dublin, 1977), pp.181-2.

<sup>551</sup> Johnston Birchall, *The international co-operative movement* (Manchester, 1997), pp12-13.

<sup>552</sup> Michael Prinz, ‘German rural cooperatives, Friedrich – Wilhelm Raiffeisen and the organisation of trust’ (2002), p.4.



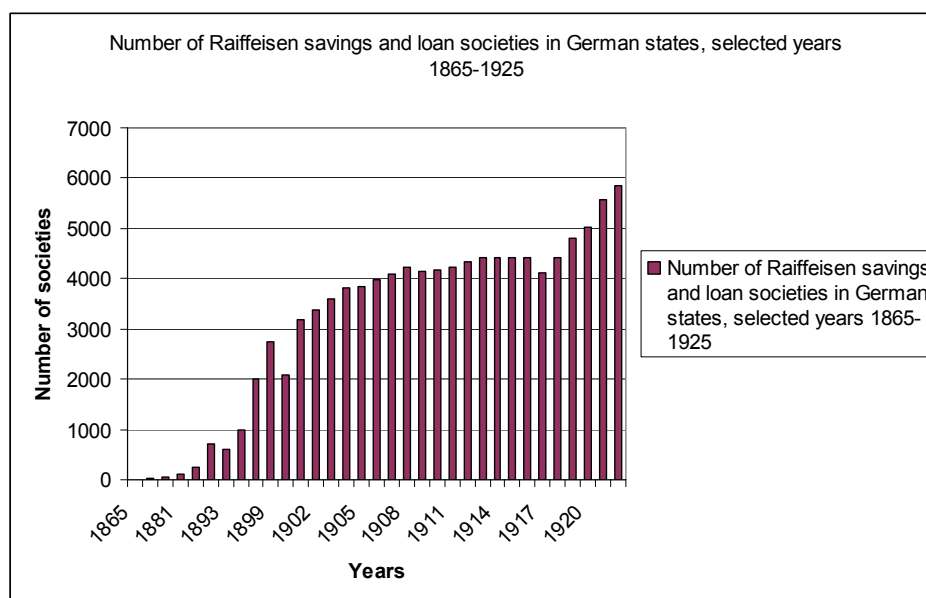
Table 1: *Strands of credit cooperatives in Germany by unions, 1918*

Union	Societies	Members in 1000	Turnover in Million Marks	Shares in Million Marks
General Union of German Cooperatives [Schulze-Delitzsch]	948	565	37745	24611
Imperial Union of German Rural Cooperatives [Hass]	12480	1100	15965	41
General Union of Raiffeisen Cooperatives [Raiffeisen]	5121	471	443	5
Sum [including others]	19738	2525	71794	393

Source: Michael Prinz, 'German rural cooperatives, Friedrich – Wilhelm Raiffeisen and the organization of trust', (2002), p.6.

Of the three forms of credit cooperation in Germany, Raiffeisen and Haas groups were the ones which were primarily geared towards rural communities. Schulze-Delitzsch banks were mainly urban operations, although there were some rurally based members. All three offered short term unsecured loans and none provided loans on long term mortgage. Loans were usually guaranteed by sureties and the personal security of the borrower, although in some cases loans could be guaranteed by mortgage.

Figure 1



Source: Data app. in Michael Prinz, 'German rural cooperatives, Friedrich – Wilhelm Raiffeisen and the organisation of trust', (2002).

M.L. Darling, writing in 1922, gave an outline of the Raiffeisen system:

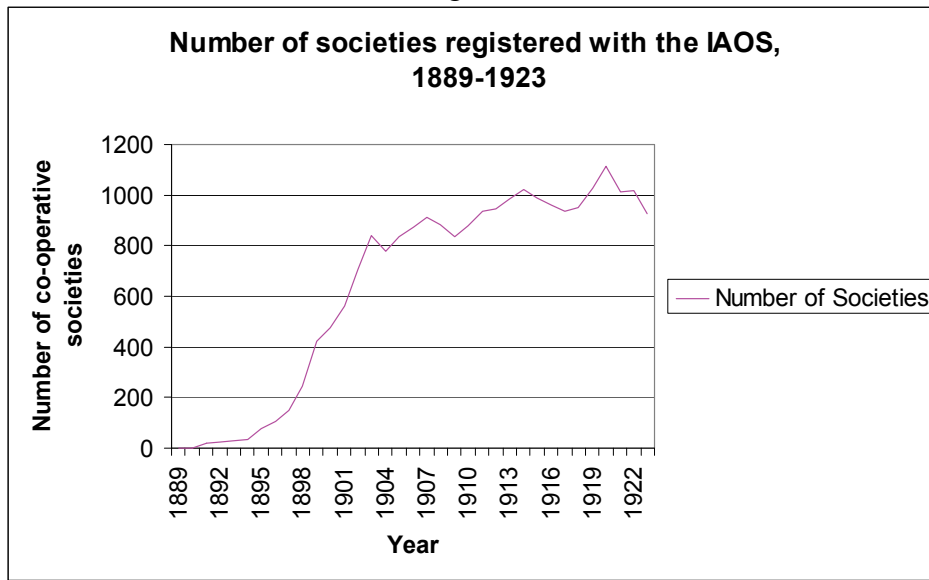
Everyone who knows anything at all of agricultural cooperation is familiar with the main features of the system, namely, unlimited liability, an area restricted to a village or two, small shares, limited dividends or no dividends at all, indivisible reserve, loans to members only, low rates of interest and honorary management controlled by the general assembly of members, each of whom has one vote and no more. In detail one country or province may vary from another, but the ground principles are everywhere the same, and wherever they are found and however they appear to be derived, their ultimate origin is Germany and their sponsor Raiffeisen.<sup>553</sup>

<sup>553</sup> M. L. Darling, *Some aspects of co-operation in Germany, Italy and Ireland* (Lahore, 1922), p.18.

The operations of Raiffeisen banking structures can be explained by use of agency theory. The structure of the Raiffeisen bank, membership and limited area, can provide additional information which can overcome principal agent problems, such as monitoring, screening, ex ante moral hazard, ex post moral hazard and adverse selection.

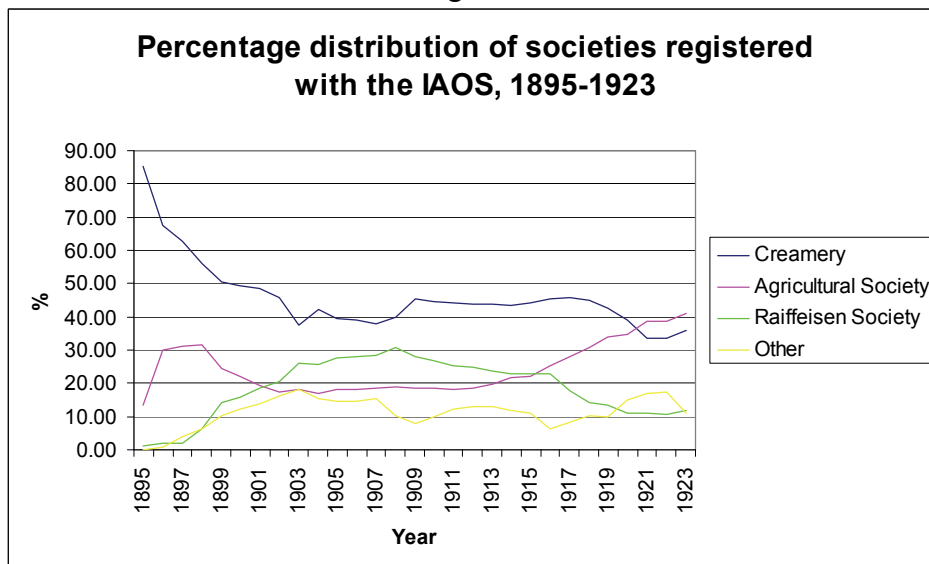
Analysis of the annual reports of the IAOS, the body which established cooperatives in Ireland, shows the relative importance of the Raiffeisen societies within the Irish cooperative movement. Figure 2 shows the number of cooperative societies registered with the IAOS from 1889 to 1923, and figure 3 shows the percentage distribution of cooperative societies registered with the IAOS.

Figure 2



Source: Annual reports of the IAOS.

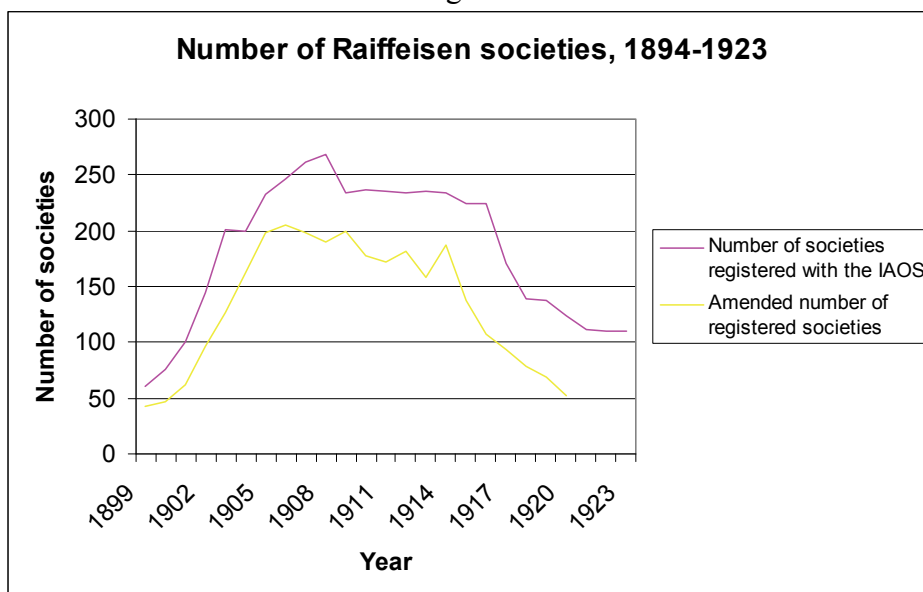
Figure 3



Source: Annual reports of the IAOS.

Figure 4 shows the number of Raiffeisen societies registered with the IAOS from 1894-1923. The IAOS was inclined to overstate the number of registered societies that were in operation in order to propagate its message of cooperation, and thereby justify its existence. This has been amended by subtracting the number of inactive societies from the number of registered societies.

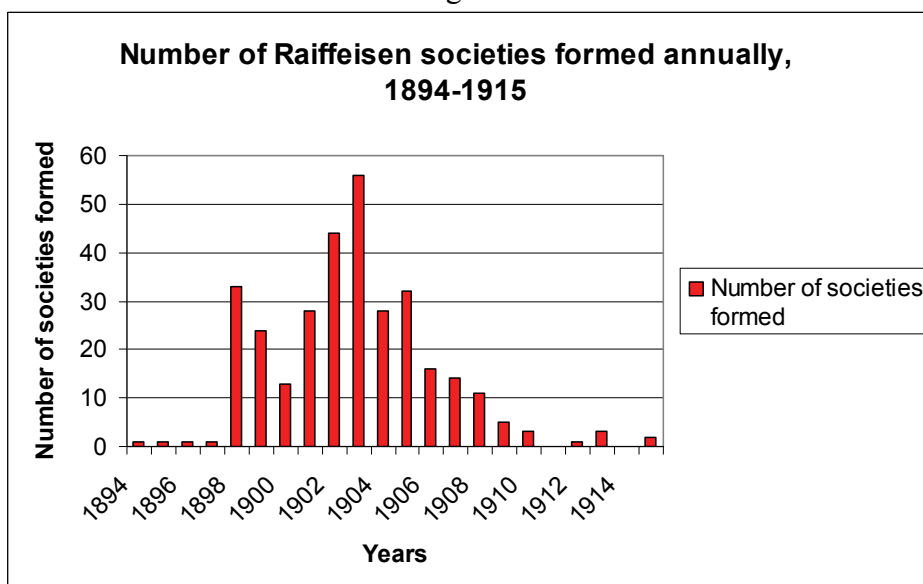
Figure 4



Source: Annual reports of the IAOS.

Despite experiencing a boom in the number of Raiffeisen societies in the early 1900s, this number was not sustained and there was a gradual decrease in the amount of Raiffeisen societies over the remainder of their existence in Ireland. Guinnane cited three key differences between the Irish and German systems. These were competition for savings, an absence of strong auditing federations and norms of rural behaviour undermined information advantages that the Raiffeisen societies should have possessed.<sup>554</sup> This paper will argue that the decline of the Raiffeisenism in Ireland can also be explained by the political economy of cooperation in Ireland and the manner of the imitation of the institutional infrastructure of the Raiffeisen system.

Figure 5



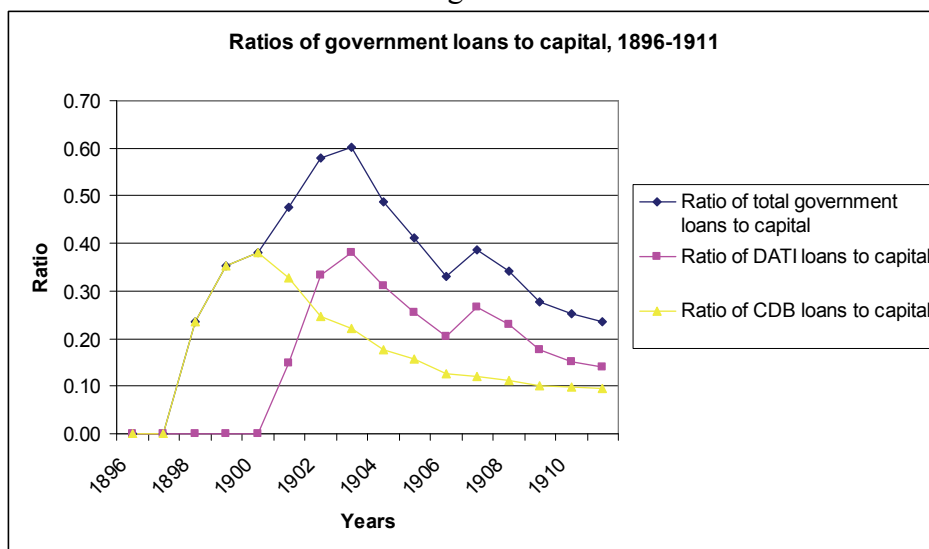
Source: Annual reports of the IAOS, 1900-25.

The political economy of cooperation in Ireland can give an indication as to what incentives may have influenced the yearly formation of Raiffeisen cooperatives. The initial favourable

<sup>554</sup> Timothy W. Guinnane, 'A failed institutional transplant: Raiffeisen's credit cooperatives in Ireland, 1894-1914' in *Explorations in Economic History*, xxxi (1994), p.39.

government action toward the Raiffeisen societies, and the cooperative movement as a whole, can be explained within the context of the Unionist government's policy of killing Irish Home Rule with kindness. Horace Plunkett, one of the founders of the IAOS, was a Unionist MP, the first minister for agriculture in the Department of Agriculture and Technical Instruction (DATI), and had a seat on the Congested Districts Board (CDB). The number of societies formed increased in 1898 due to a private members bill which enabled the Raiffeisen societies to accept deposits from non-members.<sup>555</sup> Plunkett's involvement in the legislature enabled the passing of legislation in 1898, and perhaps encouraged the concessional loan policy of the CDB and DATI and also the favourable treatment the IAOS received in the early 1900s. A number of local government bodies also offered concessional loans to Raiffeisen cooperatives in the early 1900s. Joint Stock Banks agreed to lend to Raiffeisen societies at a rate of interest of 4 per cent after 1900. These arrangements with government bodies and joint stock banks ceased after 1907. This was due to a change in government which caused political changes within the DATI and the CDB that influenced their behaviour towards Raiffeisen societies.

Figure 6



Source: Report of the departmental committee on agricultural credit in Ireland, 1914, p.128.

Table 2 shows that there was an equal distribution of Raiffeisen societies across the four provinces in 1906. The greater number present in Connaught can be explained by the fact that it contained a number of counties which were deemed to be congested, and these counties were among the first to receive government support from the CDB. County Mayo had the greatest number of Raiffeisen cooperatives in 1906, with 45 societies registered with the IAOS, and 37 amending for inactivity.

Table 2: *Raiffeisen Societies in 1906 (deflated)*

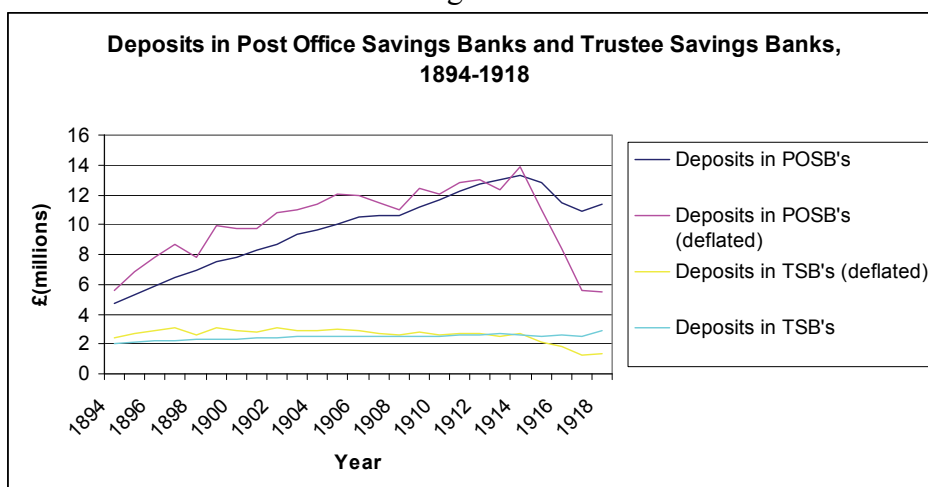
Province	No. of societies	Amended societies	Membership	Loan capital (£)	Deposits (£)	Total capital (£)	Loans (£)	No of loans granted (£)
Leinster	50	46	2856	7795	2590	10385	11310	1122
Munster	56	47	2330	6418	1816	8234	7160	943
Ulster	59	49	4110	7224	10065	17289	19102	943
Connaught	81	64	5695	12409	4586	16995	19648	3958
Total	246	206	14991	33846	19058	52903	57221	8447

Source: IAOS report 1907 and Liam Kennedy 'The cost of living in Ireland, 1698-1998' (2007).

<sup>555</sup> An Act to empower certain societies to borrow money from persons and corporations other than members, 1898 (61 & 62 Vict.).

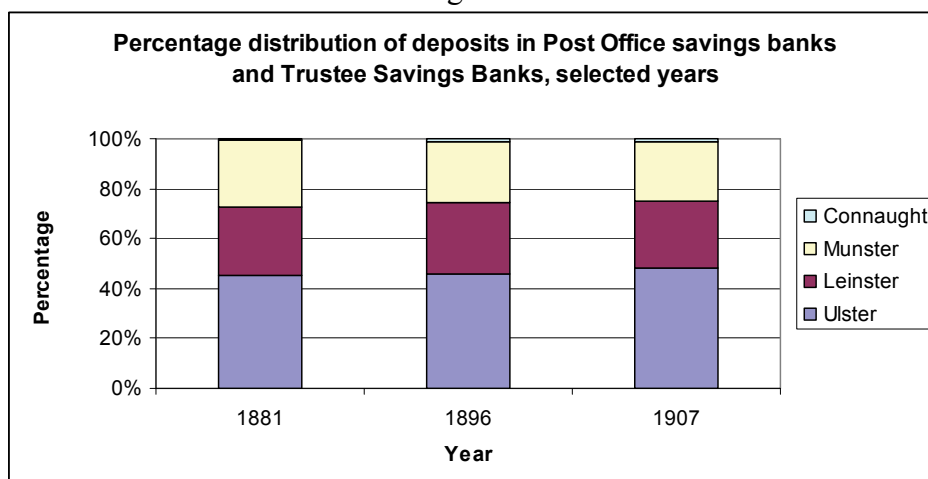
One of the main failures which helps explain the decline in Raiffeisen societies in Ireland was the failure to encourage savings mobilization in all societies. Data from trustee savings banks (TSB) and Post Office Savings banks (POSB), shown in figures 7 and 8, show that the Irish population did in fact save, but not with the Raiffeisen societies.

Figure 7



Source: Thom's directory & Kennedy (2007).

Figure 8



Source: Thoms 1923, p.722.

Initially the lack of thrift was not an overriding problem, but this lack of thrift became a serious issue when the economic climate was changed by the First World War. Agricultural production went through a boom caused by the decrease in international competition during the war, and increased demand. As a result agricultural nominal income increased, but this increase was not saved in the Raiffeisen cooperatives, but was instead deposited in other saving institutions. The failure to encourage thrift in many societies from the onset caused the decline in the Raiffeisen societies as they were seen, and portrayed, as credit cooperatives.

A number of features of the German system were introduced in Ireland, mainly unlimited liability, area restrictions, no shares or dividends, loans to members only, and the use of personal security and sureties. Each member's unlimited liability for the debts of a cooperative society if a society was unable to meet its debts was perceived to be the fulcrum of the Raiffeisen methodology, although in hindsight the IAOS actually believed that it may have been one of the reasons for its failure.<sup>556</sup> The Raiffeisen internal structures of screening

<sup>556</sup> IAOS report 1931, pp18-19.

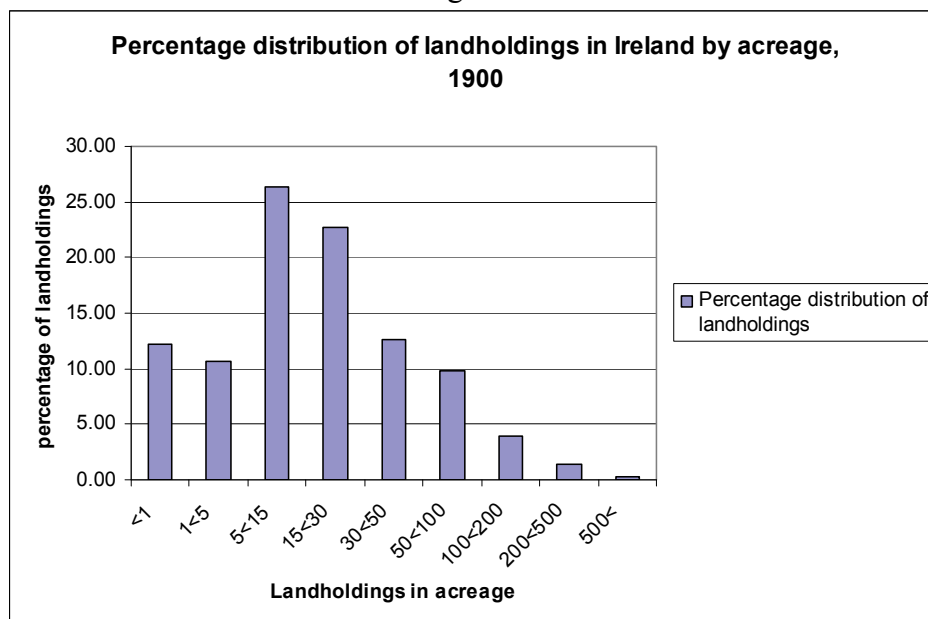
and monitoring seemed to have been adaptable to the Irish environment, so much so that in the IAOS report in 1900 it was stated that ‘... we are glad to be able to report that the Raiffeisen tradition of punctuality in repayments has been observed unblemished in Ireland, and that no bad debts have been made’.<sup>557</sup> The tradition of punctuality was not sustained, the rapid growth in Raiffeisen societies, encouraged by the availability of soft loans from government departments, correlated with an increasing number of complaints in the IAOS annual reports about the lax application of society laws. There were repeated claims of loan renewals and delay in repayment of loans by borrowers as the social pressures envisaged by the Raiffeisen system were eroded. There was also the realization of risk covariance amongst the borrowers, as borrowers had made similar investments. The monitoring procedures had failed to stop homogenous borrower investment patterns and this effectively narrowed the society’s portfolio diversification.

One of the key differences between Raiffeisenism in Ireland and Germany was the absence of trading powers and federation. In the Irish case this was caused by legislative restrictions. In essence there was a trade off between registration as an industrial and provident society with trading powers, and registration as a friendly society with unlimited liability. The IAOS chose the latter. Henry Wolff noted that:

As our law at present stands in the United Kingdom – there is reason to hope that it will soon be modified – cooperative banks with limited liability (such must necessarily be Share banks), in addition to having things made easy for them in their individual, purely banking, action, also enjoy these two valuable advantages, that they are free to combine to federation or Central Banks, and to couple, in country districts, trading in goods with trading in money. Unlimited liability banks, registered under the Friendly Societies Act, can at present do neither the one thing or the other.<sup>558</sup>

Unlimited liability would have been suitable for a homogenous society. Using land distribution as an indicator for homogeneity it can be seen that Irish society, at a macro-level, was not homogenous.

Figure 9



Source: Agricultural Statistics of Ireland, 1901.

<sup>557</sup> IAOS report 1900, p.10.

<sup>558</sup> Henry W Wolff, *Co-operative banking: its principles and practice* (Westminster, 1907), pp.294-5.



Wealthier landholders had no pressing need to join a Raiffeisen society as they had access to other credit streams. They would also have been unwilling to accept unlimited liability. If the wealthier members of Irish society had joined Raiffeisen societies the quality of leadership and administration could have been enhanced, as they could have contributed their knowledge, expertise and wealth.

The IAOS eroded the singularity of the Raiffeisen societies as a credit provider in the cooperative movement as it encouraged creameries and agricultural societies to offer credit services to its members.<sup>559</sup> Given that many Raiffeisen societies did not offer saving services, it would be logical that members of Raiffeisen cooperatives would switch to other cooperatives that could offer greater economies of scope. The IAOS had supported a bill to give Raiffeisen societies complementary trading powers.<sup>560</sup> When the bill was not passed the IAOS subsequently encouraged other 'industrial and provident society' cooperatives to offer credit along Raiffeisen lines.<sup>561</sup>

One of the major flaws of the Raiffeisen cooperatives in Ireland was the lack of cooperation amongst individual cooperatives to form federated bodies. M. L. Darling observed that in Germany:

When a village society is formed, it is at once affiliated to three cooperative organizations, to a central bank for finance, an agricultural wholesale society for supplies, and to the local provincial union for audit, inspection and control.<sup>562</sup>

These affiliations did not take place in Ireland. The Raiffeisen societies were not affiliated with an agricultural wholesale cooperative as they did not have trading powers. Central banks had been proposed in the early 1900s<sup>563</sup>, but plans were dropped when the IAOS negotiated an agreement with the Irish joint stock banks. When a central bank was established in 1913 it was not a federated body of Raiffeisen societies, and only made five loans in its existence.<sup>564</sup> Audit federations were not established in Ireland, instead the IAOS provided free auditing services to the Raiffeisen societies but these services were not part of a federated process. The IAOS decreased its auditing services as the number of societies decreased, and instead focused its attention on the burgeoning agricultural societies.

The Raiffeisen system introduced in Ireland in 1894 was an exogenous innovation in economic organization structure. It was an innovation which was introduced by an idealistic and paternalistic body, the IAOS. Their idealism and paternalism, with the aims of introducing a sustainable economic innovation to Irish rural society, created a dependent and restricted body of Raiffeisen societies that were inadequate imitations of the German Raiffeisen societies. The IAOS through its actions in attempting to promote Raiffeisenism in Ireland stifled its development. Through lobbying for concessional loans from government bodies and negotiation with banks for preferential treatment it undermined the need for deposit mobilization. This in turn undermined any need within the movement itself to form federated institutions, such as central banks and audit unions. The IAOS also provided a free auditing service to societies which also discouraged the establishment of auditing unions. The Raiffeisen societies were intravenously supported, with the removal of these forms of support and the failure to imitate key institutional infrastructure, many societies collapsed. The combined efforts of the IAOS and the unionist government colluded to undermine Raiffeisen institutional imitation and successful development, effectively killing Raiffeisenism with kindness.

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<sup>559</sup> IAOS report 1909, pp.9-10.

<sup>560</sup> IAOS report 1910, p.32.

<sup>561</sup> IAOS report 1914, p.19.

<sup>562</sup> M. L. Darling, (Lahore, 1922), paragraph 24, p.36.

<sup>563</sup> IAOS report 1901, pp.10-11.

<sup>564</sup> IAOS reports 1913-1925.

# The Funding Loan: why did the Rothschilds underwrite Brazilian bonds in 1898?

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## 1. Introduction

Why did the Rothschilds underwrite a £8.6 million loan to Brazil in 1898, in the middle of a fiscal and payment crisis? This paper argues that the Funding Loan was a bailout operation explained by the bank and the country's special relations. The claim stands as an alternative for the literature on sovereign debt, as it highlights the role played by path dependency and reputation between borrower countries and underwriters – a crucial link in major nineteenth century financial operations that the literature often neglects.

The paper is divided into four sections. Section 2 addresses the effects of Brazilian economic crisis in the 1890s. Section 3 assesses the mutual dependence between the Rothschilds and Brazil, and Section 4 concludes by proposing an underwriter-borrower game based on this case study.

## 2. Fundamentals, sovereign debt and Brazil in the 1890s

The literature on public debt presents a set of fundamentals on which creditors infer the risk of sovereign bonds. Most studies assume that countries will default if the benefit of doing so – not paying services – is greater than the cost of defaulting – future lack of foreign borrowing.<sup>566</sup> The larger the sovereign debt stock vis-à-vis tax revenue and exports – respectively given by  $SD/T$  and  $SD/X$  – the heavier the burden of servicing the debt, and therefore the greater the benefit of defaulting.<sup>567</sup> The exchange rate plays a crucial role in  $SD/T$ , as taxes are collected in domestic currency and sovereign debt is denominated in foreign currency. Therefore, currency depreciation makes a default more likely. Moreover, countries that borrow to invest in productive infrastructure or to convert their debt into bonds quoted at better conditions improve future fiscal results. This is not the case when borrowers use loans to finance fiscal deficits or warfare.<sup>568</sup> Finally, governments in politically unstable countries are likely to borrow too much in order to finance military expenditure. If the enemy's victory is certain, the cost of default is zero and service will not be paid.<sup>569</sup>

The Brazilian political and economical fundamentals deteriorated after the parliamentary monarchic regime was brought to an end by a republican coup d'état, in November 1889. This section assesses why Brazil was close to a default in 1898, even though she was the only Latin American country that had never defaulted.<sup>570</sup>

The politics of the first republican decade were dominated by disputes between the army and coffee growers from São Paulo over centralization of power in the hands of the president, which was defended by the former and opposed by the latter. The militaries imposed two authoritarian administrations, from 1889 to 1894, after which the *paulista* Prudente de Moraes became president. The election inaugurated a civil regime that lasted for 35 years during which the coffee sector was politically dominant. The Moraes administration, however, faced violent opposition from the army and popular urban sectors, mainly in Rio de

<sup>565</sup> The author thanks Colin Lewis, Aldo Musacchio and William Summerhill for their constructive feedback. The research has been financed by CAPES (Brazilian government).

<sup>566</sup> See, for instance: Eichengreen, 1991, pp.149-69; and Bulow and Rogoff, 1989, p.10.

<sup>567</sup> Flandreau and Zumer, 2004, pp.31-9.

<sup>568</sup> Fishlow, 1995, pp.37-40.

<sup>569</sup> For the nineteenth century Latin American case, see Taylor, 2003. pp.7, 8.

<sup>570</sup> For an overview on Brazil's sovereign debt, see Abreu, 2006; and Summerhill, forthcoming.

Janeiro, which explains the period's military indiscipline, urban riots and attempted assassination of the president, in 1897. In parallel, the government fought rebels in two costly and bloody civil wars: the Federalist Revolution, in the extreme south, and the Canudos War, in the northeast.<sup>571</sup>

Matters were also dire in relation to the economy. The first republican administration granted emission rights to different banks throughout the country and, concomitantly, provided the system with liquidity in order to support those who lost slaves in the 1888 emancipation. The outcome was a financial boom culminating in a stock market crunch, in 1891. Monetary expansion was reduced but not controlled in the Morais administration, which explains the exchange rate slump reported in table 1. By the time the Funding Loan was issued, in 1898, the *mil-réis* was almost four times weaker than in 1889, the last year of the monarchic regime.<sup>572</sup>

**Table 1**  
**Brazil: payment, fiscal and monetary fundamentals, 1889-1907**

	SD (£ million)	(X-M)/X	SD/X	Coffe Price (£ per 60 Kg)	(G-T)/T	SD/T	M <sub>2</sub> (thousand contos)	Exchange Rate (d./\$000)
1889	30.4	0.2	0.2	3.4	-0.2	1.7	206.8	27.2
1898	39.1	0.1	0.1	1.5	-1.1	4.0	780.0	7.2
1907	69.1	0.3	0.3	1.8	0.0	2.0	743.6	15.2

Obs: SD stands for sovereign debt stock; (X - M) and (G - T) are trade and fiscal results, respectively

Source: SD - Elaborated from Bouças, 1955; and Brazil, 1927.

Estatísticas Históricas do Brasil, 1987, pp. 535-571.

Fiscal policy was extremely unsound in the 1890s. Warfare increased expenditure and the income from customs – the main source of federal government revenue – was depressed. That was because (1) exchange depreciation decreased imports and (2) the 1891 republican constitution devolved export duties to the states. In order to finance recurrent federal deficits, Brazil borrowed around £11 million in London, in 1893 and 1895.<sup>573</sup> The only fundamental that did not deteriorate was *SD/X*, as coffee exports expanded despite the fall in prices. Nevertheless, *SD/X* more than doubled in a decade and, not surprisingly, *The Investor's Monthly Manual* expected a “*fin-de-siècle* expedient of a moratorium”.<sup>574</sup>

The crisis depressed the price of Brazilian bonds in London, whose average spread was 6.1 per cent in July 1898, the month the Funding Loan was issued. Such a risky rate was much higher than the “first world” spread quoted nine years before – the last July of the monarchic regime. The striking point, however, is that it was 1.8 times higher than the spread at which the funding bonds were quoted, as presented in table 2.

**Table 2**  
**Market conditions for Brazilian sovereign bonds floating in London**

	Number of loans	Price	Premium (weighted average)	Spread
1st July, 1889	8	102.5	4.6%	1.8%
1st July, 1898	6	54.5	8.6%	6.1%
1st July, 1907	11	85.5	5.1%	2.1%
Funding Loan (at issuing)	1	85.0	5.9%	3.4%

Source: Investor's Monthly Manual, various issues.

Two points may be concluded so far. Firstly, the fundamentals proposed in the literature tell how the market priced the bonds already issued, but fail to explain the Funding Loan's rather good conditions. Secondly, the funding bonds' low spread suggests a Brazilian bailout from

<sup>571</sup> Fausto, 2002, pp.249-59.

<sup>572</sup> See Peláez and Suzigan, 1976, pp. 78-81; and Fritsch, 1988, pp.2-8.

<sup>573</sup> See Franco, 1990, pp. 23-25; and Bouças, 1955, pp.91-4.

<sup>574</sup> *Investor's Monthly Manual*, vol. 28, n. 5, 31<sup>st</sup> May 1898, p.225.

the Rothschilds. The next section presents evidence that supports the latter claim and explains the bank's reasons for launching the operation.

### 3. The Rothschilds, Brazil and the Funding Loan

Besides arranging generous lending, the Funding Loan's contract set important agreements on debt servicing and policymaking. It was agreed that the interest on all Brazilian bonds had to be paid with funding bonds until 1901, when the country would resume the payment with cash backed by a newly established 25 per cent gold import duties. In addition, amortization on the new and old sovereign bonds was suspended until 1911.<sup>575</sup> Therefore, the Funding Loan was not only issued at a rather low premium, it also arranged a relief in service payment and prevented a default on Brazil's sovereign debt. This section explains such an improbable operation based on the relations between the Rothschilds and the Brazilian government.

The history of the English Rothschild's businesses in Brazil dates from the early nineteenth century. After being involved in the then Portuguese diamond trade, the bank started to underwrite Brazil's bonds in 1825, three years after Independence. The Rothschilds were appointed the government's financial agent in London in 1856, making it in charge of paying services and issuing sovereign loans. Such lending monopoly remained unchallenged until 1908.<sup>576</sup> As the Rothschilds became important for Brazil, so the country became important for the bank. Table 3 shows Brazil amongst the Rothschild's main three clients and supports the view that a Brazilian default would damage the house's reputation in a level comparable to a Russian (or even an unthinkable British) default.

**Table 3**  
**Breakdown of sovereign bonds underwritten by London Rothschild**

	Russia	Brazil	Britain	Others
Floating in 1897 <sup>a</sup>	57%	26%	7%	10%
Issued from 1818 to 1897 <sup>b</sup>	34%	21%	26%	19%

Source: (a) Investor's Monthly Manual, n. 7, vol. 28, pp. 396-397.

(b) London House of Rothschild, 1905.

In fact, the Rothschilds were directly connected to high officials in Rio de Janeiro. Such special relations provided the bank with inside information, which is particularly clear from the Funding Loan correspondence. The operation's contract established that Brazil would burn national currency in an amount equivalent to the bonds issued, implying a fall in monetary stock and the straightening of the national currency.<sup>577</sup> The operation was established at 18d. per *mil-réis*, although the Rothschilds proposed to lower the rate to 16d., which would force Brazil to withdraw more liquidity from circulation. The government was inflexible, though, as the 16d. rate would decrease the monetary stock far too much, causing "embarrassments to the National Treasury".<sup>578</sup> The episode shows that the Rothschilds interfered in monetary policy, although Brazil was strong enough to negotiate the "ownership" of policymaking with the bank. Secondly, it seems that the house understood the need for improving the exchange rate in order to avoid a default.

The bank had actually been informed by the finance minister Bernardino de Campos (1896-1898) about the role played by the weak *mil-réis* in the Brazilian crisis. In a letter sent to the Rothschilds in early 1898, the minister declared that depreciation was a "bottomless pit without which Brazil would already have converted the 1890s fiscal deficits into surpluses".<sup>579</sup> Although Campos' point goes too far, the exchange rate did deteriorate service capacity. This

<sup>575</sup> Brasil, 1909, pp.15, 20.

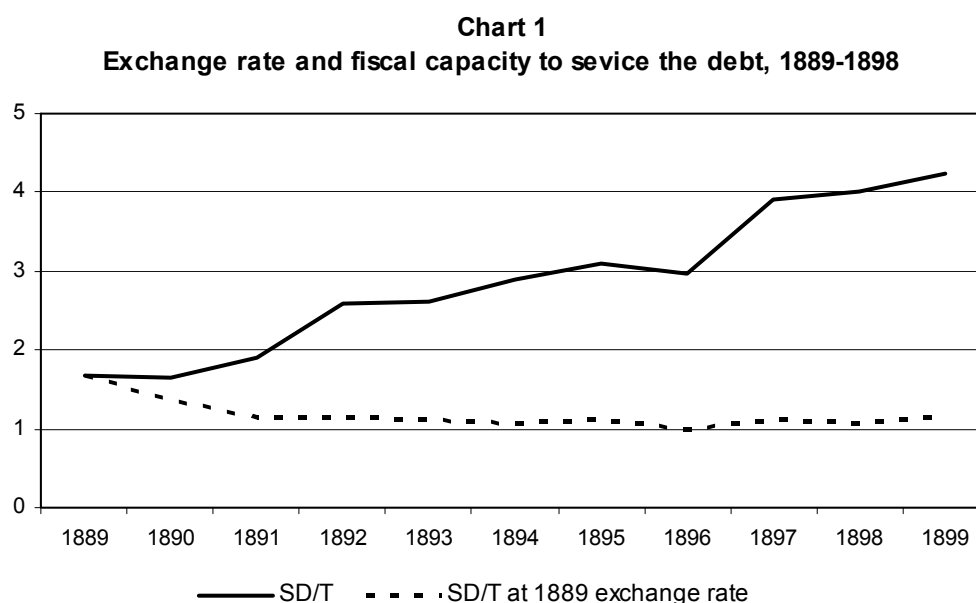
<sup>576</sup> Ferguson, 1998.

<sup>577</sup> Brasil, 1909, p.20.

<sup>578</sup> Ibid, p.29.

<sup>579</sup> Ibid, p.17.

is shown in chart 1, according to which  $SD/T$  would have actually decreased had the exchange rate remained stable at the 1889 level.



Source: Brasil, 1987.

The Rothschilds were aware of Brazil's future monetary policy, and therefore expected an improvement in the country's capacity to service the debt. One can assert that access to inside information convinced the bank to issue the Funding Loan, and perhaps even made it influence bondholders to purchase the bonds. Nevertheless, evidence shows that the Brazilian government pressured the underwriter in order to grant the loan. By early 1898, a letter from president Morais to minister Campos reported that the Rothschilds were pessimistic about the availability of credit. The bank suggested the leasing of Central do Brazil, the country's main state railway line, as a solution to the crisis. The president then determined an aggressive strategy: the minister was to oppose the railway leasing and to "insinuate that (the government would) be fatally forced to suspend payments abroad if (it) does not obtain the loan".<sup>580</sup>

Such a blackmail strategy worked, as the Funding Loan was arranged two months later. The Rothschilds then agreed to "immediately communicate with the Council of Foreign Bondholders" and to "use our best endeavour to induce them to accept the propositions contained in your message".<sup>581</sup> The bank was forced to bail out Brazil, moving "heaven and earth to protect the issues for which they are responsible," as was published in an English periodical at the time.<sup>582</sup> Once agreed to launch the loan, the Rothschilds made sure that the client would improve its foreign credit through orthodox monetary policy. In summary, the sequence of correspondence shows that the Funding Loan is explained by path dependency and reputation; inside information played a subsequent role in improving the operation's expected profitability.

#### 4. Conclusion: the underwriter-government game

The fundamentals proposed in the literature on sovereign debt do not explain why the Rothschilds underwrote the Funding Loan. The operation can only be understood if one bears in mind that the banker and the country had a well-established relationship that created mutual dependence. Brazil needed the Rothschilds to borrow abroad, whilst the latter would suffer a serious reputation loss if the bonds it had underwritten went into default.

<sup>580</sup> IHGB, ACP66, DL1592,45.

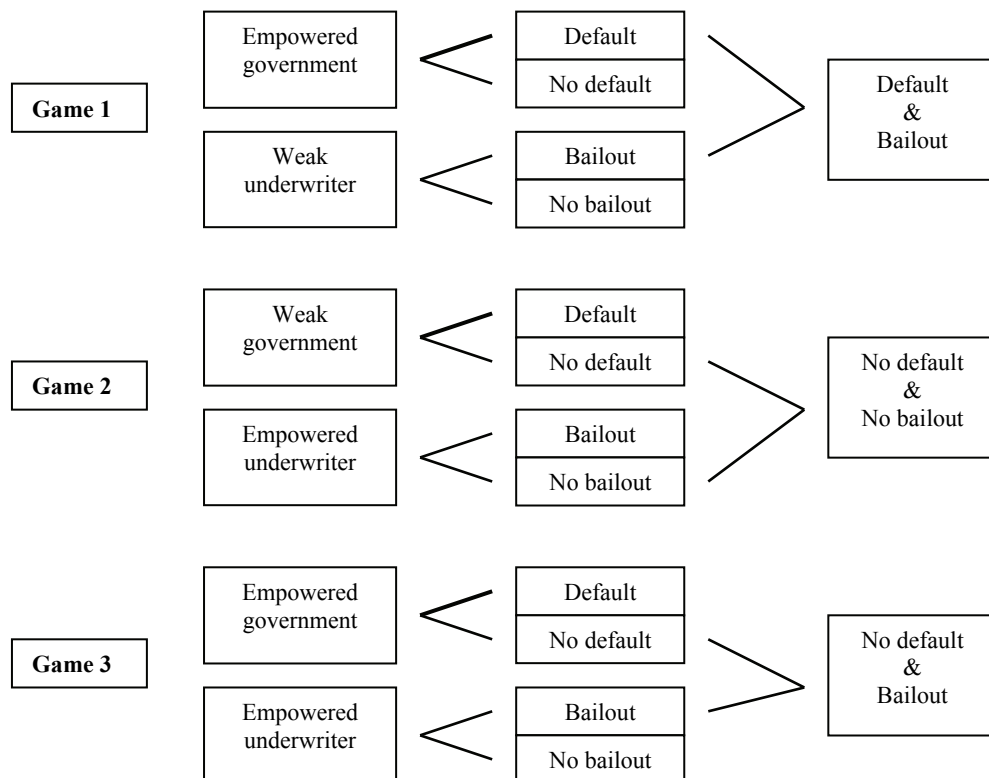
<sup>581</sup> RHA, XI/65/6.

<sup>582</sup> *The Herapath's Railway*, vol. 59, n. 3048 (15<sup>th</sup> October, 1897), p.1054.

This conclusion suggests an agent-principal game that addresses relations between governments and underwriters, a crucial link in the nineteenth century sovereign debt market that the literature often neglects. The game can be proposed as follows: (1) the government decides whether to default based on the cost and benefit of doing so, such as proposed in the literature; (2) the underwriter decides whether to bail out regarding the reputation costs of having some of its bonds in default, as well as possible gains created by inside information. The game's main contribution is that it considers not only the borrower's but also the underwriter's choices.

In one extreme situation, represented in game 1 in chart 2, the underwriter has only underwritten bonds of a certain government that, for some reason, will always be able to borrow through other sources. The government would count on a bailout, which incentives bad policymaking and increases the benefit of defaulting vis-à-vis its cost. The debt will eventually be defaulted. The other extreme case, represented in game 2, happens when the country is unimportant for the underwriter, although the latter is the only source of credit to the former. The underwriter would never bailout the government, which would face too high a cost to default.

Chart 2: *Government-underwriter games' results*



The results of the 1890s Brazil-Rothschild case is represented by game 3, in which both parts have considerable power over each other. Brazil was able to threaten the Rothschilds with a default, although highly dependent on the house to borrow abroad. This situation created the incentive for bad policymaking, which increased the benefit of default. However, the dependence on the underwriter guaranteed high defaulting costs and prevented the suspension of services payment. The Rothschilds had two reasons to bail out the government. Firstly, the operation improved the government's finance and decreased its incentive to default. Secondly, inside information seems to have made the bank expect an improvement in the bonds' rating, which actually materialized as shown in tables 1 and 2.

The government-underwriter games proposed in this paper do not distinguish the "carrot" and "stick" reasons underwriters consider when launching a bailout – respectively preventing a default and capturing gains from inside information. In the Funding Loan case, the Rothschilds firstly agreed to launch the operation in order to prevent a default. Once the



deal was arranged, the bank used its participation in the ownership of Brazil's monetary policy to insure the *mil-réis* appreciation, which increased the country's rating and made the 1898 bonds profitable. In short, the stick rather than the carrot moved the bank. Nevertheless, game 3 explains the main outcomes assessed in this paper: the deterioration of Brazil's fundamentals, the lack of default and, mostly important, the Rothschild's decision to underwrite.

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# ABSTRACTS OF ACADEMIC PAPERS



## I/A Historical Roots of Poverty

Chair: **Sue Bowden** (York)

**Sue Bowden** (York) & **Paul Mosley** (Sheffield)

*Politics, public expenditure and the evolution of poverty in Africa, 1920-2007*

We investigate the historical roots of poverty, with particular reference to the experience of Africa during the twentieth century. Like the recent studies by Acemoglu et al (2001, etc) we find that institutional inheritance is an important influence on current underdevelopment; but unlike them, we argue that the influence of policies on institutions is highly significant, and that in Africa at least, a high representation of European settlers in land ownership and policy-making was a source of weakness, and not of strength. We argue this thesis, using mortality rates as a proxy for poverty levels, with reference to two former settler colonies – Zimbabwe and Kenya – and two former peasant export colonies – Uganda and Ghana. Our findings suggest that in Africa, settler-type political systems tended to produce highly unequal income distributions and, as a consequence, patterns of public expenditure and investment in human capital which were strongly biased against smallholder agriculture and thence against poverty reduction, whereas peasant-export type political systems produced more equal income distributions whose policy structures were less biased against the poor. As a consequence, liberalization during the 1980s and 90s produced asymmetric results, with poverty falling sharply in the ‘peasant export’ and rising in the settler economies. These contrasts in the evolution of poverty in the late twentieth and early twenty-first centuries, we argue, can only be understood by reference to differences between the settler and peasant export economies whose roots lie in political decisions taken a hundred years previously.

**Alvaro Pereira** (Simon Fraser)

*Chasing germs in Southern Europe: lessons for developing economies in the elimination of disease*

Disease is often considered to be a major obstacle to economic development and the eradication of poverty. This indeed has been a major theme in recent work on, inter alia, the implications of HIV/AIDS and malaria on long run growth in sub-Saharan Africa, as per Sachs. This paper draws on this development literature to explore the effects of disease on economic growth and development in Southern Europe in the mid twentieth century. We use data from new archival sources to estimate the economic impact of diseases such as tuberculosis, malaria, cancer, and influenza in Italy, Portugal, and Spain: at the time non-developed, primarily agricultural economies. We also investigate the role that public policy played to decrease the incidence of disease and to lower mortality rates in the Southern European countries. Our statistical results show that the fight against disease was an important (albeit not sufficient) factor for the emergence of sustained rates of growth in some Southern European countries and that, in line with Collier, the elimination of conflict was a more powerful determinant of long run growth than the elimination of disease.

**Jordi Domenech** (York)

*Mineral resource abundance and regional economic growth in Spain, 1860-2000*

The ‘natural resource curse’ literature posits that the abundance of natural resources in an economy can reduce its long-run level of income per capita by crowding out manufacturing, slowing down the accumulation of human capital, damaging institutions, and increasing inequality. In spite of this influential literature, economic historians are well aware that these results do not hold for the nineteenth century. As the cases of the British or North-American industrialization show, in a world of high transport costs, proximity to vital natural resources like coal or iron ore was an advantage, not a curse. Nevertheless, within this historical literature, Spain stands as one of the cases in which the abundance of natural resources in

some areas could have damaged their long-term economic potential. Natural resources, it is argued, attracted foreign capital and expertise and a great deal of infrastructure investment. However, mostly foreign-owned companies were not interested in local industrial development or investment in local technical expertise or more general human capital. Once the mineral was exhausted or could not be extracted at competitive prices, those companies disappeared without having created the necessary linkages for development. Some of those regions, especially in the South and in the centre of Spain, remained some of the poorest areas in Western Europe.

Using Spain as a potentially interesting historical case-study, this paper explores some of the central tenets of the ‘natural resource curse’ literature by exploiting the variation in the endowments of mineral resources across provinces in Spain from 1860 to 1930. Focusing on one economy only allows me to isolate some of the effects of natural resource abundance on industrialization and human capital accumulation, while abstracting from effects on economy-wide institutions or the state, which are better dealt with in the cross-country empirical literature. The paper also addresses one of the main problems of the natural resource curse literature, namely the endogeneity of the supply of natural resources. The paper does so by approximating the potential supply of minerals at each point in time using extraction data for the period 1860 to 1930 (although ideally we should incorporate all the mineral extracted until exhaustion). The paper argues that through the analysis of the medium- and long-run comparative performance of the ‘old’ mining regions of Europe, economic history can advance our understanding of the literature on the effects of natural resource abundance on long-run growth. Historical lessons however need to be somewhat downplayed by the enormous change in transport technologies over the twentieth century.

The paper uses a model of economic location that takes into account factor endowments (including natural resources) and ‘new economic geography’ effects (market potential) to predict levels of industrialization (measured by employment) in 1900 and 1920. Taking into account original (before industrialization) and contemporary factor endowments and economic geography effects, I find very little support for the natural resource curse hypothesis. The abundance of mineral supplies did not reduce industrial employment in 1900 and had a positive, sizeable effect on industrialization by 1920 (Spain industrialized much faster between 1900 and 1920 than in the late nineteenth century). Moreover, controlling for urbanization or industrialization levels, there was no visible reduction in human capital investment in the provinces with abundant natural resources. Beta-convergence regressions with an additional control for natural resource abundance show no slowing down of real wage growth for mineral abundant regions between 1860 and 1930. I extend the analysis further by looking at the long-run convergence of income per capita in the period 1930-2000. The main conclusion is that there were no significant long-run costs, but also no visible long-term benefits of early specialization in extractive industries.

## I/B Long Run Economic Change in Asia

Chair: **Bishnupriya Gupta** (Warwick)

**Daan Marks & Jan Luiten van Zanden** (Utrecht)

*Two hundred years of economic growth in Indonesia, 1800-2000*

On the basis of recent reconstructions of the national accounts of Java (1815-1940) and Indonesia (1880-2000) we are able to analyse the long-term growth path of the Indonesian economy in these years. We analyse the determinants of growth, making the distinction between the growth of inputs and the increase in total factor productivity. It appears that tfp growth was very limited over the long run, although a few periods of tfp growth did occur. We then turn to various explanations for the growth of tfp, and compare its development with changes in the openness of the economy, its 'market access, and in the quality of its institutions.

**David Donaldson** (LSE)

*Railroads and the Raj: the economic impact of transportation infrastructure*

I estimate the economic impact of the construction of colonial India's railroad network from 1861-1930. Using newly collected district-level data on annual output, prices and internal trade flows I find that the railroad network had the following effects: (1) Railroads caused transport costs along optimal routes to fall by 73 per cent for an average shipment. (2) The lower transport costs caused by railroads significantly increased India's inter-regional and international trade. (3) The responsiveness of a region's agricultural prices to its own rainfall shocks fell sharply after it was connected to the railroad network, but its responsiveness to shocks in other regions on the railroad network rose. (4) Railroad lines raised the level of real agricultural income by 18 per cent, and significantly reduced its volatility, in the districts where they were built. I find similar results using instrumental variables based on British military and famine-prevention motives for building railroad lines; and I find no effect, for any of the above four outcomes, in a 'placebo' specification that uses over 2,000 km of railroad lines that were approved and surveyed, but were never actually constructed. Finally, I estimate the structural parameters of a Ricardian trade model using data on salt prices and trade flows only. The calibrated model explains 88 per cent of the real income impact of railroads, suggesting that railroads raised welfare primarily because they enabled regions to exploit their comparative advantages by trading with one another.

**Jörg Baten** (Tuebingen), **Debin Ma** (LSE), **Stephen Morgan** (Nottingham) & **Qing Wang** (Munich)

*Evolution of living standards and human capital in China, 18-20th centuries: evidence from real wages and anthropometrics*

This paper mobilizes and integrates time series data on real wages, physical heights and age-heaping to examine the long-term trend of living standards and human capital for China during the eighteenth to twentieth centuries. Our findings confirm the existence of a substantial gap in living standards between China and North-western Europe in the eighteenth to nineteenth centuries. They also reveal a sustained decline in living standards and human capital at least in South China from the mid-nineteenth century followed by a recovery in the early twentieth century. However, comparative examination of age-heaping data shows that the level of Chinese human capital was relatively high by world standard during this period. We make a preliminary exploration of the historical implications of our findings.



## I/C Second Serfdom: Macro Perspectives

Chair: tba

**William W Hagen** (California, Davis)

*European yeomanries: a non-immiseration model of agrarian social history 1350-1800*

The neo-classical and political economy literatures view the post-medieval history of the European peasantry as one of economic dispossession and legal disability. In this perspective, the beneficiaries of long-term commercialization were landlords and an emergent rural bourgeoisie allied with them. Family farmers and smallholders widely suffered removal from the land or reduction to wage-labourer status. Village communalism dissolved into entrepreneurial atomism, or into class polarization and conflict. East of the Rhine, a semi-feudal neo-serfdom ruled the countryside to the villagers' cost. In Mediterranean and western Europe, free status availed little against rent/tax oppression and Malthusian down-cycles. In England alone did individualized property rights, free labour, and free markets combine to sustain a long-term development only fitfully advanced elsewhere (as in the Netherlands) to lay the basis for a revolution in agricultural productivity and breakthrough to factory-based industrialization. Yet, the price of British progress was the death of the historic landed peasantry.

Against this vision, widely shared despite disagreement over causal explanation between the neo-classical and political economy schools, these pages propose a model of early modern European village history which concentrates foremost on the maintenance and reproduction of the self-sufficient family farm. Its proprietors figure here, ideal-typically, as householders free of the necessity to resort extensively to wage-labour and capable of developing their holdings into small-scale engines of market production. Such farms must be conceptualized in an historical setting in which European villagers were everywhere subject to seigneurial lordship or landlordism, whether as serfs, seigneurial subjects, or freemen. So too were they universally, if variously, subject to rents, taxes, and often conscription too. They occupied their farms under widely differing tenures, with correspondingly varying property rights, though never altogether without some degree of ownership in fixed capital, farm stock, or other mobile goods. Everywhere, individualism and collectivism co-existed in differing proportions.

This paper aims to delineate a sphere of comparative history within which self-sufficient family farms, despite the many ways they differed across Europe, figure as a major stratum of European society which, in the post-medieval half-millennium, did *not* disintegrate under the advancing tread of capitalism. Instead, many family farmers themselves became successful agrarian entrepreneurs, while others managed at least to survive through market production. In political life, although they inhabited widely differing legal and institutional settings, landed villagers – whether juridically free or feudally hobbled – stubbornly pursued their self-interest, preferring judicial to armed solutions, though (like any human group) not foreign to the temptations of violence.

Some may think the English word yeomanry non-exportable. But if it is understood to refer less to a politically enfranchised freeman agriculturist than to a family farmer (whatever his legal disabilities) living, in good times, in rustic sufficiency, engaged in market production with opportunities for surplus-accumulation (in one or another form), the experimentation-friendly reader will not step down from this train of thought.

**Alessandro Stanziani** (CNRS)

*Russian serfdom in a global history perspective*

Since the eighteenth century at least, comparisons between Europe and Russia about labour conditions have been made as if the boundary between free and unfree labour was a-historically and universally defined. Free labour in the West is thus opposed to serf labour in

Eastern Europe. We wish to offer an alternative approach. We will show that, unlike common beliefs in history, sociology and economics, in Russia a clear and formal serfdom rule was never adopted in law. Over a century and a half, we rather find a considerable number of rules defining limits to mobility in case of debt (as for workers in Europe) and rules defining who had the right to claim these rights or to be submitted to. The institutional definition of social groups (nobility, peasants, bourgeois, etc.) was the real stake of these rules.

The way economic actors mobilize these rules in judicial disputes will complete this analysis. In the decades before the official abolition of what was called, only after the 1840s, 'serfdom', there were considerable shifts in the legal statutes of the peasant population from private to state peasants, the latter being free to move. Administrative legal decisions and judicial settings were at the origin of this phenomenon involving not less than a quarter of the whole peasant population of Russia.

Quite the opposite, in eighteenth- and nineteenth-century Europe, labour contracts were not those which are usually identified by economic and historical analysis. Labour was much closer to a service than to free bargaining. Debates and litigations concerning the master and servant act in Britain and the colonies and the *louge d'ouvrage* or *louage de service* in France will be evoked.

**Steven Nafziger** (Williams College)

*Inputs and outputs to primary education in Tsarist Russia*

Education and human capital investment – especially at the primary level – are widely acknowledged as key components of the development process. However, economists continue to debate which inputs matter for achieving educational outcomes and why. Modern evidence is mixed as to whether greater expenditures, better teachers, or various other characteristics of the educational process actually matter for school attendance, academic attainment, or graduation rates. Recent studies by economic historians have considered aspects of the education production function in contexts as varied as Colonial India, the antebellum United States, and early twentieth-century British Columbia. In the nineteenth and early twentieth century, perhaps the key determinant of human capital investment was the actual supply of schooling: where schools were located and how access changed over time.

This paper explores the expansion of primary schooling and the education production process within these schools in the context of late-Tsarist Russia. Starting from a very low level, the Russian empire saw an increase in the number of primary schools per capita between the 1870s and the 1910s. Government spending on education increased, the number of teachers (especially women) grew, enrollments crept upward, and adult literacy rates slowly converged towards Western European levels. However, no empirical work has investigated these processes. Historians have provided detailed studies of curriculum changes, the professionalization of teaching in the period, and some basic quantitative evidence on support for education by different levels of government. This research has focused either on detailed analyses of particular provinces or schools, or broader issues of central government policy-making. But the Russian empire was incredibly diverse, and this heterogeneity offers an intriguing opportunity to investigate the variation in schooling inputs and human capital outcomes.

In this vein, I will take advantage of two detailed surveys of Russian primary education in 1894 and 1911. These research efforts collected data on the number and kind of schools, teacher quality, attendance, and other inputs into the education process. These surveys offer data at the level of the district and by the type of school (locally funded, church, informal, etc.). These sources are especially unique in that each survey was executed on one day (or drawing on records from one day) and were intended to document *every* primary school in the empire.

Two main questions will drive the empirical work in this paper. First, what determined the variation in school availability across European Russia? Recent studies in other contexts

have pointed to population heterogeneity and political institutions as key reasons for why certain communities or regions possess different levels of schooling. By combining data from the two surveys with additional district-level information on demographic, economic, and political characteristics from a variety of other sources, I will test for what factors were important correlates of the variation in primary schooling across the empire. The second part of the paper will employ the same dataset to study the relationship between different educational inputs and two outcomes: attendance and graduation rates. Were teacher quality, school resources, or local social and economic factors important for human capital investment decisions in the Russian context? How did the education production process vary according to the ethnic and religious characteristics of the district? These two components of the paper will help inform our understanding of the role played by primary education in the process of economic development in late-Imperial Russia.

## I/D Finance

Chair: **tba**

**Alan Booth** (Exeter) & **Mark Billings** (Nottingham)

*'Between a rock and a hard place': British banks and working class customers, 1945-70*

In the 1950s, the Radcliffe Committee drew attention to the limited provision of banking services for ordinary British working class families. As part of its analysis of underlying inflationary pressures in the UK, it suggested that workers were encouraged to accumulate cash balances because British banking institutions failed to serve the needs of the great mass of the population.

The large commercial (or clearing) banks were perceived as conservative institutions with unadventurous managements. They were subject to various types of lending controls and collective agreements covered important parts of their activities. Frequently described as 'the banking cartel', these arrangements were also a device accepted by government to assist in the implementation of monetary policy. The unhelpful business hours and middle class image of the clearing banks were unlikely to attract working class customers. Other possible providers of services to such customers were also constrained: the clearing banks' conservatism was shared with that of the Post Office Savings Bank; and the trustee savings banks (TSBs) faced regulatory restrictions on expansion.

The Radcliffe Committee suggested the creation of a continental-style giro bank, to be owned and operated by the clearing banks or the Post Office, to fill the apparent institutional gap and improve the monetary transmission mechanism. This created difficulties for the clearing banks in particular. These banks recognized that rising household affluence and income security offered profitable opportunities, and were strongly positioned to take advantage with large and well-dispersed branch networks. However, they feared the processing and monitoring costs of many small accounts that might have a tendency to be overdrawn at frequent intervals. As progress towards the Post Office's National Giro gathered momentum other 'traditional working class financial institutions' sought to extend their range of services into quasi-current account business (for example, the TSBs sought to extend their range of services by offering cheques). The clearing banks were caught between a rock and a hard place, simultaneously wanting and fearing new working class business.

We approach this topic from two directions. First, it is a socio-economic history of Britain in the 1950s and 1960s, which builds on the work of Paul Johnson and Peter Scott on the stratification of working class household incomes in the interwar period, and connects with the 'affluent worker' literature of the early 1960s. At another level, this is a study of postwar business strategy in a segment of the financial services sector that was regulated, cartelized in some aspects of its activities, but sensed greater competitive pressures. We argue that the clearing bank cartel was better at blunting competition from outside than from within, helping to shape the context of inter-clearing bank competition (through cheaper processing via computers) for at least two decades. We seek to challenge the meta-narrative of financial services in which the stultification of the cartel acted as a significant negative influence on the vitality of the sector until regulatory change in the 1980s.

**David Green** (King's, London) & **Janette Rutterford** (Open)

*Spreading the net: distance, shareholding and the geography of risk in England and Wales, 1870-1935*

Geographers have long been aware of the importance of the friction of distance as an impediment to the flow of information. Studies of the diffusion of information have emphasized how the take up of innovation depends on the spatial location of individuals. Drawing on these ideas, this paper explores the relationships between individual shareholders and types of shareholdings. Different share types and securities (i.e. ordinary, preference,

debentures) carried different levels of risk. Better access to information could help to reduce such risk and as such proximity to sources of financial knowledge was an important factor in influencing the geographical pattern of share ownership in any given company. Over time, information became more widely available through the financial press, a growing number of investment manuals and an increase in the number of stockbrokers and accountants. Prompted by improvements in communications and the spread of financial information, did the relationships between companies and investors change?

This paper addresses that question by exploring the relationships between distance and risk through an analysis of the geography of shareholding of some 38,000 individual shareholders in England and Wales between 1870 and 1935. It pays particular attention to the importance of gender as well as distance in shaping the pattern of shareholding during this period. At the start of the period, women tended to prefer less risky types of shares and also generally lived further away from company headquarters. By contrast, male investors tended to prefer riskier ordinary shares and typically were located closer to company offices. Over time, these differences diminished. Spatial differences for both male and female shareholders became less important as communications improved and financial information became more widely available. This in turn helped to widen the geographical scope from which investors were drawn. This was particularly important for women who increasingly invested in riskier, ordinary shares. Over time, therefore, the distances between owners of ordinary shares and company headquarters increased. Companies increasingly drew their shareholders from a wider geographical pool.

Most explanations of the growth in the number of shareholders have focused on aspects of investment such as the availability of lower share denominations, the relative cost and returns of share ownership and increased company floatations. The implications of this research are that the geographical diffusion of share ownership was also a key component in understanding investment practices and encouraged a wider range of individuals to become shareholders. As such, geography played an important part in the construction of Britain as a nation of shareholders.

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<http://www.womeninvestors.org.uk>

**Stefano Battilossi & Stefan O Houpt**(Carlos III, Madrid)

*Predicting institutional collapse: stock markets, political violence and the Spanish Civil War, 1920-36*

Could the outbreak of the Spanish civil war have been predicted? We explore this issue by looking at the behaviour of Spanish investors in the 15 years that preceded the dramatic events of July 1936. Two major phases of political instability characterized this period. The first one, opened by the general election of December 1920 and the assassination of a prime minister in July 1921, was brought to an end by a military coup in December 1923. The second one, after the fall of Primo de Rivera's military regime in January 1930, witnessed a major political regime shift, with the proclamation of the II Republic, three general elections, repeated government crises, and frequent outbreaks of political violence and military uprisings. Also in the light of the 1920-23 antecedent, did economic agents interpret such instability as a run up to a major regime switch?

The paper tests the ability of financial markets to assess ex ante the risk of extreme political events which may have posed a serious threat to the survival of the existing economic order, such as a revolution or a civil war. Financial markets offer several advantages for a historical analysis of market actors' expectations. Data provided by efficient financial markets reflect knowledge and information available at each point in time, including investors' expectations and 'sentiment' about the future. These are transmitted to asset prices



as any error in assessing the impact of current or future developments on assets' value risks to impose a monetary loss on investors (Frey and Waldenstrom 2004).

Our approach elaborates on a growing body of empirical research, both historical and contemporary. One recent stream of literature investigates the impact of political, institutional and military events on asset prices. Willard et al (1996) inspect the impact of military events during the US civil war on the market for greenbacks. In the same fashion, a recent series of papers finds systematic evidence of the impact on bond prices of political and military events before and during the Second World War (Frey and Kucher 2000 and 2001, Brown and Burdekin 2002, Oosterlinck 2003, Frey and Waldenstrom 2004). Another stream of literature focused on the volatility of aggregate stock market returns during the interwar period. In a seminal paper, Schwert (1989) argues that the unusually high volatility of the US stock market during the Great Depression can be explained only by investors' expectations about an adverse regime switch.

Bittlingmayer (1998) suggests that the extreme volatility of German stock market returns in the 1920s were largely determined by political events. This interpretation is challenged by Voth (2001), who finds no empirical evidence supporting the hypothesis that social or political uncertainty significantly affected asset prices in interwar Germany. However, Voth (2002) also finds that indicators of social unrest and the probability of a violent challenge to the economic status quo significantly contributed to the volatility of share prices in a panel of 10 industrialized countries in the period 1919-39.

In order to assess investors' response to political violence we have reconstructed two original time series: an index of the Bilbao stock exchange and the yields of government bonds at weekly frequency from January 1920 to July 1936. We have also collected weekly information on volumes of stocks and bonds traded. We prefer Bilbao to Madrid because of the former's characteristic of an industrial stock exchange, whereas Madrid traded predominantly in government securities. We formally test the impact of political events on stock price returns and government bond prices and yields in an event-study fashion. We model our time series as GARCH processes and search for abnormal returns (either positive or negative) and structural breaks in their level and conditional volatility. We also use dummies in order to empirically test to what extent abnormal returns were related to political events and violence (including social and military uprisings). In order to isolate the impact of political events, we also control for the influence of macroeconomic factors, such as economic activity, inflation and monetary variables, for which an original dataset has been constructed. We find some preliminary evidence suggesting a significant impact of major political events and surges in violence on stock returns and bond yields. The general election of February 1936, with the victory of the Popular Front, emerges as a possible turning point in investors' expectations about the survival of the existing political and economic regime.

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## I/E International Trade

Chair: **Matthias Morys** (York)

**Jean-Pierre Dormois** (Strasbourg)

*The art of simulation; or, did the Third French Republic just pretend to be protectionist?*

Ever since its passing into legislation in 1892 the notorious French Méline tariff has attracted much attention from scholars interested in political economy. To some it represents the ideal counter-example to the Classics' argument in favour of free trade. Bairoch following a long tradition of analysts perceived this measure as the final conversion of the French government to protectionist policy after the 'liberal interlude' created by the Cobden-Chevalier treaty of 1860. Such a view is based on the pronouncements of policy-makers (such as Méline's own speeches), the debates among legislators, the arguments put forward by supporters and opponents alike and is corroborated by the observation of the course of the tariff rate thus interpreted as that of 'nominal protection.' In this paper I question both the protectionist nature of the Méline tariff and its effectiveness. Finally I ask why did people interested in the issue believe it did have the desirable or undesirable (as the case may be) effect.

Firstly I dissect the composition of customs revenues and their relative incidence by classes of commodities over the period 1850-1940 (after minor readjustments the Méline tariff was put back in force after the Franco-German tariff agreement of 1927). The fiscal aspect of a customs tariff so apparent when its promoters defend it (as in the case of the US, Australia and other 'white dominions') is first revealed by the use of heavily taxed 'fiscal products' without domestic substitutes. These cannot reasonably be included in a protection indicator. The same reasoning applies to a vast number of individual intermediate products given the overwhelming proportion of intra-industry trade in foreign trade. Next I test the proposition, often debated at the time, that the agricultural tariff rescued (or conversely irremediably condemned) the French farming sector. Are the rise and fall of farming imports indicative of the (in)effectiveness of the tariff or of other determinants? The overall effects of the tariff are then assessed in a third section. Finally I examine the reasons why, in the absence of any positive proof of its effectiveness, the tariff has remained such a popular policy instrument – with politicians, and the voters as with intellectuals.

**Jari Eloranta** (Appalachian State) & **Cristinia Moreira** (Minho)

*US-Portuguese trade in the era of the first real world war and beyond: instability and opportunity, 1796-1831*

The transition from the end of the eighteenth century to the first decades of the nineteenth century was marked by political instability in Europe. The expansion of the ideals of the French revolution, and the spread of the global war driven by aggressive Napoleonic France caused deep instability in Europe. Across the Atlantic, other wars were giving birth to new nations and the world was facing tremendous changes. The understanding of the trade relations between US and Portugal from 1796 to 1831 can contribute to a deeper insight into an understudied period in terms of international trade. Overcoming a major lack of studies regarding trade relations between Portugal and the US at that time, a new database has been created by the authors, based on new Portuguese sources. This research was then analysed in conjunction with American quantitative data and several qualitative sources.

This paper taps into an important field of analysis, namely the discussion of the economic impacts of war on trade as well as the role of smaller ('weaker') states in wartime situations. Many scholars – including Alan Taylor and Reuven Glick; Lance Davis and Stanley Engerman; as well as Ronald Findley and Kevin O'Rourke – have recently analysed the disruptions caused by major conflicts like the world wars. And recent scholarship, as presented by, for example, David Bell, certainly puts the revolutionary wars and the ensuing Napoleonic conflicts into the same category. However, these scholars have paid relatively

little attention to the smaller players in these wars, often assuming that they occupied an insignificant role in the conflict. Portugal, in particular, suffered three French invasions during Napoleon's rule, and, since it did not adhere to the Continental blockade, it experienced trade restrictions with several of its former suppliers. Thus, the Peninsular War caused severe disruption of agricultural production in Portugal, and the United States, despite its strained relations with an ally of Portugal, Great Britain, became a key supplier for the Portuguese market. By cross-checking data from five primary sources, it became very clear that the most relevant period of US exports to the Portuguese market was 1807-12. The main products imported from the US during that period were cereals, both as grain and as flour. The sudden increase in the demand for cereals was clearly due to the need to feed the Portuguese people and the Portuguese and English armies, fighting the French on Portuguese territory. Clearly, the threatened position of the peninsula awarded the Portuguese some room to manoeuvre in the international markets, despite alliance commitments.

As a consequence of the close relations between the Portuguese and British empires, already established as an ancient alliance and strengthened during that critical period, in the early years of the nineteenth century England was both the main supplier and client of the Portuguese market. In the period from 1808 to 1813, when some external markets such as Holland, Prussia, France, Denmark and Hamburg ceased their trade relations with the Portuguese (the latter three from 1809 onward), the English, American and Spanish merchants pursued this trade in their absence. Although distant, the American market in fact took on a key position in terms of imports during the Peninsular War, a reality which deserves to be highlighted and analysed further.

After 1812, the war pitting the United States against England brought new difficulties for US-Portuguese trade, as US shipments with cereals and flour were frequently captured by England. Meanwhile, Portugal exported mainly wine, silver in the form of Spanish *patacas*, and salt, although the export values were much lower than the imports during the period of more significant trade. Also striking is the prominent position of the Portuguese market as a US client market, during the Peninsular War, reaching more than a 10 per cent share of all US exports from 1809 until 1813. The reversal of the political situation after the second defeat of Napoleon and the Congress of Vienna once again changed the external environment for trade.

In this paper we want to analyse the changes in Portuguese trade relations, both in terms of goods exchanged and policies, with the United States during an extremely turbulent period in history. We want to explore the following questions: 1) What kinds of changes do we see in the trade flows between these two countries, especially whether the pressure of the war effort allowed more latitude for Portugal to explore its trade options; 2) Do we see substantial changes in the types of goods exchanged over this complex period? 3) What was the significance of this trade for both countries? In terms of the first question, we indeed do observe a change in Portugal's position to engage in trade due to the pressures of the war. There were also changes in the composition of products traded, and, furthermore, this trade was large enough to be of significant economic value for both trading partners in the midst of this period of conflicts. In sum, the exchange of American cereals for Portuguese goods, in a context of the deep instability that existed in the early nineteenth century, can be assumed to have linked both sides of the Atlantic Ocean in mutually beneficial trade. Yet, the context of this trade and its impact needs to be studied in detail, which is indeed our goal here.

**David S Jacks** (Simon Fraser & NBER), **Christopher M Meissner** (California, Davis & NBER) & **Dennis Novy** (Warwick)

*Trade booms, trade busts, and trade costs*

What has driven trade booms and trade busts in the past 130 years? We construct a new balanced sample of bilateral trade flows for 103 country pairs across the Americas, Asia and Europe. We then use a micro-founded measure of bilateral trade costs derived from a standard and basic gravity framework to gauge the importance of trade frictions in determining

international trade flows. We demonstrate an overriding role for declining trade costs in accounting for the pre-First World War trade boom. In contrast, for the post-Second World War trade boom we find a more muted role for trade costs and identify the growth of output as the dominant driving force. As determinants of changes in trade costs we find important roles for trends associated with improved communication and transportation, exchange rate stability, and tariffs. Historically transportation and communication improvements and stable exchange rates seem to have played roughly equivalent roles. Since 1960 however, exchange rates diminish in importance so that tariffs and improvements associated with transportation have been paramount.

## I/F Health

Chair: **Barry Doyle** (Huddersfield)

**Martin Gorsky** (Hygiene & Tropical Medicine), **Aravinda Guntupalli**, **Bernard Harris** & **Andrew Hinde** (Southampton)

*Analysing long-term trends in sickness and health: further evidence from the Hampshire Friendly Society*

The last two decades have witnessed a significant increase in the number of studies which seek to use the records of friendly societies and other organizations with health insurance schemes to reconstruct the history of sickness and morbidity, but the majority of these studies have tended to rely on aggregate records, especially for the period 1870-1914 (see e.g. Riley 1997; Murray 2003). In a series of earlier papers, we used a small-scale survey of records from the Hampshire Friendly Society to conduct a preliminary analysis of the sickness experience of around 800 individual members of the Society between c. 1870 and 1950 (Edwards et al 2003; Gorsky and Harris, 2005; Gorsky, Harris and Hinde 2006), but we have now assembled a much larger sample containing information about more than 5,000 individuals who were eligible for benefit over an 80-year period.<sup>583</sup> In the current paper, we aim to use these records to conduct a more detailed investigation into two specific questions: first, to what extent have changes occurred in the age-of-onset of chronic morbidity; and, second, what is the relationship between the historical experience of age-specific morbidity and changes in the causes of sickness claims?

### **The age-of-onset of chronic morbidity**

During the last 30 years, there has been a great deal of debate, involving not only historians but also economists, demographers and medical researchers, about the relationship between trends in sickness and mortality. Fries (1980) argued that morbidity had been ‘compressed’ because the age-of-onset of chronic morbidity had increased whilst the ‘maximum’ human lifespan remained unchanged, but this argument has been challenged in different ways by Riley (1997), Olshansky et al (1991) and Costa (2000; 2002). Our paper will contribute to this debate by exploring the relationship between sickness and age among successive cohorts of men who joined the Hampshire Friendly Society from the 1820s onwards. Our previous work demonstrated that both the incidence and, especially, the duration of sickness episodes increased sharply beyond a certain age (see e.g. Edwards et al 2003: 144-8). By drawing on a much larger sample of records, the current project will also enable us to show whether the ‘critical age’ for the onset of chronic morbidity changed over time.

### **The causes of increased morbidity at older ages**

Although previous studies have demonstrated that both the incidence and the duration of sickness episodes rose with age, it has been more difficult to explore the relationship between these changes and the causes of morbidity. However, from 1892 onwards the officers of the Hampshire Friendly Society recorded not only the number of days on which a member received sick pay, but also the conditions for which it was paid. We can therefore use these data to examine whether older members experienced longer sickness episodes because they took longer to recover from similar conditions, or because of differences in the nature of the conditions to which they were subject. The paper will also enable us to shed new light on the distribution of non-fatal illnesses in the late-nineteenth and early-twentieth centuries, when the majority of such conditions were not normally recorded.

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<sup>583</sup> The collection and analysis of these records has been facilitated by the award of an ESRC grant (RES-062-23-0324).

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## Beatrice Moring (Cambridge)

### *Milk, meat, men, women and modernity*

Today many western societies are faced with the increasing problem of obesity and its health consequences linked to the excessive use of unhealthy food. A hundred years ago food and diets were also under scrutiny. Surveys showed that the urban working class survived on diets that did not sustain health and well-being. While we today eat too much, in the past people could not afford to eat enough. However, in the past as today questions were also raised, not only about the quantity of food but also its composition. As a result many studies exist that fairly faithfully record how the families structured their spending. The aim of the presentation is to raise the question whether the nineteenth century changes in diet identified with advancement and a more urban life style potentially had a negative effect on the health of women and children. The core question will relate to the issue of choice and distribution in a situation of shortage. Could it be possible that the porridge, milk and potatoes of Scottish labourers and other agrarian regions gave women and children a better chance than the pork, white bread and tea of southern England.

The study will approach these questions using the Medical Officers Report to the Committee of the Privy Council, Conditions of Nourishment (Smith 1864), turn of the century diet studies and literature analysing food consumption in working class families.

The survey of 1864 recorded the diet in labourers' families in England, Scotland and Wales and included detailed information from different regions making possible a comparison of the presence and quantities of certain foodstuffs. It also recorded information from families in urban and rural areas. The data made clear several regional differences in lifestyle and diet. The families in Scotland and Wales consumed considerably more milk than those in the English countryside. Their diet included more oats and barley, which was eaten as porridge or mixed with wheat and baked into bread. Home baking was much more common as baking ovens were commonplace. Keeping cows, pigs and chickens and growing potatoes and other vegetables was far from unusual. In southern England, particularly the south-east no animals were kept, bread was bought from the bakers and milk was only put in tea. In some areas farmers fed the milk to their animals rather than selling it to the labourers. In other places



milk was only available at some distance and was therefore not acquired. White bread was considered desirable and little interest was shown in other types.

The choice of foodstuffs and greater or lesser processing in the household is not only a food issue. Jane Humphries has analysed the effect of industrialization on working class women and demonstrated their marginalization and increasing dependency. The unwillingness or incapacity of labourers' wives to bake bread was commented on not only in this survey but also in others at the turn of the century. It was sometimes pointed out that some families lived in the kind of housing that lacked a suitable oven for baking. The fact remains that while industrial baking relieved the women of work, it also deprived them of an important skill, a task and a source of warmth. The liberation of women through industrialization from tasks connected to food and clothes production also undermined their authority, their economic importance and increased their dependency on an earning husband. Although a confirmed believer in the blessings of the male breadwinner system, Smith points out the advantages for the families where the mother has been able to find work in the fields. Not only does she bring in money for the family, she also has a meal at the farmers' table, which improves her health and well-being.

Meat has in many studies been used as a measure of standard of living, the larger the meat consumption the better the situation has been assumed to be. Smith, however, revealed that the presence of meat in a family budget could by no means be assumed to benefit all the family members. In any situation of shortage, or even at other times, the male head of the household had all or most of the meat. Repeatedly the survey revealed that the father had bacon or other meat while the wife and children survived on tea and bread. In such a situation calculations of calorie consumption dividing what was available for the family into adult equivalents will be misleading. One person walked away with half the family calories. Where the family diet consisted to a larger extent of milk porridges, all the family members had access to the food. Smith, however, comments on the tendency of the Scots, when moving south, of giving up their traditional diet and being amalgamated into a more modern system of tea, white bread and sugar.

In an urban male bread-winner system it might seem rational to maintain an unequal distribution to guarantee the working potential of the breadwinner. The husband 'needed' meat to be able to work, therefore the wife deprived herself and her children of nourishment, not only in Britain but also in urban areas in other parts of Europe. Studies from the early twentieth century have, however shown that the 'need' of the husband to have the meat was there even when he was unemployed. In some situations the males of the household were a drain on the resources. When the husband had departed to the next world or the next town, the wife or widow could rearrange her spending. To illuminate the aspect of different spending priorities calculations have been made of the diet of female-headed households in early twentieth-century Finland, compared with those including a male breadwinner. The comparison revealed some interesting differences. When women made the decisions they made radical cuts in meat consumption and gave priority to milk and grain products. If meat is used as the way to measure well-being, the female headed household were worse off. If a calculation is made of available protein the image is radically different.

Smith drew the conclusion the English worker was reasonably well fed. He raised, however, some questions about the situation of their wives and children. It would seem that the milk porridge was possibly more democratic and beneficial for the weaker family members than the rashers of bacon they were not allowed to taste.

**Leonard Schwarz** (Birmingham) & **Jeremy Boulton** (Newcastle)

*Reassessing the decline of smallpox in later Georgian London: a new approach*

Recent work has established that smallpox was endemic in eighteenth-century London. It has also been demonstrated by Landers that the incidence of the disease was at its most serious in the first half of the eighteenth century, and that it declined thereafter (Hardy, Landers,

Razzell). In the early eighteenth century it was endemic amongst the capital's infants and children, and common amongst new immigrants. Why the disease became less prevalent in the second half of the eighteenth century, however, has not been given much empirical attention, although a number of plausible – but untested – mechanisms have been suggested. The principal reason for this is that most of the material we have about eighteenth-century smallpox victims is either derived from institutions devoted to their care or comes from sources that do not allow us to find out anything at all about them. The Bills of Mortality, for example, Landers' main source for his pioneering study of smallpox, are aggregated numbers only. To understand and analyse the decline of this much feared and disfiguring disease, therefore, one needs a source that identifies a representative cross section of smallpox victims at a fine level of detail.

Such a source exists. The Sextons' burial books from the Westminster parish of St. Martin-in-the-Fields (population c. 30,000) supply a unique level of detail about the dead. These reports provide the name, gender, age, address, cause of death and burial fee of almost everyone dying in the parish between 1747 and 1825. This source lies at the core of what will be an investigation of unparalleled depth into the decline of smallpox in Georgian London. With the aid of appropriate cartographic software we are in a position to map, for the first time, individual smallpox deaths at street level, to analyse the characteristics of the victims by age, sex and social status and undertake 'forensic' studies of particularly serious local epidemics.

## II/A Women and Academic Careers

Chair: **Francesca Carnevali** (Birmingham)

**Helen Julia Paul** (Southampton)

*Women and economic history research in UK higher education: results from the EHS census*

The health of the Economic History profession has been a subject of debate for some time. Some have claimed that Economic History is a subject in decline, especially with regard to the highly mathematical type of cliometrics. In addition, in the UK the Research Assessment Exercises (RAE) have changed incentives for researchers and institutions. Some of these changes have had unintended consequences, particularly influencing decisions on hiring and promotion. This paper addresses some of these concerns especially with regard to women's careers. It uses data from the census of researchers of Economic History. This census was funded by the Economic History Society (EHS) and the data was gathered from the websites of HE institutions.

There are drawbacks to this method of data collection. For example, the dataset is not as rich as would be expected from a questionnaire survey, but it is broader in scope. It includes researchers in atypical departments as well as the more usual History and Economics departments. The data was analysed largely with logit and probit models. The underlying distribution of researchers across ranks is different to the parent disciplines of Economics and History. Researchers are concentrated at the upper ranks with fewer early career researchers. There is a gender effect with regard to rank, as women are concentrated at lower ranks. This may partially be due to cohort effects, as there were fewer women entering academia in earlier cohorts. However, there is evidence that the RAE has created distortions by giving greater bargaining power to those of higher rank. This may mean that gender effects persist, even though women are entering academia in larger numbers.

Regarding EHS membership, gender effects were not significant, although departmental affiliation was. The gender effect on rank disappears when using a dataset of EHS membership only. This may imply that society membership offers women researchers some sort of protection from the difficulties posed by the RAE or the supposed decline of Economic History as a discipline. This may be due to networking or mentoring within the society.

**James Walker, Marina Della Giusta** (Reading) & **Anna Vignoles** (Institute of Education, London)

*The gender pay gap in academia*

Over the last few years there has been a surge in the literature investigating both the gender pay gap (female-male earnings ratios) and occupational segregation (predominantly female occupations paying less) in a variety of settings ranging from international comparisons to sector-specific studies, and addressing a range of possible explanatory characteristics. The policy implications from considering all the factors leading to unequal pay can be substantial, as witnessed by the case in 2004 of the £300million equal pay case won by Unison on behalf of women health workers in two Cumbrian NHS hospitals, which has been quickly buried in the news for fears of the repercussions it could have across the whole of the public sector. The issue is of current relevance since as part of the new Equality Bill (2007) the public sector in the UK is asked to take proactive steps to positively promote equality rather than solely taking steps to prevent discrimination.

This paper provides a summary of two strands of an on-going project on academic pay. The first strand provides context to the debate by providing comparative estimates for academic men and women across three countries – the US, UK and France – between 1992-2005. In their examination of UK academia Walker, Vignoles and Collins (2008) showed that academics are underpaid and overworked compared with other graduate professions – and this

is likely to have consequences for the quality of UK degrees. The study also showed that, women were paid 9.5 per cent less than male graduates, but that, compared to other female graduates, female academics did not fare any better or worse.

While work examining how women are paid relative to men across professions and nations provides useful context to the debate it does not identify the mechanisms underlying the pay gap. The second strand of the project uses detailed information on individuals in a specific institution to examine the mechanisms that lead women to have lower wages than men by relating wages to how promotion occurs, for example whether women are willing to pursue outside options in the form of jobs in alternative institutions, children, relative publication and teaching success.

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## Janet Hunter (LSE)

### *Economic history careers and LSE*

The gender profile of academic employment remains an issue of ongoing concern, and research has long identified the existence of structural and societal constraints that have sustained gender inequalities in higher education work. Recent analysis of gender equality issues among staff and students at LSE has underlined the difficulties of overcoming such constraints, and highlighted the fact that despite major efforts to promote gender equality across the School significant disparities between men and women persist in terms of pay structures, promotions and length of contract. While during 2007-8 LSE had more female than male students at both undergraduate and postgraduate levels, women were well under 50 per cent of all permanent and fixed term academic staff. As of 2008-9 only 23 per cent of the LSE professoriate was female. Some of these gender disparities are mirrored in the faculty and student profile of the Economic History Department, which has only two tenured female faculty but large numbers of female students. The gender profile of tenured faculty has remained unchanged over a long period, as, unlike at most other universities, at LSE all recent tenured appointments in economic history have been of male academics. This short presentation argues that the gender imbalance in economic history at LSE is in part the outcome of broader LSE-wide and external issues, but that it is also in part the consequence of the international character and location of LSE, its strong social science identity, and the broad spectrum of geographical coverage and methodological range within economic history. For the sake of the future of the discipline at LSE, ways have to be found of addressing this imbalance.

## Jane Humphries (Oxford)

### *Women in economics*

Since 1996 the Women's Committee of the Royal Economic Society has undertaken bi-annual surveys of the gender proportions at various grades in employment in the economics departments of UK universities. The resulting longitudinal data is probably unique in British academia and documents trends over time in gender balance. I focus below on the findings from the sixth survey written by Andreas Georgiadis and Alan Manning.

The main features that stand out in the 2006 survey are:

- women are 20 per cent of all academic staff in economics;
- women are under-represented among professors – one in three men are professors compared to one in six women;
- the proportion of women is higher in research jobs than in standard academic jobs;
- the proportion of women is higher among part-timers than full-timers;
- 15 per cent of staff are from ethnic minorities but only 9 per cent of professors;
- the response rate among departments is not high – 47 per cent. Many departments give the impression of being uninterested in the exercise.

## II/B Social Networks

Chair: **Anne Murphy** (Exeter)

**Thomas Max Safley** (Pennsylvania)

*The role of social networks in the bankruptcies of early modern merchant-financiers*

This paper addresses the role of social networks for the establishment of credit relations, the transfer of business information and the settlement of bankruptcy proceedings among early modern, German merchant-financiers. Discussion will focus on the failures of Ambrosius and Hans, the Brothers Höchstetter and Associates, 1529, Bernhard Schoch, 1545, Markus Ulstett and Brothers, 1564, The Common Fugger Company, 1565, and Conrad Roth 1579. By examining the business records of these selected firms and the legal proceedings of their bankruptcies, this paper will address the relevance of social network theory for the study of early modern economic relations.

Social networks are structures that connect individuals or groups, in the cases at hand, merchants and their associates, especially debtors and their creditors. A relatively recent phenomenon – the term was coined by JA Barnes in 1954 – the study of ‘social network’ has emerged as an important methodology in many fields. Research in sociology, anthropology and history has demonstrated that networks operate on many social levels and play a role in many social processes.

In simplest terms, social network theory views social relations as structures made up of nodes and ties, that is, of agents and the relationships between them. These structures can take many shapes, but theorists distinguish broadly between two types: ‘closed’ networks that have fewer nodes and stronger, often redundant ties; and ‘open’ networks that have more nodes and looser ties. Generally speaking, it is thought that open networks have more various and multivalent connections to a wider world and are, therefore, more open to new information, new relationships and new engagements. Looser ties also permit nodes a greater degree of initiative and freedom.

This brings us to the advantages and disadvantages of social network analysis. Traditional social analysis takes as its focus the attributes and actions of individuals, but network analysis focuses on the relationships and transactions that bind individuals together. Though this approach has proven useful in explaining many phenomena, it clearly limits the potential for individual agency, a person’s capacity to influence his own success or change his course of life. It limits as well any capacity for social dynamic. Networks may – and obviously do – change over time, as the notion of ‘openness’ indicates, but the very act of defining a network also fixes and obscures this fact. In a sense, the very act of changing disrupts and dissolves a social network.

Social network theory would seem to have relevance for the study of early modern business and bankruptcy. Merchants constructed their businesses through ties of personal relationship. Case documentation identifies their spouses and children, their partners and competitors, their employees and customers, their creditors and debtors. It reveals not only the nature but also something of the intensity of those relationships: how much intimacy; how much value; how much frequency. Were these firms, themselves social networks, connected to other social networks? Were these networks an integral part of the rise and fall of these firms?

Social networks – or, at least multiple relationships among individuals and families – seem to have played a role in the rise to power and prosperity of most early modern merchant-financiers. Their marriages suggest a strategy of upward mobility and, possibly, financial advantage. It seems equally clear, however, that they did not pursue a similar strategy in business. They did not foster ties to elite merchants that might have assisted family and firm in their need. There is almost no overlap between the set of families, from whom marriage partners were drawn, and the set of families, from whom business partners were drawn. Put



another way, the social networks that become visible in bankruptcy cases fostered connections not among social equals, but among social unequals. Is lack of connection a hallmark of bankruptcy, of social and economic failure? Certainly, social network analysis makes little allowance for questions of motive or strategy, tending to simply complex human relationships into series univalent bipolarities, that is relations binding two agents in a single manner. It has difficulty explaining multivalent relationships.

Yet, the role of these networks seems less clear in a crisis. Networks did not save the bankrupts of my sample. On occasion, ties of relationship provided a basis for credit transactions. It should be emphasized that these ties were usually multivalent, that is, that large-scale credit transactions involved families redundantly tied to one another through business and marriage. Yet, none of the families, to whom they maintained ties of marriage or partnership came to their assistance once the bankruptcy became public knowledge. Rather, they abandoned the bankrupts to their fate, or they pursued them for payment of debt.

Does social network analysis help us to understand the early modern firm and early modern bankruptcy? Among other things I want to know how open these networks were and how that openness functioned in the bankruptcy. Put more broadly, I want to know whether social network analysis helped us to understand social or economic success and failure.

**D'Maris D Coffman** (Cambridge)

*The failure of the protectorate excise farms: social network theory and the management of counter-party risk*

This paper explores the collapse of the Protectorate excise tax farms in 1659. Compared to French, Spanish and even Scottish experiences with tax farming syndicates, English excise farms (in use from 1650 to 1660 and from 1662 to 1683) failed infrequently. In the rare instances when groups of farmers encountered difficulties in the performance of their contracts, the regime usually stepped in to prevent collective collapse and to stave off individual bankruptcies. Unlike their continental competitors, the English state did not see revenue farming primarily in terms of privatization of risk. They frequently rescued their farmers, either by increasing allowances for defalcations or by aggrandizing the executive powers of the farmers to enforce compliance with the excise ordinances. Access to London capital markets assured successive regimes a steady (if expensive) supply of short-term loans to bridge shortfalls in tax revenues.

One important exception to this rough characterization of late seventeenth-century English public finance occurred in the last years of the Cromwellian Protectorate and was, in fact, one of the causes of its financial instability. For confessional and social reasons, Oliver Cromwell abhorred reliance upon established London financial interests. In re-establishing the ancient Exchequer, Cromwell adopted none of the innovations of parliamentary finance, choosing instead to award farming contracts to Independents in the city and to Puritan gentry in the counties. In the process, the Protector undermined the achievements of the Commonwealth *Committee for Regulating the Excise* in disciplining the fledgling excise establishment and antagonized both the sub-commissioners and the justices of the peace, while nonetheless insisting upon a statutory provision that required no successive farming contract be let for less than the previous year's rent. This practice, coupled with the introduction of gauging, resulted in sharply increasing, but widely unrealistic, valuations of the farms. Moreover, Cromwell's animosity towards groups who had previously lent funds to the Commonwealth narrowed his regime's financial base and alienated powerful interests in the Protectorate Parliaments. Although the sectional excise farmers who petitioned the Protector in February 1658 for relief were, in effect, 'too big to fail', Richard Cromwell's regime lacked the resources needed to rescue them.

An analysis of the failure of these farms and the subsequent workout after the Restoration illuminates the places of particular confessional and social networks as clients and as financiers of the Cromwellian Protectorate. New research, drawing heavily on un-

catalogued material found amidst the Adam Baynes manuscripts in the British Library, has made it possible to tease out the details of the farmers' individual and collective efforts to stave off bankruptcy. This material (in combination with the data gleaned from the Exchequer and Audit Office rolls) makes it possible to reconstruct precisely the Protectorate regime's failures in financial forecasting.

Despite the usefulness of social network analysis in characterizing the allegiances and interests of the players, it would not have predicted the failure of the excise farms. Instead, the inability (or unwillingness) of the Protectorate regime to hedge significant counter-party risks, which were borne by financial intermediaries under the Commonwealth and after the Restoration, eroded the ability of the regime to bail out its excise farmers at a critical juncture.

Those who shaped the policies of the Restoration Treasury understood this, not least because they conducted extensive investigations into the failure of the Protectorate excise farms. The results of their efforts have furnished us with the only reliable records of the financial operations of the Interregnum regimes. This paper ends by considering those investigations in some detail. To a surprising degree, the Restoration Treasury was able to diagnose what had happened and to prevent recurrences. Southampton and his associates applied their analyses of the failure of the Protectorate farms to their strategy for reintroducing revenue farming in 1662/3. This justifies a detailed comparison between the operation of revenue farming in the 1650s and the 1660s. In the latter period, the farmers enjoyed better financial protections, which came at the king's expense. After considering the conclusions contemporaries reached about the structural problems with the Protectorate farms, this paper asks if social network theory retains any value as an interpretative frame for understanding the role networks of private financiers in early modern public finance. If not, what mode of analysis should replace it?

**Ann M Carlos** (Colorado & University College Dublin)

*Financial crises and bankruptcy in early eighteenth-century England*

Bankruptcy laws create an incentive for investment because they help define the set of property rights, in particular defining the role of residual claimants. But not all firms or merchants who could go bankrupt do go bankrupt. Credit relations between merchants and firms can provide support in times of financial crises. The seventeenth and early eighteenth century witnessed a shift from personal to more impersonal financial arrangements with the rise of financial intermediaries. None the less, personal, social and family connections continued to play an important role in terms of access to capital. These social and mercantile communities created sets of interlocking networks within which individuals and the nascent financial intermediaries operated.

This paper examines the role played by social network theory in helping to explain the extent of bankruptcy for those involved in the share market before, during and after the financial crisis of the South Sea Bubble. This crisis was not merely one of public finance. Individuals down the social ladder owned shares and those shares played an important role in their personal portfolio decisions. Shares provided income through dividend streams and potential capital gains, but equally, shares were a transparently priced source of collateral in the financial and commercial communities. Brokers and large traders in shares were in a position to attenuate the risk of bankruptcy for individual members of the group in large measure to protect their own positions. The paper explores the circumstances of individual bankruptcies paying particular attention to the issue of counter-party risk. Why did those particular individuals or merchants go bankrupt? Correspondingly the paper explores those who did not go bankrupt because accommodation was made. Were there individual shareholders who were too large to fail because their level of debt would have caused the network to collapse? And by inference did this mean that those who did go bankrupt were located on the periphery?

## II/C Second Serfdom: Micro Perspectives

Chair: tba

**Markus Cerman** (Vienna)

*Explaining the rise of the early modern demesne economy (Gutswirtschaft) in East-central Europe: a critique of existing models*

Various theories have been proposed to explain the establishment of demesne lordship (Gutsherrschaft) and the rise of the demesne economy (Gutswirtschaft) in early modern East-central and Eastern Europe. This paper will provide a survey and a critical discussion of the reasoning and the arguments of these theories. Particular focus will be given to the commerce and grain export hypothesis, Robert Brenner's discussion of European dualism and the theories based on the impact of the Thirty Years' War. The paper will argue that recent empirical advances are valuable to dismiss considerations of some of the existing theories, while evidence is still missing for others. It will conclude that research has failed to address long-term developments since the later middle ages. Existing theoretical approaches also neglected to differentiate between processes, which led to an increase of landlord powers, and changes in the economic sphere, which resulted in the growth of the demesne economy.

**Tracy Dennison** (California Institute of Technology)

*Contract enforcement in Russian serf society*

How are contracts enforced in societies with weak or underdeveloped formal institutions? Where state institutions fail to provide this service, are there alternative ways to reduce transactions costs sufficiently to encourage exchange and credit? These questions have received much attention in the legal history, economic history, and development economics literatures in recent years. Yet surprisingly little empirical evidence has been adduced in these discussions. In this paper, these questions are addressed with a sharp focus on micro-level evidence from a single estate in eighteenth- and nineteenth-century rural Russia.

Imperial Russia before the abolition of serfdom offers an illuminating context for the study of contract enforcement outside a formal, state-sanctioned framework. Serfs in Russia had no recourse to civil institutions; they were considered the subjects – the property, in fact – of their landlords. They were not legally permitted to own immoveable property in their own names until 1848, and they were not legally permitted to engage in credit transactions with free persons. Many scholars have thus assumed that Russian serfs neither held property in individual tenure nor engaged in formal contractual transactions. However, this view is not consistent with empirical evidence for lively property and credit markets on a number of Russian serf estates.

This paper discusses evidence for one such serf society, the estate of Voshchazhnikovo, a Sheremetyev family holding in the Rostov district of Jaroslavl' Province. Archival documents for the period 1750-1860 show that serfs on this estate engaged in a wide variety of contractual transactions with each other, with serfs from other estates, and even with free persons, including those of higher legal rank (*soslovie*) such as merchants and landlords. These transactions, I argue, were made possible by the administrative framework developed by the Sheremetyev family to oversee their far-flung holdings. This framework offered serfs a reasonably reliable system of contract enforcement, thereby reducing the risk involved in extra-legal property and credit transactions. It is further argued that, while this arrangement did pave the way for a remarkable degree of contractual exchange, it was far from optimal. There was still considerable scope for administrative arbitrariness, and serfs had no recourse beyond the estate. Furthermore, evidence suggests that the enforcement services offered by the landlord may have been too expensive for the poorest members of society, thus forcing them to rely on riskier informal means of enforcement, or do without access to credit altogether.

**Mikolaj Szoltysek (Max Planck)**

*The effects of manorial institutions on peasant household patterns in late eighteenth-century Eastern Europe: theory, practice and regional disparities*

Despite continuous interest in the working of manorial-serf regimes in early modern Eastern Europe, the links between manorial institutions and family patterns remain poorly specified. Up to now, most scholars usually tended either to generalize the Russian experience over all Eastern Europeans, or to rely on mechanistic explanations of the effects of the serfdom system on the family life. Many others deliberately avoided questions of how family life relates to serfdom. Apart from that, the field of family history and historical demography has been pervaded by some sweeping generalizations of which two seemed to be most widespread: (1) the belief that the institutional mechanisms of the Eastern European manorialism of second serfdom were capable of creating underlying structures sufficient to create a homogeneous family pattern throughout this part of the continent; (2) a widely held view, according to which Eastern European complex family patterns have supposedly made economic sense both for Eastern European peasants and landlords, given the circumstances of the re-feudalization in which the two sides found themselves. In Eastern Europe, where landowners found their profit in the reimposition of coercive forms of labour control on peasant subclasses, complex household structures served best to maintain the standards of living of rural families, at the same time providing landowners with the highest possible benefits from the peasants' labour output.<sup>584</sup>

This paper seeks to reveal some crucial misconceptions that obscured the proper understanding of the relationship between peasant family life and different forms of Eastern European serfdom in the Early Modern period. Without dismissing the determinative character of the estate owners' economic interests over the everyday life of the peasants, the ingenious analyses of the manorial system as put forward by economic historians J. Rutkowski, W. Kula and S. Vilfan will be used to present the model of landowners' interference with peasants patterns of family co-residence in the context of two ideal versions of Eastern European serfdom (*corvee* labour or cash quitrent).<sup>585</sup> Within such a model regional disparities in socioeconomic development, as well as divergent pathways to introduction of the serfdom system in different parts of Eastern Europe will also be allowed for. The model will be tested against the data for 28,000 peasant households from the territories of the late eighteenth-century Polish-Lithuanian Commonwealth (including Poland proper, Ukraine, Belarus). Macroanalysis of this spatially, culturally and socioeconomically diverse dataset will be supplemented by a microstudy of peasant household structures from several noble estates of central and southern Belarus with dissimilar institutional and ecological profiles (cash quitrents, labour services, and a mixture of both). In the study, the effects of different

<sup>584</sup> F. Le Play, *L'organisation de la famille* selon le vrai modele signale par l'histoire de toutes les races et de tous les temps, 3<sup>rd</sup> edn. Tours: Alfred Mame et fils, 1871, § 12, p. 94; A. Plakans, Seigneurial authority and peasant family life: the Baltic area in the eighteenth century. *Journal of Interdisciplinary History*, 5, 1975, 629–654; Wally Secombe, *The Western European Marriage Pattern in Historical Perspective: A Response to David Levine*, in: *Journal of Historical Sociology* 3, 1990, p. 50–74; Alderson, A. S. & Sanderson, S. K. (1991). Historic European household structures and the capitalist world-economy. *Journal of Family History*, 16, 419–432; Rudolph, R. L. (1992). The European family and economy: central themes and issues. *Journal of Family History*, 17, 122–124.

<sup>585</sup> Rutkowski, J. (1956 [1914]). Studia nad położeniem włościan w Polsce w XVIII wieku. In J. Rutkowski, *Studia z dziejów wsi polskiej XVI–XVIII w.*, ed. by W. Kula (pp. 145–240). Warszawa: PWN; Kula, W. (1976). The seignury and the peasant family in eighteenth-century Poland. In R. Foster & O. Ranum (Eds.), *Family and society. Selection from the "Annales. Economies, Societes, Civilisations"* (pp. 192–203). Baltimore: The Johns Hopkins University Press; S. Vilfan, Die Kolonisation nordostlich der oberen Adria und ihre sozialgeschichtlichen Grundlagen, in *Schlesinger, Walter (Ed.) Die deutsche Ostsiedlung des Mittelalters als Problem der Europäischen Geschichte*. Reichenau (Vorträge und Forschungen, Bd. XVIII), 1975, 567–604.

physical environments, and institutional and socio-economic structures on the incidence of different forms of co-residence and household formation will be assessed.

In general, it will be shown in the paper that the impact of second serfdom on family structure in Eastern Europe was by no means uniform. The data presented in the paper will also suggest that a sweeping generalization that posits a functional link between coercive forms of labour control and complex household structures among peasant subjects must be meticulously revised.



## II/D Macroeconomic History

Chair: **tba**

**George Chouliarakis & Paolo di Martino** (Birmingham)

*Gold, money and prices during the Napoleonic Wars: was Ricardo right?*

The inflationary phase characterizing the years of the Napoleonic wars (1797-1815) represents a fantastic case study to look at fundamental debates in economics and economic history alike. Using an improved dataset and standard time series econometric techniques, this paper aims at contributing to these debates by re-assessing the direction of the casual link between money supply and the variation in the level of prices.

It is no exaggeration to say that it was during the years of the Napoleonic wars that the foundations of modern monetary economics were established. During the course of the conflict, the remarkable rise in the price of grains and the paralleled devaluation of the Pound attracted the attention of scholars of the calibre of Tooke, Thornton, and Ricardo, who gave birth to one of the fiercest debates in the history of economics. The dispute saw the emergence of two alternative positions, the so-called Bullionists and anti-Bullionist. The former identified the source of inflation in the suspension of the gold standard, the increase in the money supply, and the consequent lost of value of the paper Pound vis-à-vis the value of metal coins (*bullions*). The alternative view favoured a 'real' explanation of the inflationary process pointing the finger at the bottlenecks in the international trade; in this approach, money supply increased only to accommodate an exogenous rise in the level of prices. It is no mystery that the monetarist school has always considered the bullionist view as its intellectual predecessor, while the anti-bullionist perspective reminds in many ways the Keynesian approach to the issue.

As far as debates in economic history are concerned, the Napoleonic wars period provides the perfect laboratory to analyse whether or not, and to what extent, the classical gold standard system contributed to price stability. In fact, while the impact of the gold standard on the exchange rate stability is widely recognized, its direct role as anti-inflationary device is less clear (Bordo and Schwartz 1981).

The relevance of the issues above meant that the study of this historical phase never went out of fashion and over the years a number of outstanding scholars, including Clapham (1944) and Kindleberger (1984), contributed to the debate. In general the anti-bullionist position tended to emerge as the dominating position, but despite massive amount of research the dispute is far from closed. In particular, the recent wave of econometric works on the subject (for example Officer 2000) did not reach any final conclusions on the direction the casual link between money supply and inflation.

This paper re-assesses this relation applying the analysis of cointegration to an improved dataset. More precisely our data on money and prices are quarterly (instead of annual ones), and we use advances and discounts from the Bank of England as a proxy for money supply. This allows to by-pass the limit and biases of the current estimates of outstanding paper notes, the standard proxy for the supply of money.

Although still provisional, our results challenge the dominant view, identifying a casual relation running from money supply to prices.

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**Nicholas Dimsdale** (Oxford)

*The dynamics of consumption and investment in the Victorian economy*

According to economic historians, such as Cairncross and Ford, there was a strong inverse relationship between home and foreign investment in the British economy in the late nineteenth century. This implied that investment overseas may have been partly at the expense of home investment. What this approach overlooks is the behaviour of savings after 1870. This paper argues that there was a rise in the savings ratio from 1870 to 1913 which enabled increasing rates of overseas investment to be financed without displacing home investment. Accordingly rising savings allowed Victorian investors to accumulate foreign assets as well as to meet the investment needs of the domestic economy.

The paper provides an explanation for the rise in the propensity to save, which is attributed mainly to demographic factors. Demographers have long discussed the reasons for the marked decline in fertility, which occurred after 1850 and resulted in the average number of children per family falling from 5 to 3. The reasons for this decline in fertility are not well understood, but there is no doubt that it took place. What have not been examined are the economic consequences of this major change, which shifted the age distribution of the population. The proportion of the population aged 16 or less progressively declined. Families, particularly among the middle classes found that they had greater financial flexibility, which enabled them to acquire more financial assets. These assets could be used to finance retirement or to provide bequests for heirs.

The empirical work reported in the paper indicates that the main factor causing the average propensity to consume to decline was the reduction in the proportion of the population aged 16 or less. This implies a comparable rise in the savings ratio. Rising thrift in the late nineteenth century helps to explain the ability of the British economy to resolve the conflict between home and foreign investment. The role of demographic change in affecting savings behaviour has been observed in the US, but it has not previously been shown for the UK.

The paper goes on to examine the determinants of investment to find evidence of displacement of domestic capital formation by overseas issues. This involves the estimation of separate equations for investment in plant and machinery, investment in commercial and industrial buildings and in residential construction. A distinction needs to be made between the two components of industrial investment because of their distinct behaviour. Accelerator effects are found to be important for plant and machinery, while real share prices provide the main explanation for industrial and commercial buildings. In both components, investment followed its own course and was not affected directly by overseas capital issues.

Investment in house building proved to be difficult to explain despite the extensive discussion about its determinants among economic historians. The most important explanatory variable was found to be changes in the population aged 20-40, which is the main household forming age group. This variable was originally suggested by Feinstein but has not been adequately tested empirically. It can only be measured approximately but does much to

explain the course of house building. In addition it points to the major impact of emigration on housing investment. There is some evidence that the vigorous boom in house construction in the 1890s, which was associated with urbanization, may have led to an excessive increase in the housing stock. The result of this excessive accumulation as a sharp decline in house building after 1900. This seems to have been more important than the marked increase in overseas issues at this time. The late Victorian boom in housing investment was followed by an Edwardian bust, an outcome which accords with some contemporary views on the housing market.

**Matthias Morys** (York) & **Martin Ivanov** (Bulgarian Academy of Sciences)

*Business cycles in South-East Europe 1870s-1939*

This paper constructs new business cycle indices for South-East Europe (SEE) from the 1870s to 1939 in order to address the following questions: First, how volatile were business cycles in SEE compared to the core countries of Western Europe and can differences in volatility be explained by different levels of trade openness and financial integration? Second, how persistent were macroeconomic fluctuations? Third, was there an identifiable regional business cycle? Fourth, did the SEE business cycle exhibit characteristics similar to the stylized facts established on the basis of the business cycles of other countries and regions? The business cycle indices are constructed by extracting common dynamic factors from annual data of 22 variables stemming from sectoral output, trade, fiscal and financial data that have either been collected by the authors themselves or that have recently become available from the South-East European Monetary History Network.

Despite recent contributions for Austria-Hungary (Schulze 2000, Schulze 2008) and Bulgaria (Ivanov&Tooze 2007), our knowledge of pre-Second World War GDP for the SEE countries remains poor (cf. the frank assessment in Good&Ma 1999 and Maddison 2003). This lack of proper GDP data is unlikely to be overcome in the near future; even where attempts are made in this direction, there is often a need to limit the estimation to a number of benchmark years, as has recently been the case for Bulgaria (cf. above).

This paper takes a different approach in order to construct GDP and, in turn, business cycle indices for four SEE countries which combined account for roughly 80 per cent of SEE GDP: Austria-Hungary, Bulgaria, Greece, and Serbia/Yugoslavia. To the best of our knowledge, this is the first attempt ever to construct such indices for SEE which therefore could be a welcome addition to other business cycle reconstructions for other parts of Europe and beyond (inter alia cf. Basu&Taylor 1999). Our approach is similar to Aiolfi & Catao & Timmermann (2008) who have recently constructed such indices for four Latin American countries for the period 1870-2004. The basic idea of our approach is that a cross-section of economic variables ranging from sectoral output over fiscal and financial variables to trade data share a common factor. Extracting the common factor for the entire period, in turn, delivers a business cycle index which can potentially be superior to a business cycle reconstruction based exclusively on GDP (cf. Aiolfi&Catao&Timmermann [2008]).

The 22 annual data series employed in this context have either been collected by the authors themselves or have become available as part of the data collection efforts of the South-East European Monetary History Network. The 22 variables can be classified in five groups. (1) sectoral output: agriculture, communication, industry, mining, transportation; (2) fiscal variables: government expenditure and revenue; (3) financial variables: narrow money and broad money, CPI, domestic interest rate, external spread, foreign capital inflows; (4) trade data: terms of trade, real exchange rate, export and import volume, trade balance; (5) other variables: foreign short-term interest rate, foreign output, real wage and population.

The business cycle indices are then used to address the following questions. First, how volatile were business cycles in SEE compared to the core countries of Western Europe and how can we account for these differences? Second, how persistent were macroeconomic fluctuations? Both questions are important as the welfare cost of income fluctuations and the

burden on stabilization policy rise on volatility and persistence. Third, did SEE exhibit an identifiable regional business cycle, or does the label 'SEE' cluster together countries that should better be treated separately? Last but not least, did the SEE business cycle exhibit characteristics similar to the stylized facts established on the basis of the business cycles of other countries and regions?

## II/E Labour

Chair: **tba**

**Thijs Lambrecht** (Ghent)

*Servants and wage bargaining in rural Europe (c. 1600-c. 1800)*

The institution of service was one of the main characteristics of the early modern demographic landscape. In exchange for highly diversified forms of remuneration young unmarried people sold their labour power to farmers. The outcome of the bargaining process between masters and servants was expressed through a variety of oral and written labour contracts. So far historians have mainly studied the monetary rewards (cash wages) servants received from their employers. This research, however, not only indicates that 60 to 70 per cent of the total reward of servants consisted of non-monetary forms of payment (e.g. food and board), but that servants also bargained over leisure and other commodities with a practical and symbolic nature.

A close inspection of published and unpublished sources from England, Germany, France and Belgium reveals that the process of wage bargaining was far more complicated than has previously been assumed. Early modern economic and moralistic treatises acknowledge the unique bargaining position of farm servants and sketch a very businesslike image of master and servant negotiations. From all these data a picture emerges of a well-informed agricultural labour force that responded very promptly to changes in market conditions. Also, their ability to move frequently over time and space and the widespread existence of hiring fairs in early modern Europe enabled them to secure attractive living and working conditions compared to day labourers. There is even some evidence to suggest that collective wage bargaining strategies were deployed by this category of the rural labour force to obtain higher wages. The individual labour supply of servants, especially during periods of labour shortages and scarcity, displays a pattern that very closely fits the ‘backward-bending supply curve of labour’ or ‘leisure preference’ behaviour. As individual wages rose servants were eager to substitute extra wages for more leisure time. Rather than withdrawing temporarily from the labour market (as has been suggested by mercantilist economists), servants made agreements about the quantity and forms of leisure an integral part of their total remuneration.

From the middle of the sixteenth century onwards early modern state authorities (both central and local) increasingly reacted against these ‘excessive’ demands formulated by servants and actively enforced legislation to break their unique bargaining position. This resulted in a widespread movement of setting maximum wages through wage assessments and restrictions on their geographic and temporal mobility. Highly remunerated labourers did not only undermine the economic viability of agriculture (and thus threatened state taxation), but also posed a threat to traditional social and economic structures and relations. Throughout the early modern period the margins of servant and master negotiations were increasingly defined by law. The example of some German territories in the aftermath of the Thirty Years War and late eighteenth-century revolutionary France however illustrate that farmers and servants frequently stepped outside the bounds imposed by labour legislation.

I conclude that farm servants, compared to other categories of labourers, enjoyed a relatively high living standard and held a strong bargaining position towards future employers.

**Marcel Fafchamps** (Oxford) & **Alexander Moradi** (Sussex)

*Referral and job performance: evidence from the Ghana Colonial Army*

Referral is known to play a crucial role in employer recruitment. Because worker referral tends to focus on friends and relatives, referral is suspected of playing a role in biasing the ethnic composition of the workforce. What is less clear is whether referrals raise the quality of

new recruits – e.g., because better informed referees help employers screen and discipline workers – or whether it reduces the quality of new recruits, because workers distort the recruitment process to favour friends and relatives (Granovetter, 1974; Montgomery, 1991).

In this paper, we study the mechanisms and effects of job referrals in the British colonial army in Ghana. The varying conditions under which the Gold Coast Regiment (GCR) operated provide an exceptional testing ground. The GCR was a big employer, with a peace-time strength of about 1,500 rank-and-file drawn exclusively from the indigenous population. Universal conscription was never introduced and the GCR had to compete for labour on the labour market. Until the mid-1920s, referral by fellow soldiers was used explicitly by the employer, with a financial reward for the recruiter paid in the period 1908-1918. Referrals represented a significant hiring channel; 30-80 per cent of new enlistees were brought in by fellow soldiers, often from their home village or region.

Did recruitment by fellow soldiers increase the quality of recruits? To investigate this hypothesis we compare the initial physical ability and subsequent performance of volunteers, conscripted and referred recruits. We also investigate the role that incentives play in shaping the referral process. Two types of incentives are at work:

- (1) the inducement to bring new recruits; and
- (2) the penalty for bringing an unsuitable recruit

If the first incentive is strong and the second incentive is weak, soldiers may be induced to recommend new recruits whose ability and expected performance are low. In contrast, if the first incentive is weak and the second incentive is strong, soldiers are unlikely to recommend someone unless this person is clearly above average.

The historical record suggests that the two incentives were at work during the study period and that their relative strength varied across soldiers and over time. In the initial period (1908-18) the first incentive was fairly strong because of the financial reward associated with successful referrals. The strength of the second incentive varied; recruiters were held partly responsible for the performance of new recruits they brought in, but higher ranks had more clout. Due to the difficulties of the British campaign in East Africa, the GCR was deployed on the East African war theatre in 1916. As a consequence, the need for new recruits increased dramatically. Corporal punishment was reintroduced and the incidence of desertion fell considerably, making it less difficult to penalize recruiters for bringing subsequent deserters. This means that the second incentive rose. Finally, after the end of the war (1918-1925), incentives were again reversed, with a reduction in troops and the practice of 'bringing-in money' coming to an end.

The GCR as an employer had massive problems to recruit reliable, physically fit, and capable men – about 25 per cent of enlisted recruits did ex-post not meet these requirements. We find that the referral system at place did not lead to a selection of high-quality recruits; referred recruits were significantly more likely to desert and to be discharged as 'medically unfit' or 'inefficient'. This is also true for referrals from relatives serving in the army. In fact, recruits with a kin in the army were accepted even though their lower than average physique was ex-ante clearly observable. Our results also suggest that the lack of prospects of promotion may have been sufficient to water down the second effect in referrals from non-commissioned ranks, particularly Company Sergeant Majors. Men who presented themselves as volunteers, in contrast, turned out to be the most reliable and efficient.

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**Peter Scott & James Walker** (Reading)

*'The lowest edge of the black-coated class': the family expenditures of Edwardian railway clerks*

In contrast to the substantial volume of socio-economic survey material for British working-class households over the half century to 1939, the household behaviour and consumption patterns of the lower middle-classes were almost entirely neglected by the early generations of social investigators. Thus, prior to the late 1930s, there is no substantial published study of household expenditure for any middle-class group.<sup>586</sup> Yet there was a substantial strata of relatively low income 'white collar' occupations, where households incomes were little different from those of skilled artisans, but families faced greater budgetary pressures to maintain the 'social capital' necessary for their occupation and class position – in terms of conspicuous expenditure on housing, clothing, education, and entertainment.

This paper examines the household consumption patterns of clerks – who comprised 5.48 per cent of occupied males, and 3.30 per cent of occupied females, in 1911. These represented a larger occupational group than professionals; foremen, inspectors, and supervisors; or managers and administrators; their importance to middle-class employment being exceeded only by employers and proprietors.<sup>587</sup> Clerks were on the lower boundary of the middle-class. Their incomes were generally no higher than those of skilled workers, yet they were compelled to match certain middle-class standards of visible consumption – to meet the expectations of employers, their firms' customers, and their peers.

We utilize nationwide household budget surveys of some 630 married railway clerks, conducted by their trade union - the Railway Clerks Association (RCA) - in around 1911-12. These surveys, used in support of a cost-of-living argument for higher clerical wages, provide detailed budgetary data for a major class of clerks whose incomes – while lower than those of banking or insurance clerks – were roughly similar to the lower and middle ranks of commercial and industrial clerks. The RCA surveys are particularly valuable as they provide standardized data which, unlike the 1904 and 1918 official working-class budget surveys, include not only food and accommodation but all substantial categories of household expenditure. Firm-level data are available for clerks employed in 25 companies or jointly-administered lines, while we have also recovered household-level data for over 200 families included in the surveys (mainly from surviving analyses presented by the RCA to the individual railway companies).

Our paper examines clerks' expenditure patterns and the ways in which these were shaped by a combination of clerks' own perceptions of their class position and the perceptions of wider lower-middle class society and of their employers. Asserting their middle-class status on their meagre incomes led them to devote an unusually high proportion of weekly expenditure to rent, in order to secure suitable accommodation in a 'respectable' district. A long-term planning-horizon and an emphasis on social security also led to particularly high levels of 'precautionary' expenditure on insurance, sick-club payments, etc.

Conversely, high accommodation and precautionary expenditures made it difficult to maintain desired levels of expenditure on two other areas of consumption that were seen as major status markers, 'presentation' (clothing and footwear, toiletries, hairdressing, etc.) and 'culture' (books, newspapers and magazines, stationery, music, sports, entertainments, etc.).<sup>588</sup> These pressures in turn squeezed clerks' weekly expenditure on basic necessities such as food, fuel and light, reducing these to levels significantly below those of their skilled working-class counterparts. They also led clerks to engage in family limitation in order to

<sup>586</sup> Massey, P., 'The expenditure of 1,360 British middle-class households in 1938-39', *Journal of the Royal Statistical Society*, CV, III (1942), pp.159-96.

<sup>587</sup> Guy Routh, *Occupation and Pay in Great Britain 1906-60* (Cambridge: Cambridge U.P., 1965), pp.4-5.

<sup>588</sup> Pierre Bourdieu, *Distinction. A Social Critique of the Judgement of Taste* (London: Routledge & Kegan Paul, 1984), p.184.



keep their spending on these basic items to a level at which they could also meet their requirements for conspicuous and precautionary consumption. Meanwhile a growing sense of grievance regarding the gap between the investments in social and cultural capital required to maintain their occupation status, and the earnings from which they were expected to fund this expenditure, facilitated the growth of the Railway Clerks' Association as one of the most active and successful pre-1914 white-collar unions.

Household-level budgetary data are used to examine the extent to which railway clerks' expenditure patterns are consistent between households and how clerks on higher incomes distributed their additional spending between the competing priorities of presentational, cultural, and precautionary expenditures, accommodation, and basic needs. We also compare the railway clerks' budgets with the other major household budget surveys of this period, to examine the extent to which the particular social pressures and expectations placed on low-income white-collar workers gave rise to distinctive household consumption patterns.

## II/F Empire

Chair: **tba**

**Mark Casson, Ken Dark** (Reading) & **Mohamed Azzim Gulamhussen** (ISCTE, Lisbon)

*Imperialism reconsidered: using the economic theory of institutions to explain imperial history*

Although there are many studies of individual empires (e.g. Cain and Hopkins, 1993), the theory of imperialism has changed little since the surveys by Fieldhouse (1967) and others. Most recent theoretical work takes a cultural history perspective (e.g. Hardt and Negri, 2000). Economic research has tended to focus on the benefits generated by trade and investment flows and the costs of imperial defence (e.g. O'Brien, 1988); the resultant cost-benefit evaluations shed light on decolonization and other specific issues.

The basic questions of why, when and where empires develop, how far they spread and how long they last have received little systematic attention, however. This paper considers the contribution that the economic theory of institutions can make to the analysis of these larger questions (see e.g. Buckley and Casson, 1976; Williamson, 1985; North, 1990). It identifies six key insights that can be applied to imperialism:

1. Some states are more entrepreneurial than others because they provide strong incentives for individual discovery and innovation (e.g. promoting freedom of travel, association and expression).
2. Newly-discovered knowledge is a global public good; it is therefore efficient to apply it simultaneously in all territories to which it is relevant (e.g. apply the same mining technology in several different mineral-rich countries).
3. States have a role in supplying local public goods (e.g. law and order, transport and communications infrastructure, and certain types of health and education); they can also establish property rights and regulations under which private goods are provided by a private sector. Newly-discovered knowledge about how to supply public goods can therefore be exploited by a state.
4. Although knowledge is a public good, there are obstacles to transferring it between locations. Foreigners may not accept the superiority of the knowledge; they may pass it on to the supplier's enemies; or they may not be able to absorb it because of limited education. A state may therefore encounter difficulty in exploiting its knowledge abroad through licensing agreements negotiated under treaty arrangements.
5. States possess military knowledge as well as civilian knowledge. The rule of law is weaker between states than it is within states. Superior military knowledge therefore permits a state to take over other territories by force. A knowledge-intensive state frustrated by barriers to knowledge transfer may therefore resort to force and take over (occupy or govern) territories controlled by other states (especially those that refuse to recognize its supremacy)
6. Knowledge obsolesces, and as it does so the strategic case for imperialism declines.

These insights suggest that imperialism is a rational response to a specific set of circumstances. They suggest that in a world where opportunities to discover new knowledge arise continuously, imperialism emerges naturally wherever these circumstances prevail. Obsolescence too is a natural process, and this explains why empires decline. The decline of one empire may generate a gap that some other rising empire may be able to fill.

The paper concludes by reviewing a panel of twenty empires on which the theory can be tested using case study evidence.

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**Eric C de Sena** (John Cabot, Rome)

*Regional economies in the Roman Empire: a case study in the upper Valle Latina, Italy*

There are many economic studies based upon both the ancient sources and the archaeological record which highlight the 'global' system of trade during the Roman Imperial period. Scholars have demonstrated the workings of the long-distance supply network based upon archaeological indicators, such as shipwrecks and patterns discerned in the ceramic assemblages excavated in the major Roman cities. We are well informed about the production and long-distance transport of staple goods, such as grain, wine, olive oil and *garum*. Experts in the study of ancient stone building material have indicated the sources and destinations of precious marbles and granites used in public and private buildings. Moreover, there is a growing body of evidence for trade beyond the borders of the Empire, including India and Arabia to the east and *Barbaricum* to the north. Given the means, citizens could have procured resources from any of the Roman provinces and even from territories located beyond the limits of the Empire. In most instances, however, communities, even those in relatively close proximity to metropolitan cities like Rome, relied upon their own region to satisfy their dietary and material needs.

This paper considers how regional economies fit into the broader scheme of the 'global' system of production and exchange in the Roman period, based upon a case study of the upper *Valle Latina* in west-central Italy. In the late 1990's the Soprintendenza Archeologica per il Lazio undertook a series of small-scale excavations of Roman sites along the line of the high-speed railway between Rome and Naples. Six Roman-period sites located between 20 and 35 miles to the southeast of Rome were excavated (Colle Mezzo, Colle Cisterna, Colle Maiorana, Colle Pelliccione, Colle il Fico and Le Difese). These were small rural communities in antiquity whose livelihood depended upon the nearby towns of Praeneste, Artena and Tusculum. The author of this paper was responsible for studying approximately 1000 kg of archaeological materials that were recovered through the excavations.

Pottery excavated from stratified archaeological deposits is recognized as useful to study economic trends when researchers can determine the provenience, date and proportions of the pottery. A statistical analysis of the Valle Latina pottery assemblage indicates a general detachment from the Roman global system of trade. In short, whereas many coastal cities in west-central Italy have an abundance of pottery imports from Hispania, Gaul, Africa and the Aegean, pottery from the Valle Latina is almost all of regional manufacture. The author compares the percentages of regional vs. imported pottery from the Valle Latina excavations with a series of contemporary sites in order to highlight the differences. The economic system in the Valle Latina is then characterized through an analysis of ancient literary texts and archaeological and environmental indicators from the region: the road system, the distribution of farms, evidence of industrial activity, natural resources, etc. In short, while the inhabitants

of the Valle Latina engaged in limited trade with Rome, they relied primarily upon their own region for quotidian needs.

**Judith Spicksley (Hull)**

*Europe meets Africa: the uses and abuses of debt in the Atlantic slave trade*

The concept of debt is a powerful notion in human history, having symbolic as well as material implications. In its material form, it represents the value of an agreed exchange that occurs when there is a delay in its completion. Trust may be enough to allow the debt to be created, but often the individuals or groups that are involved in extending the debt require some other guarantee that it will be repaid. Thus the earliest records of human existence, which concern aspects of property and its exchange, are also concerned with practices of pledging and distraint, in order to protect and recover outstanding debts.

This paper will consider practices of pledging and distraint as they appeared and evolved on the West African coast during the period of the transatlantic slave trade [c.1600-1800], in order to examine how the negotiation of debts between Europeans and Africans aided the process of enslavement. In the seventeenth century, records of the English and Danish trading companies suggest that initially these merchants preferred pledges in gold or other valuable items. The pledging of people had been an earlier feature of European debt relations, and although in Europe it was unusual by the seventeenth century to accept individuals as pledges for debts, it may not have been uncommon in Africa. The Dutch apparently took people as pledges for goods from the early seventeenth century and by the eighteenth century this had come to the notice of the English, who believed they had little option but to adopt similar practices: they shifted their policy on debt security to use people from early in the century. However, ‘pawning’, as this method of pledging has been called, soon emerged as a method by which Africans could become enslaved; failure to redeem the debt gave authority to the creditor to sell the pledge in compensation for the loss, in a process akin to distraint.

How common it had been to distraint people as payment for debts in Africa before the emergence of the Atlantic slave trade is difficult to establish, although debt appears to have been a source of enslavement for merchants visiting Africa before the fifteenth century. The use of debt as a means of enslavement during the period of the slave trade is widely recognized among historians, however, and the evidence from Portuguese Angola in the seventeenth and eighteenth centuries suggests that debt provided many opportunities for both Europeans and Africans to exploit the indigenous economic and judicial practices that had their basis in a culture of compensation.

### III/A Learning by Doing in the First Financial Crisis

Chair: **Ann Carlos** (Colorado & University College Dublin)

**Larry Neal** (London School of Economics)

*Learning to speculate: the deals of Lord Londonderry, 1717-27*

Thomas Pitt, Jr. took over management of the Pitt family's finances after negotiating successfully the sale of the Pitt diamond to the Regent of France in 1717. Thereafter, as Lord Londonderry he speculated on his own account and that of family and friends in the Mississippi bubble under the influence of John Law, becoming one of the first 'millionaires'. Dealing in Royal African subscriptions successfully and South Sea subscriptions unsuccessfully later in London, his main efforts dealt with promoting a bubble company of his own (the Bahamas Company) and concluding a forward bargain with John Law on East India Company shares. His successes at first led his family and partners to ask him to speculate on their account in a wider range of ventures. When his counterparties defaulted in sequence, his reputation was ruined, but not, as it turns out, his financial legacy.

**Anne L Murphy** (Exeter)

*Learning to invest: the financial choices of Charles Blunt, 1692-1720*

This paper will examine the investment portfolio of Charles Blunt, one of the new breed of moneyed men that emerged during the late seventeenth and early eighteenth centuries. Among Blunt's surviving papers there are accounts which reveal the extent of his financial activities between the early 1690s and 1718. This was a period of rapid change and development in London's financial markets and, in particular, in the area of state finance. Blunt was one of men at the heart of this process. He was a successful financial broker during the early 1690s, and although business had declined by 1695 he maintained a strong connection to the developing financial markets and, most notably, became one of the directors of the South Sea Company.

Blunt took advantage of his association with the new financial markets to create a varied personal investment portfolio. His use of the new financial instruments that emerged during this period showed an increasing level of personal experience and knowledge. Blunt's financial choices during this period also demonstrated a sophisticated but cautious approach to risk. His assets remained consistently diverse and in spite of his strong connections to the newly-established markets his portfolio continued to combine traditional and new investments. Thus, Blunt's choices reveal much about the workings of London's first financial markets and demonstrate the extent to which those with insider knowledge trusted and made use of the new opportunities that were available.

**Gary S Shea** (St Andrews)

*Arbitrage and simple financial market efficiency during the South Sea Bubble: a comparative study of the Royal African and South Sea Companies' subscription share issues*

Subscription shares of the early eighteenth century were early examples of what today would be called innovated securities. Either by intent or happenstance, they served to overcome imperfections in the capital markets of the day. Not all such securities were, however, alike. The prominent examples of the subscription shares of the South Sea Company and the Royal African Company in 1720 were quite different in their design and the corporate financial policies they were intended to aid. The historical literature emphasizes the importance of irrational pricing behaviour during the South Sea Bubble, yet it is remarkable that in the financial markets of 1720 the relative values of subscription shares are easily understandable using standard financial theory.

### III/B Business Networks

Chair: **tba**

**Hannah Barker & Mina Ishizu** (Manchester)

*Inheritance strategies amongst small business families in Liverpool and Manchester, 1760-1820*

This paper stems from an on-going ESRC-funded project based at the University of Manchester. The project examines small family firms in towns across the north-west of England during the late eighteenth and early nineteenth centuries. Small businesses were at the heart of urban economic growth and social transformation during the ‘industrial revolution’. In north-west England, urban economic development was particularly marked in these earlier years, and towns such as Manchester, Liverpool, Warrington and Preston witnessed rapid economic and social transformations between 1760 and 1820. Families were central to the organization of small firms throughout the eighteenth and nineteenth centuries, and most appear to have been organized around, and run for the benefit of, a family group. Yet despite their significance before the 1830s, we know far more about family firms in the Victorian period – described as the ‘age of the family firm’<sup>589</sup> – than we do of their Georgian counterparts. Moreover, we know least of all about family businesses run by the lower middle or artisanal classes, since those engaged in craft-based manufacturing and retailing during the late eighteenth century have been somewhat overlooked as researchers have focused instead on middle-class elites in contrast to studies of the later nineteenth century. Our project aims to help to redress this balance.

Whilst small family firms during the industrial revolution are arguably under-researched, historians have more recently begun to reassess the role of women in business during this period, examining those from amongst the lower middle classes as well as more prosperous members of the middling elite. Such studies have revealed much about female economic agency, but their focus on individual businesswomen, and particularly the figure of the female entrepreneur, tends to privilege accounts of more ‘independent’ individuals, and widows in particular. At the same time, the place of women within family businesses – where the majority of female business activity would have taken place in this period – remains insufficiently investigated, as does the experience of their male relatives. Both of these aspects will be illuminated, we hope, by a focus on family and gender in the study of small businesses.

Our project seeks to explore the ways in which power was divided, and the tensions that existed, within family groups and the impact that these had on decision-making and strategy. We are particularly interested in the transmission of resources and the ways in which power was transferred between individual family members over time. Wills are thus a particularly important source for us, as they are especially revealing of family relations and power dynamics. We analyse information from probate material both quantitatively, to give an overview of the ways in which property was passed on and shared out, and qualitatively, to provide case studies about individual family histories. Particular attention is paid to the types of property left to others and the degree to which a gendered pattern of property transfer can be identified, especially between spouses and between parents and their children. We also consider the fate of family businesses upon the death of a key member, and what this reveals about the importance and meaning of family firms for those involved in them.

Whilst this analysis is ongoing, our interim results have already revealed some notable patterns. Not surprisingly in terms of what is already known about property transfer amongst non-elites in general during the eighteenth and nineteenth centuries, wills made by lower-middling men (the vast majority of our sample) were generally written to ensure the well-

<sup>589</sup> Stana Nenadic, ‘The small family firm in Victorian Britain’, *Business History*, 35:4 (1993), p.86.



being of surviving widows and children. More unexpected is the degree of freedom offered to widows in managing family property and wealth after their husbands' deaths, and the tendency for sons and daughters to be treated equally in terms of both the amount and type of property that they were bequeathed. Whilst the paper will outline our overall preliminary findings, it will also provide some examples of individual families in order to highlight the fact that within the general picture of inheritance presented by our research, important variations also existed. Many of these variations suggest either particularly strained familial relations or the existence of preferences within families that were not necessarily dictated by gender or age.

**James Foreman-Peck** (Cardiff)

*The strength and persistence of entrepreneurial cultures in the twentieth century*

A pervasive anti-industrial and anti-business culture, especially transmitted through middle class education, was supposedly responsible for Britain's 'industrial decline', according to the 'cultural critique' of British entrepreneurship and capitalism (Wiener 1981; Rubinstein 1993 p.3). Perhaps because of obvious cultural changes in Britain over the quarter century from 1980, the 'critique' is now less popular. Yet culture as an explanation for historical economic development continues to find support. Having demonstrated half a century ago the shortcomings of French business culture in the nineteenth century, David Landes (1998 pp.516-7) now maintains the proof of culture's centrality is to be found in expatriate entrepreneurial performance. He instances Jews and Calvinists throughout much of Europe, Chinese in East and South East Asia, and Indians in East Africa.

Discrimination against minorities may force them into business but this does not mean they have entrepreneurial cultures, as Max Weber (1905/2003 p39) pointed out. Poles in Russia and Eastern Prussia, Huguenots in France under Louis XIV, Nonconformists and Quakers in England, and Jews for two thousand years, all were economically precocious because of the institutional barriers to other forms of advancement they faced, according to Weber.

How do we distinguish entrepreneurship driven by discrimination from that driven by culture? Landes' expatriate method provides the basis. The practical definition of entrepreneurship adopted is creating a firm that employs people. The contention here is that becoming an employer (in an incorporated business) is an entrepreneurial act in the sense that it involves taking on risk. It also involves being innovative to the extent that setting up any business requires looking for a gap in the market, however narrowly defined. Obviously individuals will show varying degrees of innovativeness and risk bearing but these need not be considered for the collective concept of culture.

To measure the impact of culture on the firm start-up rate we need to know how those brought up in one country perform in a social and economic environment where institutions and market opportunities are different. Moreover to calibrate the measure we require the performance of persons from a range of different cultures in the same environment. The United States in 1910 and 2000 provides a convenient laboratory both to test the persistence of distinctive entrepreneurial cultures over the twentieth century and to compare their performance. We can contrast the propensities of immigrants from different countries to start firms there. This avoids the bias of comparing immigrants with indigenous entrepreneurs. Even though migrants may be exceptional in their originating country, each immigrant group will be exceptional to the same extent, unless there are historically unusual 'push' factors that must be identified qualitatively.

Consistent with the cultural critique, the English were persistently prone to less entrepreneurship than other US immigrant groups, once controls for entrepreneurship influences are included. The Dutch were consistently about averagely entrepreneurial, not as precocious as might be expected if the predominant Protestant religion encouraged entrepreneurship. Conversely Weber's identification of nineteenth century Catholic culture as

inimical to economic development is not born out in the twentieth century by the sustained entrepreneurship of Cubans and Italians in the United States.

The strongest entrepreneurial cultures were exhibited by those originating from the Middle East, Greece and Turkey, though some historical interpretation is necessary to establish who these people were. Comparison of Israeli migrants in the US in the year 2000 with those from Russia and Poland in 1910 reveals a stable marginal propensity for self-employment across the century. These findings are consistent with the business precocity of Jews and Greeks in Britain from the nineteenth century onwards.

English entrepreneurial culture was stable over the twentieth century, despite the changes of the last two decades. But many other cultures were not. Both the Welsh and the Irish became more entrepreneurial over the twentieth century, while the Scots perhaps grew less so.

A strong and persistent entrepreneurial culture does not guarantee successful entrepreneurship, nor does it carry implications for the sectors in which enterprise will be exercised. These depend upon governance institutions, human capital, industrial experience in country of origin, technology and entry barriers, among other considerations. Individuals inheriting a highly entrepreneurial culture are simply more likely to exercise their initiative and ingenuity; how they do this, and with what outcomes, will be determined by institutions and history. Consequently the conclusion that the English in the twentieth century did not have an entrepreneurial culture by comparison with other countries could be entirely consistent with a strong English entrepreneurial performance in England, providing that other English conditions for entrepreneurship were favourable.

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**John Haggerty** (John Moores) & **Sheryllyne Haggerty** (Nottingham)

*Visual analytics and eighteenth-century business networks: pretty useful?*

The social sciences have long been interested in the interaction and dynamics of social networks, of which business networks are a subset. Interdisciplinary studies use Visual Analytics (VA) and graph theory in order to model and analyse relationships between network entities (actors and the relationships between them). For example, an analysis of centrality within social networks provides an understanding of the dynamics of those groups under investigation, or attempts to predict how and when people in an exchange become committed to their relationship. An understanding of such group dynamics, centrality and strength of ties is of interest to the historian by providing a greater understanding of how business networks within the eighteenth century operated. This exploratory paper uses these techniques to analyse the business networks of Samuel Rainford, a merchant based in Kingston, Jamaica in the late eighteenth century.

In order to represent and analyse Rainford's slave trade network, this study combines two methods; VA and graph theory. VA allows the researcher to visualise both tangible data (e.g. event, time of event, etc.) and intangible data (e.g. relationships between actors), and the correlation between the two data types, within a large dataset. The visualisation of data provides the researcher with a different viewpoint than achieved through tables and graphs, in particular when there are large numbers of actors. Graph theory provides a means by which relationships between actors may be modelled and analysed. It recognizes that entities

belonging to a network are inextricably linked, either directly or indirectly, and these links can be analysed to provide a greater understanding of the network's dynamics. Metrics such as in-degree, out-degree, betweenness and closeness centralities provide different viewpoints of the dynamics of Rainford's business network. This quantitative analysis makes the intangible data tangible.

Samuel Rainford was a merchant based in Kingston Jamaica between 1774 and 1798. He emigrated from Liverpool and maintained business and personal contacts there throughout his time in Jamaica. Liverpool was the leading British slave trade port at this time and Jamaica was the leading entrepôt for slaves in the West Indies. Rainford's merchant house dealt with a significant percentage of the slave sales in Kingston from Liverpool. He also exported sugar and other goods from Kingston to Liverpool and imported various manufactures in return for the almost monocultural economy. Furthermore, his records provide both qualitative and quantitative data. They also form part of a wider collection and provide links with many other networks. Rainford therefore provides a representative and useful case study for the application of VA and graph theory. This paper will concentrate on a particular subset of these records, those regarding the slave trade. The analysis identifies key actors within this one network and also their centrality within the wider Liverpool business community at this time. The analysis also demonstrates the importance of reputation in that to operate successfully within the slave trade, Rainford not only relied on those people he knew directly, but through his relationship with these actors, people he did not know.

The aims of the paper are twofold. First, to demonstrate the usefulness of VA in representing business networks. Second, to apply graph theory to the networks represented to measure in degree, out degree, betweenness and closeness. In doing so it will demonstrate that VA not only provides pretty visuals of business networks, but that it is also a useful analytical approach.

### III/C Medieval

Chair: **Margaret Yates** (Reading)

**Tony K Moore** (Reading)

*Credit finance in the middle ages*

The ESRC are funding a project hosted at the ICMA Centre, University of Reading to investigate the early and innovative use of credit finance by a succession of English medieval monarchs. The study – entitled ‘Credit Finance in the Middle Ages: Loans to the English Crown c. 1272-1340’ – examines in detail the credit finance arrangements used by Edwards I, II and III from both a historical perspective as well as utilizing the approaches and models recently developed by economists for the analysis of modern-day sovereign borrowings. This interdisciplinary approach is intended to produce new ways of understanding medieval credit finance during a period of severe pressure on the king’s resources. This paper will provide an introduction to the project, setting out our aims and methodology, before examining the implications of some initial findings concerning the events of 1294.

During the period under study, the English kings turned to the credit facilities offered by the great Italian merchant societies (the Ricciardi of Lucca from 1274 until 1294, the Frescobaldi of Florence from 1297 to 1311 and the Bardi and Peruzzi, also of Florence, until 1341). The resources and expertise of these merchant societies allowed the English kings to overcome some of the fundamental problems with English royal finances. Credit could be used to smooth the uneven distribution of royal income and the king could respond to unforeseen events by anticipating future revenues. However, the relationship between king and merchant was more advanced than has previously been thought. It was not merely the case that the Italian merchant societies made loans on the security of future royal revenues, usually the customs charged on the export of wool. In particular, the Ricciardi of Lucca and Edward I operated what we have likened to a modern current account with extensive overdraft facilities. The Ricciardi managed certain sources of royal income on the king’s behalf, most notably the customs but also other subsidies granted by parliament. In return, the Ricciardi would make payments as ordered by the king. For instance, in addition to paying cash into the wardrobe or transferring money to the king’s allies or diplomats abroad, the Ricciardi were often used to pay the wages of royal officials or for goods purchased for the king. This relieved the royal government of the burden of maintaining and transporting large sums of cash. To oversee this relationship, Edward’s officials and the Ricciardi held periodic accounts at which the monies they received and paid out were audited and the balance of the king’s account calculated.

The complexity of the relationship between the English crown and the Italian merchant societies during this period has necessitated the development of a new methodology. This is based on a comprehensive search of all the published and unpublished English governmental sources to identify all payments received and made by the English government. This data is being entered into a comprehensive database tracking the financial dealings of the various Italian merchant societies with the English crown. The aim is to reconstruct as closely as possible the credit history of the English monarchy. Furthermore, although the interest rates charged on the credit advanced to the government were usually concealed in a variety of ways to avoid the stigma of usury, the Exchequer data will allow us to calculate the rates of interest implicit in these credit arrangements. To this end, the project has employed a ‘net present value’ method of calculating actual interest rates from the records of payments received and made by the English government, based on current financial practice and taking into account the time value of money.

Finally, the paper will set out some of the project’s preliminary findings about the nature of the credit relationship between the kings of England and the Italian merchant societies. The kings of England, like medieval equivalents of sub-prime borrowers, have often

been blamed for the financial difficulties in which the merchant societies that advanced them credit found themselves. The paper will question this widely held belief via a detailed re-investigation of the crisis of 1294 and the subsequent collapse of the then royal bankers, the Ricciardi of Lucca. Rather than concentrating on the role of the English king, this paper will suggest that wider economic forces were at play. The calling in of large sums of papal taxation deposited with the merchant societies combined with the unexpected outbreak of war between England and France disrupted networks of trade and credit. This led to a reduction in liquidity and exposed the merchant societies, who had over-extended themselves during the preceding decades of commercial growth and easy credit. The paper will therefore conclude by suggesting some intriguing parallels between this late thirteenth-century banking crisis and the current credit crunch.

**Lars Boerner** (European University Institute) & **Oliver Volckart** (LSE)

*Currency unions, optimal currency areas and the integration of financial markets: Central Europe, 14-16<sup>th</sup> centuries*

How did the integration of markets in fourteenth- to sixteenth-century Europe develop under the influence of the formation of currency unions? The answers we give to this question are based on a new approach to estimating financial market integration and on a new dataset compiled in order to make it possible to apply this method. We start out from the idea that combining data on exchange rates between currencies based on gold and silver with data on the bullion content of the coinage allows us to calculate local gold-silver ratios. Interpreting such ratios as proxies for prices paid on financial markets, we can use the approach most common in integration studies: that based on the Law of One Price. The basic idea is that in a world with zero transport and transaction costs and perfect monetary integration, prices, i.e. gold-silver ratios, between localities converge to identity. With positive transport and transaction costs, spreads between prices indicate that opportunities for arbitrage remained unexploited, making it possible to estimate how integration developed. This method allows us to take the quantitative analysis of financial market integration back from the late seventeenth century, which is the earliest period research has so far been able to reach, to the fifteenth and even the fourteenth centuries.

Monetary conditions in late medieval and early modern Europe were characterized by a diversity that defies modern imagination. The question of how this diversity – and efforts to overcome it by forming currency unions – affected market performance has hitherto not been discussed in any detail; most scholars seem implicitly to assume that money was neutral. Economists, by contrast, point to the advantages of unitary currencies, and empirical analyses made under present conditions claim that trade within unions is considerably larger than what gravity models predict under monetary diversity. As for the period under discussion here, there are a number of arguments which suggest that monetary diversity cannot have been a serious impediment to commercial integration. Thus, gold coins, which were primarily used in international trade, were more or less indiscriminately accepted in all countries, regardless of where they had been minted and of which silver currency was locally issued or favoured. This implies that long distance trade used a limited number of de facto international gold currencies. Hence, monetary diversity at the lower level – the localized use of a large number of silver currencies – should not have been a serious obstacle to market integration.

There is another argument in the modern literature on currency unions. In contrast to authors such as Rose, who stress the positive effects of monetary harmonization on integration, other scholars, who argue from the point of view of the theory of optimal currency areas, point out that trade integration may give rise to monetary integration, in other words that currencies are unified only once markets have integrated. The issue of the endogeneity of currency areas has never been discussed with regard to the pre-modern period. However, it seems all the more relevant as under a commodity money system, monetary authorities wanting to form a union needed to agree on a common standard, and if local



bullion prices diverged, as they were bound to do between weakly integrated markets, this was difficult. This argument, too, implies that market integration advanced regardless of monetary diversity, which could, in fact, only be overcome when at least the bullion market had reached a minimal degree of integration.

We employ a dataset of c. 9,000 exchange rate notations compiled for this purpose. The majority of the data (almost 79 per cent) were found in urban, princely and ecclesiastic account books. Merchant account books would probably be equally fertile sources, if more of them were preserved. As it is, only about 8 per cent of the exchange rates used here are from commercial accounts. Commercial and non-commercial correspondence yielded another c. 2 per cent of the data, and c. 1 per cent was found in notarial registers and similar sources. We also use rates mentioned by historians, which amount to c. 9 per cent of the total dataset. We do not use exchange rates that had been politically determined or imposed, instead focusing on market rates only. Data on the gold and silver content of the coinage are mainly from fourteenth- to sixteenth-century political ordinances and contracts concluded between governments and the personnel of the mints. In addition, we use the results of modern chemical tests done on specimens of the late medieval and early modern coinage.

Briefly, the results of our analysis indicate that membership in a currency union was strongly and significantly correlated with well-integrated financial markets. As because of the favourable weight-value ratio of money financial markets were better integrated than any other markets, this allows us to infer that monetary diversity did in fact have strongly adverse effects on the trade of more bulky and less valuable goods, too. Where the same currency was used, trade links in general must have been tighter than where different currencies circulated. As the currency unions which are analysed here standardized silver money only, this hypothesis implies that merchants on their own were unable to overcome the effects of monetary diversity, for example by employing a limited number of gold-based currencies in long-distance trade. What was needed was political action.

Another important insight from our analyses indicates that, as suggested by the optimal currency area literature, late medieval currency unions were endogenous, being formed on the basis of already well-integrated markets. This result has far-reaching implications. It not only indicates that unions could emerge only where the necessary preconditions existed, but moreover suggests that where they did not develop, these preconditions were frequently lacking. In other words, where bullion markets – and by implication markets for goods with less favourable weight-value ratios – were well integrated, monetary diversity could be replaced by some measure of uniformity, thus helping further advances in integration. However, where this was not the case, monetary diversity persisted. Put briefly, the existence of a huge number of silver currencies, most of which circulated in relatively small regions of late medieval Germany only, was a corollary of the weak state of market integration. In fact, given the state of development of markets, the multiplicity of currencies used in Germany seems to have been optimal. To summarize, while unions did help the integration of markets, this effect could not be brought about simply by an effort of political will. Such an effort would be successful only once market integration had sufficiently advanced in the face of monetary fragmentation.

**Jacob L Weisdorf** (Copenhagen) & **Robert C Allen** (Oxford)

*The working year of English day labourers, c.1300-1830*

The length of the working year touches many themes in early modern economic history. One is the standard of living. This is often measured by dividing an annual time series of daily wage rates by a cost of living index. That quotient tracks changes in material consumption from year to year only if the number of days worked per year remains the same, and that is the usual assumption – implicitly or explicitly. An invariant working year, however, is called into question by a second theme – the twin theories of the consumer revolution and the industrious revolution, which posit an increase in the number of days worked per year as



people earned surplus money to buy novel consumer goods like tea, sugar, books, and clocks. Finally, if the working year increased in this way, then labour inputs increased more rapidly than the population, and that rise may have had macroeconomic implications in boosting the rate of economic growth.

There are scattered estimates of the length of the working year, but they do not provide enough information to pin the matter down on their own. In this paper, we take a different approach using time series of wages and prices. In contrast to the usual approach in the real wage literature, which assumes that the working year was constant and then computes how much annual consumption changed as wages and prices varied, we assume that workers acted to stabilize consumption over time and compute how much the working year had to change in order to achieve that. The assumption is unusual, but it turns out to be consistent with many estimates of the length of the working year.

We perform these calculations for the period circa 1300-1830 for two groups of day labourers – farm workers in Southern England and London builders. For farm labourers, our numbers agree reasonably well with independent estimates. Since the consumption basket we use contains only pre-modern daily goods (no sugar, tobacco, tea, coffee etc), this suggests that something like a consumer revolution did not take place among pre-industrial farm workers. For London builders, on the other hand, a large and widening gap between ours and independent estimates points to a massive consumer revolution going on among more well-off labourers in the run up to the industrial revolution, harmonious to Jan de Vries' hypothesis.<sup>590</sup>

For farm labourers, moreover, we detect a steep increase in work-requirements over the periods 1540-1616 and 1750-1818. Remarkably, the initial upsurge in working days required per year coincides with the removal of 49 holy days in England, conducted in 1536 as part of the Protestant Reformation. If this abolition of holy days was intended to help the poor maintain their consumption by allowing them to work more days throughout the year, then it might also have helped more affluent groups of labourers, such as urban builders, to realize a higher desired consumption level, thereby encouraging the industrial revolution, closely linked to what de Vries suggests. As regards farm labourers' work-load during the industrial revolution, we closely match Joachim Voth's profound increase in labour input between 1750 and 1800.<sup>591</sup> However, the 'industrious revolution' of farm labourers at the height of the industrial revolution was not a consumer revolution, but came out of economic hardship.

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<sup>590</sup> de Vries, J. (1994), 'The Industrial Revolution and the Industrious Revolution', *Journal of Economic History* 54, pp.249-70; de Vries, J. (2008), *The Industrious Revolution*, New York: Cambridge University Press.

<sup>591</sup> Voth, H.-J. (2000), *Time and Work in England 1750-1830*, Oxford: Oxford University Press; Voth, H.-J. (2001), "The Longest Years: Estimates of Labour Input in England, 1760-1830", *Journal of Economic History* 61, pp.1065-1082.

### III/D Economic Growth

Chair: **Nicholas Dimsdale** (Oxford)

**Gianfranco Di Vaio** (Luiss Guido Carli) & **Kerstin Enflo** (Copenhagen)

*Did globalization lead to segmentation? Identifying cross-country growth regimes in the long-run, 1870-2003*

Starting with Baumol's pioneering study (1986) there has been a general consensus that convergence in GDP per capita was the main feature among the industrialized economies since 1870. Economic historians have stressed that this process was fuelled by the two trade booms of 1870-1913 and the period post 1950, while the period 1913-50 was characterized by increased protectionism, slow growth and divergence. It has therefore been argued that history provides an unambiguously positive relationship between globalization and convergence (Williamson, 1996). However, the previous evidence of long-run convergence relies on the choice of a small and ad hoc selected sample of industrialized countries, that now belong to the so-called OECD-club and we know that actually converged ex post. This means that those nations which have not converged since 1870 have been excluded from the sample, due to their present relative poverty. This calls for a sample selection problem in long-term convergence studies, as already shown by De Long (1988). A way to solve this issue is to conduct the convergence analysis on a larger sample of nations, by identifying the growth regimes since 1870 without prior restrictions. In addition, Epstein et al (2003) have recently questioned whether the first global wave 1870-1914 really was a period of unconditional convergence fuelled by globalization, even within the OECD-club. In order to bring light into this long-term growth and convergence debate, mixture models appear to be useful analytical tools, since they allow us to endogenously select unknown clusters (i.e. convergence clubs) in a set of data. The aim of this paper is therefore to analyse long-term growth experiences using an unrestricted sample of 64 nations since 1870. The model we test is in the framework of the so-called beta-convergence, for which we use data on the initial level, and on the growth rate, of per capita income. We find that the period 1870-2003 is characterized by segmentation of cross-country growth patterns. Over the long run, the model identifies two regimes: the first one basically consisting of the OECD-club and being characterized by high growth rates and convergence of per capita income, and the other denoted by slow growth and divergence and consisting of the rest of the sample. However, when the sample is split into three historical epochs of global and anti-global waves we do not find evidence of an early converging OECD-club between 1870 and 1914. Instead it appears that the dynamism of the converging OECD-club only emerged after the Second World War. These results highlight that analysing long-term economic convergence using a sample of nations that have converged ex post, may bring misleading results about the growth patterns in the long-run. According to our findings, history only ambiguously supports the positive relationship between globalization and convergence.

**William Pettigrew** (Oxford)

*Debating the 'national interest': some under-appreciated connections between constitutional change and national economic growth in England, 1660-1720*

This paper offers an account of the ways in which the rising importance of Parliament at the turn of the eighteenth century assisted Britain's national economy. It concentrates on a single problem – the economic consequences of the constitutional changes often misleadingly labelled as the emergence of 'Parliamentary sovereignty'. It answers two related questions about this period. What were the economic connotations of political reform? What were the political determinants of economic growth? Political and economic historians (including historians of the industrial revolution and historians of Parliament) have not shared contemporaries' (such as Nicholas Barbon, Charles Davenant, Celia Fiennes, and John Locke)

expectations that the 'sovereign Parliament' could assist in the development of Britain's national economy. This paper offers an interdisciplinary means to assess this expectation. Using hypotheses stimulated by the literatures on political science and institutional economics, but sceptical of such over-arching ideological constructs as 'mercantilism' or linear narratives such as the 'rise of liberalism', the paper hopes to offer a more agile conceptual framework and a more historical discussion of a question with large and multi-disciplinary implications.

Between 1688 and 1770, the national economy grew by approximately 200 per cent at a time when the national population grew by just 57 per cent. At the beginning of this period, Parliament eclipsed the Privy Council as the most important state-sponsored means to regulate the national economy. Between 1660 and 1688 Royal Proclamation maintained a 68 per cent share of state attempts to regulate the economy. Between 1688 and 1713 that share decreased to 7 per cent (at a time when total state attempts increased by 54 per cent). What part did the primacy of Parliament play in this unprecedented growth in the national economy? The shift of national, economic regulatory initiative from the Privy Council to Parliament during this period influenced the structure and scale of Britain's economy. The primacy of Parliament as the regulator of the burgeoning national economy after 1688 assisted the realization of what lobbyists and policy-makers called the 'national interest', which came, more and more, to mean national economic growth.

The paper analyses the changing pattern of state attempts to intervene in Britain's growing economy as the means for that state initiative shifted from royal proclamation to Parliamentary statute. Parliament provided a less efficient regulatory mechanism than the Privy Council, but because Parliament's enactments were based on consent, statutes provided a more effective means to enforce government attempts to regulate the economy than proclamations. Parliament proved more effective at enforcing these restrictive statutes because in the context of a more deliberative political system, disadvantaged merchants could use political rather than economic means to make their views felt, what Albert Hirschman famously characterized as 'voice' rather than 'exit'. As a more open and deliberative institution, Parliament offered a platform for commercial interest groups (often from the provinces) to assert their economic agendas via petitions to assist infrastructure projects (roads and rivers), protect nascent manufacturing (silk and cotton) or deregulate trades (cloth, corn, and iron). Parliament's representative remit also allowed lobbying groups to defeat statutory attempts to regulate overseas trade (especially in the case of the slave trade).

The paper offers an overview of all of these phenomena to allow an appreciation of the broad connections between constitutional change and economic growth in this period. In examining these political sources of economic growth the paper also offers a new interpretation of Parliamentary sovereignty and how Parliament relied upon the public sphere to assist in developing the economy and how national economic growth depended as much upon the retreat of other constitutional branches from the business of state regulation of the economy as it did on the extension of Parliament's influence. The paper also offers important refinements to economists' belief that rent seeking inhibits economic growth. The commercial interest groups the paper focuses on show how lobbyists and rent seekers helped to develop the economy contrary to the political science literature which traditionally describes interest groups as inhibitors of national economic development.

The paper therefore shows the limitations of the prevailing view that constitutional change resulted solely from parliamentary control over finance. The economic results of the primacy of Parliament as well as contemporaries' belief in Parliament's ability to generate economic benefits confirms that a theory of parliament existed to not only assist with the raising of government finance, but also to help generate economic growth, however ill distributed it may have been. For when markets deregulated, as the paper demonstrates, they did so more as a result of the reformed political process than any theoretical discussion of the benefits of deregulated economies.

**Alessandro Nuvolari** (St. Anna School of Advanced Studies) & **Valentina Tartari** (Imperial, London)

*Mr Woodcroft and the value of English patents of invention, 1617-1852*

Richard Sullivan (1989, 1990) has suggested that patent statistics can shed light on the ongoing debates on the timing and the nature of innovation during the industrial revolution. The time series of English patents exhibits a significant structural break around 1760 and this would seem to indicate, at least according to Sullivan, that technical change accelerated around that period. Furthermore, the distribution of patents across sectors displays a rather low level of concentration, pointing to a widespread nature of inventive activities. Considered together these two findings could be regarded as providing evidence for the ‘traditional’ interpretation of the industrial revolution as a phase of rapid and widespread economic change, while contradicting the recent revisionist viewpoint arguing for a more gradual dynamics, initially restricted to only a handful of modernized sectors.

Sullivan’s findings are, however, critically dependent on the reliability of patents as indicators of innovation. In fact, historians such as MacLeod (1988), O’Brien, Griffiths and Hunt (1995) and more recently Nuvolari (2004) and Moser (2005) have suggested that a sizable share of inventive activities were undertaken outside the coverage of patent protection. Therefore, one should be extremely cautious in the interpretation of trends in patenting. Furthermore, patents differed greatly in their quality and, for this reason, the use of simple patent counts for reconstructing the profile of technical change over time and across sectors may be unwarranted.

In this paper we address the issue of the different quality of patents in the period of the industrial revolution. We provide a comprehensive assessment of the quality of all English patents granted in the period 1617-1852 using a historical source that so far has been neglected. The source is the *Reference Index of Patents of Invention, 1617-1852*, London, 1862 compiled by Bennet Woodcroft. For each patent, the book provides a list of references (either to technical and engineering literature or to legal proceedings) where the specification is mentioned. Our basic assumption is that the relative ‘visibility’ of each patent in Woodcroft’s *Reference Index* provides a reasonable proxy for its relative technical and economic significance. This approach is analogous to the use of patent citations for assessing the value of patents in the contemporary innovation literature (Jaffe and Trajtenberg, 2002).

On the basis of Woodcroft’s *Reference Index*, we assign a quality score to each patent in our period of interest. The reliability of this indicator is corroborated by the fact that the inventions we regard, with the benefit of hindsight, as the critical breakthroughs of the industrial revolution (Newcomen’s and Watt’s steam engines, Arkwright’s spinning machine, Tennant’s chlorine bleaching, etc.) are all characterized by very high quality scores. Furthermore, the distribution of the quality scores both at the level of the entire sample and at the level of single industries is very skewed and similar to those found in modern patent data (Jaffe and Trajtenberg, 2002).

The final step of our exercise is to explore the determinants of our new indicator of patent quality. We establish the existence of very strong industry effects (which can perhaps be interpreted as evidence supporting the idea of an uneven profile of technological change). We also establish that inventors listed in the new *Oxford Dictionary of National Biography* tended to produce patents of higher quality. Finally the quality of patents seems also positively related with patentees active in engineering trades and with patentees residing in major metropolitan areas.

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### III/E Early Modern

Chair: **Nigel Goose** (Hertfordshire)

**Amanda Capern** (Hull)

*Women's transmission of landed property in early-modern Yorkshire*

The paper is an examination of several aspects of women's transmission of land. It is based on two types of research: first, a comprehensive trawl through the landed family papers, title deeds, wills, rentals, correspondence, surveys, maps and plans of the North Yorkshire Record Office and, second, a systematic survey of 304 women's wills in the Borthwick Institute covering the period 1600 to 1750. The research finds that while women did recognize the financial needs of female relatives and did spread their property around many kin (Erickson, 1993, p.212), when it came to land they demonstrated a strong preference for transmission to men. This confirms what Jane Whittle found for Norfolk in the earlier period of 1440-1580 (Whittle, 1998). The survey of Borthwick wills revealed that 26.97 per cent of the wills left land bequests and in 56.09 per cent of these cases the principle legatee was a man or men. Across the whole sample only 36.18 per cent featured a man as principle legatee and in the wills which did not mention land at all only 28.83 per cent had a man as the main beneficiary.

The paper will also demonstrate with supporting statistics that when women did leave land to other women it was almost always to their daughter or daughters whereas when they left land to men they went out of their way to find male heirs amongst cousins, nephews, brothers and friends as well as sons and grandsons. The qualitative evidence that will be used to support the quantitative in this paper includes examples of women pursuing as passionately as men the goal of establishing the link between land and masculinity, for example placing conditions on inheritance such as male entails and attempting to link manors and packages of land with descent of a particular male name. The final question that will be explored will be whether or not women's desire to transmit land to men varied according to the value of the land.

**Claire Judde de Larivière** (Toulouse)

*Public economy and private interests: commercial navigation in sixteenth-century Venice*

During the middle ages, Venetian maritime trade was based on two main systems: the public organization of convoys of galleys and the system of private ships. The first system was based on the regular navigation of public merchant galleys which sailed around the Mediterranean and towards the North Sea, managed by the state and rented by patricians. Meanwhile private ship-owners were free to organize their trips, as long as they respected laws and regular public interdictions.

This paper is an attempt to show why and how the public galleys were gradually abandoned by Venetian patricians just before 1570, and how rulers as well as investors and merchants reacted to this abandonment. This phenomenon will be related to the broader transformations of the Venetian economy in the sixteenth century, particularly of private commercial navigation, but also to the deep evolution of social and political structures.

In medieval Venice, as typical of medieval society, public good and private interests were often confused. Patricians' private interests incarnated the public good. The elite represented the defence of the community and personified the common good. In the economic field, the convoys of public galleys, the '*mude di galere*', constituted an organization perfectly adapted to this balance between private and public interests. This system, created at the beginning of the fourteenth century, was based on the regular navigation of galleys, in charge of the transport of spices, silk, wool and other precious merchandise. Benefits were equally divided between private investors, the majority from the patriciate, and the state. By consequence, the activity of the galleys clearly satisfied at the same time private wealth and public good. Public convoys aimed to favour patricians' investments but, at the same time,



allowed them to express in a particular way their position and their power. In fact, Venetian patricians had the monopoly of public authority as well as the monopoly of the spice trade. Thus by managing public galleys, they could show their public and private authority, and express the convergence between their economic and political activities. From that point of view, public convoys can be considered as a 'public' institution which was ideally adapted to the medieval economic and political Venetian organization.

From the beginning of the sixteenth century, public navigation started to decline and the system to change. There were fewer and fewer convoys organized every year, and after 1533, galleys followed only two lines towards Beirut and Alexandria, the other lines towards England, Flanders, North Africa, Spain and France, Cyprus and Constantinople having been abandoned. If a large group of patricians was involved until the 1520s, just a few of them participated in the following decades. Furthermore, these patricians proved themselves more and more reluctant to fulfil their public tasks (involvement in the military operations of the *Armada*, payment of taxes and customs duty ...).

While galley activity declined, private shipping activity increased. Private ships were owned by private ship-owners, patricians, *cittadini* or rich commoners. They constituted the second and parallel commercial navigation system in Venice, in charge of the trade of raw or cheap materials and merchandise (cereals, oil, ash, salt ...). Private ship-owners clearly took advantage of the galleys' decline, and managed to break the monopoly of the galleys in the transport of spices. Furthermore, because of the increase of their activity, the sociological composition of the group in charge of international maritime trade changed dramatically. This activity, as many others in Venice, was no longer monopolized by patricians. The ruling class was losing its monopoly over the Venetian economy.

More than a simple evolution of the structure of maritime trade, it was the identity and status of the actors in charge of the system which was changing. Henceforth, the convergence between the patricians' political and economic privileges was vanishing, as was the convergence between their public and their private functions. This evolution towards new distinctions between private and public actions, between economics and politics was a sign of the emergence of a new approach to economic activity in which public galleys did not accord anymore with the general concept of economics.

It appears that the abandonment of public galleys was far more important than just a transformation of economic structures, but rather the sign of transition between a 'medieval' system and a 'modern' one, the first one being based on the confusion between political and economic functions of the patricians, as well as a confusion between public and private spheres, and the second one – 'modern' in a chronological sense – being defined by the distinction between functions and roles of public and private actors.

**Karin Dannehl & Nancy Cox (Wolverhampton)**

*Inspid or intrepid luxury: the material culture of the long eighteenth century viewed through documents relating to English retail history*

The luxury debate has informed consumption studies for some thirty years and fruitfully so, and it is increasingly complemented and shored up by the equally vigorous fields of material culture and archaeology of the post-medieval yet pre-modern period. In this paper we propose a detailed look at a sub-section of luxury goods, which will be summarily called 'small luxuries' in this paper. These goods were of relative value in terms of their price, though usually relatively cheap, but on the other hand not simple enough to be tools or utensils of everyday use and functionality. In the context of eighteenth-century material culture they were for the most part also relatively ephemeral with direct repercussions on survival and the documentary evidence. This makes their investigation challenging but, as we hope to show, there are rewards.

With its broad sweep across the materials, stuff and things that were the subject of wholesale and retail in eighteenth-century England, the *Dictionary of traded goods and commodities*, permits insight into the nuances of material culture from a perspective that is

different from the angle usually taken – consumption or production – but instead the often criticized and frequently elusive stage between the two: distribution and retail. As an extended glossary that aims to list, explain and contextualize the goods and commodities that were in circulation, be it wholesale, retail and cognate forms of exchange between circa 1550-1820, the *Dictionary's* source materials are diaries, John Houghton, *Letters on Husbandry & Trade* (ed. R Bradley, 1727, originally a series of weekly letters), probate inventories, newspaper advertisement, patents, rate books, cookery and medicinal recipes, statutes and trade cards.

These datasets permit us to look across the range of small luxuries, as well as a more focused investigation into a specific item or category. The retailing strategies deployed and honed with regard to these goods had to accommodate the fact that their appeal was to be managed within the parameters of luxury – morally bad and emotionally attractive on one end of the scale – and functional – morally good but emotionally unattractive – on the other. By taking as its starting point the goods, many of which have not impinged on the literature in either the field of luxury or that of necessity through lack of material and documentary evidence, the paper engages with the necessity-luxury continuum, not to challenge the main tenets of the current literature but instead to contribute to historians' understanding. It is received wisdom that eighteenth-century materialism for the middling sort was not solely focused on the ownership and possession of particular types of goods, but we hope to demonstrate that yet more can be learned from an approach that looks at how such materialism engaged with range.

The role of the various facets of the retail trade, which largely determined what goods were available and to whom, and the spectrum of these goods allow us to trace the engagement with the objects and materials that made life prettier and that allowed those who grappled with them the opportunity to gain a sense of control over their surroundings. The compromise between means and aspiration was inherent in all objects and materials. Compromise in turn challenged the boundaries between mundane and luxury and led to changes in the way early modern consumers used material goods to communicate what was a largely unchanged message about themselves.

One such message was taste, this quintessential eighteenth century concept and its scholarly counterpart, the concept of emulation, but even here is room for surprise. As for example John Styles has shown, taste was more than a social step-ladder: 'For defenders of luxury, the code of manners known as politeness represented an important means by which the civilizing influence of commerce could polish taste and improve behaviour. ... politeness aimed to create people of decorum, taste and refinement who could be agreeable in the correct way', (Styles, 2008, p.181) According to Styles, politeness 'did not require its followers to be genteel by birth, merely that when in company they behave in a genteel manner' and he concludes that 'it was widely believed that lack of emulation among the common people led to economic and social stagnation', (Styles, 2008, p.188). In other words, parallel to the better-known concerns caused by copying ones betters, there existed the view that emulation was a desirable phenomenon and a commendable endeavour that benefited society.

Whether without taste, flavourless, and wanting the qualities that excite interest or emotion, or daring and brave, in order to participate and to communicate the message with consistency, however, those who joined would not only have to learn and spend. Where the medium consisted of the items of material culture, these physical messengers had to evolve and change to maintain the message. The deployment of objects and materials had repercussions for the values – cultural and economic – that could be attached to them. Throwaway society may have been born along the way of incremental compromises over small luxuries.

## III/F Industry

Chair: **Sigfrido Ramírez Pérez** (Evry val d'Essonne)

**Gerben Bakker** (LSE)

*The making of the pharmaceutical industry: sunk costs, market size and market structure, 1800-2000*<sup>592</sup>

Pharmaceuticals have been an important growth industry during the last two centuries. Long-run real growth of both the American and British market for pharmaceuticals was just under five per cent per annum between the mid-nineteenth century and 2000. Factors that made this growth possible include advances in basic medical science and chemistry, in chemical process technologies, rising real incomes, and the rising amount of human capital embodied in individual persons, which increased the incentive to extend its quality-adjusted lifespan. Pharmaceuticals have probably been one of the most successful new industries. In the US at the turn of the millennium, a doubling of expenditure on medicines increased life expectancy at age 40 by two per cent, and at age 60 by four per cent. One extra year of life expectancy at age 40 cost \$22,000 in total over a person's life time, versus \$18,000 at age 60.<sup>593</sup>

Virtually all medicines were introduced by firms that combined the basic science originating in the public sector with the art of corporate R&D, manufacturing technology, and saturation marketing. This paper examines the industrial economics of the introduction of new drugs over time. It tries to understand how the process worked by which firms (and in the aggregate the industry) allocated money towards the development of specific new innovations and how it evolved over time. It investigates the relative role of demand factors – such as rising incomes, social insurance schemes, regulation – in this, and that of supply factors – such as the provision of cash, scientific advances, patents and trademarks, the inherent possibilities of specific technological trajectories. It examines the evolution of market structure over time and addresses the question why the industry over-all remained relatively concentrated, despite phenomenal market growth.

Industrial-economic historical insight into the process of pharmaceutical innovation is important because it contributes to developing knowledge of the very long-run dynamic efficiency of the industry. This may help us to answer questions such as whether any counterfactual reality would have been possible with a better outcome for society and total welfare. More specifically, long-run research on the innovation process using industrial economics theory may give us microeconomic insight into how models based on oligopolistic strategic interaction can explain the development of an industry and its impact on wider economic growth and development.

To investigate the questions above, this paper will draw on industrial organization theory, most notably John Sutton's (1991, 1998) work on sunk cost, technology and market structure. The paper will argue that continuing quality races, in which firms escalated their expenditure on R&D and marketing, limited the degree of fragmentation in the industry. Detailed time series data on concentration, market size and R&D outlays for the US and British market will be investigated, and some initial data has been collected for France as well.

The paper is structured as follows. Section II discusses the industry background and long-run market growth. Section III discusses theory on endogenous sunk costs and evaluates its implications for the pharmaceutical industry. Section IV and V empirically investigate the

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<sup>593</sup> For comparison, the doubling of GDP per capita increases life expectancy at age 40 by 6% and at age 60 by 9%. Lifestyle positively affects life expectancy at birth, at 40 and at 60.

evolution of sunk costs and market structure, analysing detailed industry time series data. Section VI examines the entrepreneurial discovery process. Section VII concludes.

**Valerio Cerretano** (Glasgow)

*European multinationals and European cartels: insights from the rayon industry, 1920-40*

The paper reviews the global cartel politics and foreign direct investments of the leading players in the rayon industry – notably Courtaulds, VGF, CTA and Snia Viscosa – in the interwar era, the main aim being to add new material to the growing debate about the rise of European multinationals.

Scholars have pointed out that the development of European multinationals has been significantly shaped by international cartels, a form of international business that proliferated mostly in Europe until the Second World War. More particularly, international cartels were market-sharing, price and other technological arrangements whereby firms producing the same products sought to establish a monopoly over global markets. Commentators have suggested that these arrangements – mainly market-sharing agreements – contributed to shape the business strategy of European firms, and, with it, decisions regarding the size and the direction of their foreign direct investments.

The findings presented here are fully consistent with these conclusions. Yet this paper – which is based on primary material held in a number of European and US archives – challenges the claim put forward, among others, by Casson, Nussbaum, and Jones that European cartels had their origins in postwar over-production and business volatility, as well as in the economic de-globalization in the 1930s. The history of this trade rather shows that their proliferation went hand in hand with the internationalization of big business, and infers that European cartels, along with interwar European multinationals, were boosted by the short-lived and yet intense economic liberalization taking place in the latter half of the 1920s.

The paper proceeds as follows. The first part reviews the debate on European cartels and European multinationals. The second part examines Courtaulds and VGF's joint acquisition of Snia Viscosa in 1927 and subsequent cartel understandings. Before concluding, the paper looks at how cartel understandings influenced business decisions related to the foreign direct investments which the leading rayon firms made in Latin America, Western Europe and the USA in the late 1920s and 1930s.

**Peter M Solar** (Free, Brussels) & **John S Lyons** (Miami)

*The English cotton spinning industry, 1770-1840, as revealed in the columns of the London Gazette*

This paper investigates the early development of the English cotton spinning industry by analysing over 700 commissions or fiats of bankruptcy and over 1,200 dissolutions of partnership recorded in the *London Gazette* between 1770 and 1840. Thanks to the recent digitization of the *Gazette* by The Stationery Office, it has now become much easier to follow individual trades and industries as well as to seek out particular firms. Information from the *Gazette* can be used to examine both temporal and regional dimensions of change in cotton spinning.

Previous studies by Marriner (1980), Duffy (1985), and Hoppit (1987) have pointed out that bankruptcy data need careful interpretation: there were changes in both law and practice, as well as often extended lags in taking out a commission. We argue, however, that factory-based cotton spinning was less subject to such ambiguities than other sectors. To our knowledge, no-one has studied dissolutions of partnership systematically. Announcing dissolutions in the *Gazette* appears to have been quite a common practice, even if not legally required, leading us to believe such information to be quite revealing.

Our data for bankruptcies and dissolutions of partnership in English cotton spinning show two long temporal cycles, with dissolutions peaking a few years ahead of bankruptcies. The first peak occurred in the early to mid-1800s, the second in the mid- to late 1820s. Both

peaks occurred near the ends of investment booms in the industry. Despite significant growth in the number of spinning firms between those two decades, for both bankruptcy and dissolution the earlier peak was absolutely higher than the later one. Declining incidences of bankruptcy and dissolution may thus reflect greater enterprise stability, but we suspect that for bankruptcy they support at industry level what earlier authors have suggested were changes in the resort to extreme legal remedies.

These data are also informative about regional patterns of change in the industry, as shown in our classification of events by sub-regions of the major cotton spinning counties. When the populations are divided at 1815, both sets show quite clearly the rising concentration over time of the industry in (southern) Lancashire and adjacent parts of Cheshire, Derbyshire and Yorkshire. Both the bankruptcies and the dissolutions also suggest that within this greater Lancashire heartland, Manchester and Salford were of relatively declining importance in the growth in cotton spinning.

Likewise, since in general the notices provide names of all involved in a bankruptcy or partnership, it is possible to get an impression of ownership structure in the industry. A large majority of firms (about 70 per cent in the bankruptcy data) were single proprietorships; very few partnerships involved more than three participants, and it appears that the mean number of partners became somewhat smaller in the post-1815 period.

These results, based on the comprehensive coverage in the *Gazette*, confirm and refine the view, to be found in regional work by Chapman (1967) on the Midlands, Ingle (1997) on Yorkshire and Cockerill and Solar (2008) on Ireland, that spinners in peripheral regions of the UK found it increasingly difficult to compete during the early nineteenth century. For these areas the dream of a thriving cotton industry proved illusory: they had to find other lines of industrial development or deindustrialize. Our work highlights the importance of discerning the precise nature of greater Lancashire's competitive advantage in order to understand the regional dynamics of early industrial development.

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## IV/A Government and Markets

Chair: **Roger Middleton** (Bristol)

**Erik Lindberg** (Uppsala)

*The market and the lighthouse: public goods in historical perspective*

Ronald Coase's famous 1974 paper 'The Lighthouse in Economics' (in *Journal of Law and Economics*) is widely cited as demonstrating that private enterprise can produce public goods. Coase reached the conclusion that, historically, in England there existed a relatively efficient privately financed lighthouse system. Coase cited a number of famous nineteenth and twentieth century economists (JS Mill, Sidgwick, Pigou and Samuelson) who all argued that the lighthouse service is a quintessential government activity. Coase not only intended to revise the economic theory of public goods, he also had a methodological agenda: instead of highbrow theorizing, economist should generalize their findings based on 'studies of how such activities are actually carried out within different institutional frameworks'. Still there are few historical studies of how lighthouse services have been provided in the past. Given the impact Coase's study has had on the economic profession and that many economists and advocates of free enterprise believe that he showed that government involvement was not important in providing the public good standard theory used to claim, this empirical void is unfortunate. Only two major empirical studies have been published on the workings of lighthouse systems in producing public goods, and these also deal with the British system. In 1993, David van Zandt (in *Journal of Legal Studies*) challenged Coase's conclusion that "contrary to the belief of many economists, a lighthouse service can be provided by private enterprise". Van Zandt argued that the 'private' form of enterprise Coase described never existed and that government involvement was substantial, although there were private interests in the lighthouse industry. Van Zandt concluded that the public goods provided by the lighthouse were provided on a continuum between private and government interests. In 2006, Elodie Bertrand (in *Cambridge Journal of Economics*) probed even deeper into the history of the British lighthouses. All these studies on lighthouse provision reveal how important it is to study the property rights aspect when studying economic problems. Bertrand agrees with van Zandt that Coase was mistaken in his emphasis that the providers of light house services really were private, but she shows that at times there were severe problems with government provision of lighthouse services, since governments can be subject to corruption and other pressures. In this paper I provide further empirical evidence on the workings of a lighthouse system, as I compare the lighthouse system in Sweden between 1650 and 1890 with the British case. In Sweden, as in Britain, the lighthouse service was provided by a mix of private parties and the government, until most private lighthouses were bought by the government around 1840. Some lighthouses were, however, governed by a private body performing governmental activities well into the twentieth century. By adding further empirical evidence from another system, we gain further insights into how public goods might be provided, and under what circumstances private ownership might be preferable to public, and why private enterprise in the provision of public goods in the end was largely abolished both in Britain and in Sweden, although for different reasons.

**Avner Offer** (Oxford)

*The economy of obligation: contract ambiguity and the welfare state*

Government in affluent societies presents two puzzles. Why is it so large, and why is it not any larger? Between the 1930s and the 1970s, rich country governments increased their share of national income between twofold and fourfold. But from the 1970s onwards, governments' shares of national income have stopped growing. Affluent western societies identified the core functions of government during the three decades after 1945. That was a crucial innovation of the period. All governments came to focus on a set of four obligations. These



were (a) core public goods like law and order, defence, and environmental protection (b) inter-generational transfers like pensions, education, and child-support (c) life-cycle contingency transfers like medical treatment, disability pensions, and unemployment insurance (d) engineering and social infrastructure, like roads, science, culture, and sport. Declining personal savings rates in English-speaking and Scandinavian countries also signalled an increasing reliance on the state. Leaving aside the core public goods, what these fields of provision had in common, was the problem of fulfilling remote or contingent obligations. Markets found this difficult, because it is hard to write effective formal long-term contracts. Contracts have an aura of certainty, arising out of mutual commitment and external enforcement, and that is the position in classical legal contract theory. That certainty is illusory. Literal contracts are uncertain because they can be set aside for a broad range of reasons, both pragmatic and principled. Neo-classical economics has a similar once-and-for-all time-consistent contract model, but agency theory and its variants accept that contracts are incomplete and enforcement is uncertain. Neither law nor economic theory have credible enforcement mechanisms for long-term contracts. Governments have been able to overcome this dilemma by converting inter-temporal obligations into current ones. They operate on a pay-as-you-go basis, without long-term formal contracts. They do not try to lock in the future, but to solve the real problem, which is the transfer of resources from producers to dependants. The scale of transfers is determined and legitimized by democracy. Any contracts involved are flexible 'relational contracts' which can be realigned at any time to suit changing resources and preferences. The historical record of long-term private welfare contracts is poor. Private pensions, mortgages and health are expensive, unreliable, and have required state subsidies, guarantees, and bailouts. In infrastructure, market discount rates impose a fairly short time horizon. The demand for contingent and remote obligations rises with affluence, and it is difficult to provide them well through the markets. The market-liberal movement has aspired to take over the management of social risk, and to convert tax flows into corporate cash flows. But the corporate capacity to deliver is limited. To undertake its core functions, government needs to be capable and competent. The norms, rhetoric, political subversion, and competition for talent by market liberalism have undermined the capacity of government to undertake these core functions in the future.

## IV/B Children

Chair: **Nigel Goose** (Hertfordshire)

**Sascha O Becker** (Stirling, CESifo & IZA), **Francesco Cinnirella** (Ifo Institute for Economic Research & CESifo) & **Ludger Woessmann** (Munich, CESifo & IZA)

*The quantity and quality of children before the demographic transition: evidence from Prussia*

The Industrial Revolution is characterized by major developments in the economic and demographic environment. Between the late eighteenth century and beginning of the twentieth century, most European countries witnessed the transition from stagnation to growth. Furthermore, in later phases of the industrialization, fertility decreased and gave rise to the demographic transition.

Whereas much previous research saw these transitions as discontinuous changes, recently, much scholar attention has been devoted to explain the transition from stagnation to growth within a unified growth theory (Galor and Weil, 2000; Hansen and Prescott, 2002; Jones, 2001; Lucas, 2002; Clark, 2007). The main contribution of unified growth theory is to combine the elements of a typical Malthusian economy – a framework characterized by decreasing returns to labour, high fertility rates, and in which income is positively related to population – with the factors that characterize developed economies with high income and low fertility. Establishing the micro-foundations of the transition between those two phases resulted in a fertile research field. In particular, scholars were faced with the problem of explaining how the Malthusian positive link between income and population, for some countries, turned negative towards the end of the nineteenth century. The common denominator of unified growth theory is the role played by demography and its interactions with the economy.

In particular, in a seminal paper, Galor and Moav (2002) stress the importance of human capital in explaining the transition from stagnation to growth. In their model, the trade-off between child quantity and child quality is characterized as one of the fundamental trade-offs that exist in nature. In the economics literature, the child quantity-quality trade-off has originally been modelled by Becker (1960), Becker and Lewis (1973), and Willis (1973). Empirical studies of this trade-off, however, use modern data (Rosenzweig and Wolpin, 1980; Hanushek, 1992). A key feature of unified growth theory models à la Galor and Moav (2002), however, is the perennial existence of the child quantity-quality trade-off. Whereas in early stages of development, the fraction of parents emphasizing quality of their kids over quantity was low, they ultimately gained an evolutionary advantage. To our knowledge, there is no empirical study showing the existence of the child quantity-quality trade-off before the demographic transition, a gap we fill with our analysis. To do so, we use county-level data from Prussia for the years 1816 and 1849, well before the demographic transition that occurred at the turn of the nineteenth and twentieth centuries.

Human capital gained in importance during the Industrial Revolution. Galor and Moav (2006) suggest that the complementarities between technology and human capital during the second phase of the industrial revolution induced industrialists to lobby for the provision of universal public education. In fact, the authors show that, for several European countries, education reforms followed indeed from the pressure of the capitalists.

In Prussia, however, universal primary education was achieved earlier than in other countries but went through demographic transition no earlier than neighboring countries. Our data allow us to distinguish between primary and secondary school enrolment. We hypothesize that demand for secondary vocational education was the main trigger for the demographic transition in Prussia.

We contribute to the literature in several ways: first, we establish the magnitude of the relationship between education and fertility behavior in Prussia, for the period before the

fertility transition. We do so using detailed census data from the nineteenth century. Prussia constitutes an interesting case because it enacted a law on compulsory primary education already in 1763. Yet, this law was not strictly enforced, as evidenced by the fact that full enrollment in primary schools was achieved only towards the end of the nineteenth century. Therefore, Prussian families were able to decide whether or not to send their children to school. Since decisions about children's education and fertility are strictly interrelated, we use an instrumental variables approach to shed light on the direction of the causality between education and fertility. Our second contribution is to show that households, in limiting their fertility, took into account also investments in higher education and not only in basic primary education. In this sense, we suggest that the fertility transition in Prussia was to a larger extent driven by investment in secondary education rather than in primary education.

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## Gloria L Main (Colorado)

*'Family strategy' and the changing uses of child labour in rural New England, 1650-1840*

The field of childhood studies has grown rapidly these past few years, with the most exciting areas now focusing on the lives and experiences of non-elite children. I have been contributing to this field in a modest way, most recently with papers on the evolution of child labour patterns in New England in the colonial and early national periods. (European Social Science History Conference, University of Lisbon, Portugal, 26 February – 1 March 2008; Economic History Association, Yale University, New Haven, 12-14 September 2008). The paper I propose for the Economic History Conference makes use of this work in order to examine the tensions between work, school, and parental authority for children living in successive economic stages of rural New England between 1630 and 1830. I envision those stages as being three in number: 1) early settlement and pioneering, 1620-1725; farm maintenance and expanded home manufacturing, 1725-90; the commercialization of economic life and the early factories, 1790-1830.

The paper will first analyse the changing demographic context of family life in each stage, focusing particularly on changing levels of child mortality and marital fertility and examining their impact on the supply of child labour. Estimates of these rates derive from an existing dataset of published genealogies comprehending some 5,000 first marriages. The paper will then go on to describe for each stage the basic collection of tasks to be performed by various family members, and how an evolving gender/age division of labour allocated those tasks. Material for these descriptions draws from probate inventories, rural account books, diaries, and memoirs. The paper next reviews the availability and quality of schooling for boys and girls over the time-span of the paper, pulling together information on literacy rates and school attendance rates where available.

Different kinds of demands on child labour, and the changing degree of that labour, affected time spent in work versus time spent in school, between maximizing current income and investing in human capital. The heart of the paper assesses the impact of each economic stage and its accompanying demographic regime on the terms of negotiation between parents and children with respect to the allocation of family resources. In particular, the status of older girls changed significantly over the time encompassed by the paper.

The role of child labour in past and present economic development is a contentious topic, but I intend neither to vilify parents facing difficult choices nor will I valorize New England's pre-industrial era. By taking the perspective of children's long-term welfare, I do anticipate a re-assessment of the early stages of economic development in that region's past.

## IV/C Agricultural Trade

Chair: tba

**Karl Gunnar Persson & Paul Sharp (Copenhagen)**

*Did consumers and producers really both win in the grain invasion era, 1870-1900?*

A key event in the economic history of nineteenth century globalization (see for example O'Rourke and Williamson, 1999) was the US 'grain invasion', when unprecedented quantities of cheap American grain flooded export markets during the second half of the century, triggering a wave of agricultural protests and protectionism in Europe.

European producers in countries which failed to protect agriculture were clearly the losers from this. However, the traditional interpretation of the grain invasion, largely attributable to the work of Knick Harley, sees both European consumers and American producers as winners. Given upward sloping export supply and downward sloping import demand schedules, the gains from falling domestic and international transportation costs were shared as price gaps narrowed between the continents – the consumer price fell, and the producer price increased. American farmers gained as falling transportation costs allowed easier and cheaper access to export markets where demand was increasing with rapid population growth.

Douglass North (1974) demonstrated long ago that the real price of agricultural products did indeed increase in this period. This paper argues, however, that the full impact of the grain invasion on US farmers can only be understood if we take into account the role of geography in this story. Real price increases have only been shown for farmers at fixed locations. In reality the centre of gravity of American production was moving westwards. Why, then, should we take, for example, the price of wheat at Chicago as being representative of the price received by US producers in general?

We first show that the price differential between Midwest and UK prices remained high at the end of the nineteenth century, despite falls in the cost of domestic transportation. We then proceed to construct a series of prices which takes account of the westward movement of American agriculture over the years. By taking the average of the farm gate prices of wheat for individual states, weighted by production in each state, we get the price for the representative producer, or the price of wheat at the centre of gravity of American wheat production. We demonstrate that, in real terms, this price fell over time, so the representative farmer was becoming worse off.

Inspired by the work of Harley, W Arthur Lewis and others, we explain this phenomenon by demonstrating that falling transportation costs provided the mechanism whereby frontier farmers were invited into the world market for grain. Farmers from these regions, we argue, were permitted by falling transportation costs to access foreign markets. However, they could only do so by supplying grain at the going wage and grain price. We argue that in the long run, the US labour supply to agriculture and thus also grain supply was very if not perfectly elastic – i.e. the export supply schedule was flat – as effectively unlimited land was populated by immigrants (the upwards sloping supply schedule is however applicable to the short run, we argue, since frontier land was not costless to exploit). So, although the real price of wheat at a fixed location was increasing over this period, the price was also decreasing the further west production was located, the difference in price being equal to the transportation costs to the East Coast. When this geographical pattern of prices is taken into account, farmers did not gain from the fall in transportation costs, which only caused production to move further away from the eastern export ports. The assumptions made here would have had the added consequence that technological progress and innovation in the farming sector (as demonstrated by the work of Alan Olmstead) simply served to lower prices.



This work links into the literature about the reasons for the American agricultural discontent of the period, when a succession of farm reform movements appeared, culminating in the famous Populist movement of the 1890s. Since it has normally been taken as given that farmers experienced a real increase in the price of their produce, one of the most popular explanations for this has been to assume that farmers suffered from nominal illusions. This was a period of deflation, and farmers, some have suggested, mistook a nominal fall in the price of their produce for a real fall. Needless to say, this explanation is unsatisfactory from the vantage point of an economist, used to an assumption of rational agents. The evidence presented in this paper might go some way to understanding the economic causes of the Populist protests, and would also explain the concentration of the farm protest movement in areas of frontier settlement.

**James Simpson** (Carlos III, Madrid)

*Response to technological change: the international wine industry, 1850-1914*

Wine production in Europe today is dominated by small family vineyards and cooperative wineries, while in the New World viticulture and viniculture is highly concentrated and vertically integrated. As a result, 70 per cent of the nation's wine in the United States and Australia is produced by the top five wine companies, 50 per cent in Argentina and Chile, compared to figures of only 10 per cent in countries such as France, Italy, or Spain. This paper argues that these differences have historical explanations that date from the turmoil in wine markets at the turn of the twentieth century. Technological change radically altered the nature of the world's wine industry before 1914, and in particular it allowed the commercial production of drinkable dry table wines in geographical regions where previously they had been considered too difficult. The new production technologies provided the opportunity for greater economies of scale and vertical integration. As technological change endangered existing rents, growers, wine-makers, and merchants lobbied governments to introduce laws and create new institutions that regulated markets in their favour. The political voice and bargaining power of the economic agents varied greatly both within, and between, countries. Despite the common problems of overproduction and adulteration, very different policy decisions were implemented which had long-term consequences, helping to explain the organizational structures found in the Old World and New World today. First in France, and then in other European countries, the political influence of the hundreds of thousands of small growers forced their governments to intervene in markets to protect their interests and restrict the economic power of merchants. By contrast in the New World, the potential electoral vote of the growers was much smaller, and the large distances between the best lands for vines and the major urban markets encouraged the vertical integration of wine making with the distribution networks to sell to a population largely unaccustomed to drinking wine. While the political power of European wine-growers has maintained a small scale and fragmented industry, the horizontal and vertical integration has created one of much larger dimensions in the New World.

With a commodity chain such as wine there were numerous activities to the placing of the product on the consumer's table, including the growing of the grapes, the making of the wine, its maturing, blending and preparation for sale. When wine was marketed over a long distance other activities were required, including the need for importers or wholesalers, together with the creation of a distribution network. Before the period covered by this paper, most transactions were relatively simple: grape growers produced their own wine, and much of it was drunk by the family and friends, or the buyer knew the producer. The railways, urbanization and economic development radically changed this, and wines now travelled hundreds of kilometers to their final markets, while consumers often had little idea of where the wine was actually made, let alone knew the name of the grower.

The appearance of new vine diseases, major improvements in dry wine making technologies, and the massive growth in potential markets provided opportunities, and threats



to existing forms of production. Large quantities of adulterated wines appeared as wine prices rose because of phylloxera in France, and these continued to be sold by the turn of the century when overproduction led to a collapse in prices and a decline in consumer confidence everywhere. Within the commodity chain two major changes took place. First, the traditional separation of grape growing and wine making was questioned. In traditional areas of production in the Old World, there were large numbers of grape growers who had their own wine making facilities, and their political influence ensured that their interests were largely protected. By contrast, in the New World, the large areas of suitable land available for viticulture, and the appearance of new capital intensive wine making technologies with important economies of scale from the end of the century, encouraged the appearance of specialized growers. The second change was linked to the potential new markets and the extension of commodity chains. However, even the largest wine makers found it difficult to produce sufficient quantities of wine to brand and sell in distant markets, and in the New World this led to the appearance of two firms that dominated their markets: the California Wine Association, and the British wine merchant PBBurgoyne in Australia. By contrast in Europe the growth in the merchants' market power was challenged by the numerical superiority of the growers who, at least in parts of France and Portugal, were able to lobby their governments and successfully obtained new institutions protected their interests.

After examining the nature of technological change in section one, the rest of the paper is devoted to the political economy of institutional change and government intervention in five different countries (Australia, France, Portugal, Spain and the United States) in the areas of product adulteration, producer cooperatives, and *appellation contrôlée*.

## IV/D Institutions

Chair: **Tommy Murphy** (Bocconi)

**Mark Dincecco** (IMT Lucca)

*The political economy of fiscal prudence in historical perspective*

This paper uses a new panel dataset to perform a statistical analysis of political regimes and financial rectitude over the long run. Old Regime polities in Europe typically suffered from fiscal fragmentation and absolutist rule. By the start of the First World War, however, many such countries had centralized institutions and limited government. Panel regressions indicate that centralized and limited regimes were associated with significant improvements in fiscal prudence relative to fragmented and absolutist ones. Dynamic estimations and structural breaks tests reinforce these findings. The results suggest that good financial housekeeping is one mechanism through which political reforms reduce sovereign credit risk.

**Martin Dribe, Mats Olsson & Patrick Svensson** (Lund)

*Land transmission among tenants on noble land – the case of southern Sweden, 1766-1895*

Land transmission affected the possibility for families to plan for generational shifts, marriages and retirement. Since land was the main asset, land transfers also affected the social status of the generations and thus the social mobility. Owning land made it possible for parents to take strategic decisions on how the children would be supported during adulthood, even if legislation and practices could influence the degree of freedom in this decision (Dribe and Lundh 2005). If the family was merely tenants a lot of this decision-making was left to the landowner. In that case the tenants had to adjust to the common practice of this landowner and to seek other ways of ensuring the social reproduction of the children in the family.

In most parts of Europe manorial land ownership was the dominant form of ownership from the middle ages until the nineteenth century. However, the relative independence of the tenants managing the major part of this land differed over time and space. In some parts of Europe, predominantly in Western Europe, peasants had land tenures that included hereditary rights. These tenants could often mortgage the land and even sell the user right to another peasant. In most cases, however, the landlord had to approve the sale (Blum 1978). Even though the peasant had life-long contracts and hereditary rights it was possible for the landlord to evict the tenants if the management of the estate as a unit required so. More common was leaseholds, either for life or restricted in time, without hereditary rights. According to many studies, land was transferred within the family at the death of the tenant also on leaseholds (see Blum 1978). However, at least in some parts of Europe, the majority of the life-time tenants did not manage the land throughout their lives and land was most often transferred to other non-kin tenants by the landlord (Skrubbeltrang 1961). When tenancy was of short-term character this was even more accentuated.

In Eastern Europe tenancy at will dominated. In this case the tenant had no rights at all; the landlord could evict the tenants whenever he wished. He could transfer the land to a new tenant or add it to his demesne. Studies of eastern European manors have shown that this was common although they reveal that here also tenants sometimes stayed for life and were replaced by their sons (e.g. Wetherell et al 1994).

Thus, there are a number of studies of dealing with land transmission among tenants in Europe, although most of them, with some exceptions, deal with the system rather than the actual rate of transfers within and outside the families, respectively. For Sweden, however, studies on land transfers on manorial land are practically absent. Instead, Swedish studies have primarily dealt with land transfer among freeholders and tenants on Crown land (e.g. Winberg 1981; Rosén 1994; Perlestam 1998; Dribe and Lundh 2005).

Transfer of land was one of the strategic decisions made by the family in order to ensure the survival of the next generation as well as the provision of the first generation when

retiring (Dribe and Lundh 2005). Hereditary rights affected the possibilities of planning for marriage and migration among the children and for time of retirement for the parents. For tenants on manorial land common practices could be the base for these considerations. If the common practice of the landlord was to replace the old tenant with his son this would affect the behaviour of the tenant families in quite a different way as compared to if the landlord neither allowed tenants to stay on until they reached old age nor pass the farm to their sons or daughters. The duration of the tenancies could also affect the rate of transmissions within families. In the early nineteenth century, when life-time leases were replaced by short-term leases (see Olsson 2002), a negative effect on the possibility of transferring land within the family is possible.

The aim of this paper is to study the possibilities of land transfer from parents to children among tenants in nineteenth-century Sweden. All land transmissions in three parishes dominated by noble land during the period 1766 to 1895 will be studied. This will be supplemented by information on surviving heirs through the use of probate inventories allowing for more detailed studies of gender and birth order of the successors. This paper will enhance our general understanding of factors affecting family strategies and social mobility. Through the setup of the investigation and the use of contracts from manorial archives we will also be able to detect possible differences in land transmission due to differing traditions and objectives among the landlords as well as potential changes over time.

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## IV/E Twentieth-Century Europe

Chair: **Valerio Cerretano** (Glasgow)

**Sibylle H Lehmann** (Max Planck)

*Parties in the Weimar Republic, cohesion and cooperation in the Parliament*

This paper uses econometric methods to analyse a new dataset of roll-call bills in the parliament of the Weimar Republic in the years between 1919 and 1932. The data provides a reliable sample of voting behaviour in the parliament since it ranges from very important bills such as votes about the Treaty of Versailles to less important votes such as the ones about different types of taxes. These data allow me to test long-established hypotheses regarding the constitutional framework and the behaviour of political actors and parties in the parliament. My analysis provides new insights, which lead to a crucial change in the interpretation of the Weimar Parliament.

The instability of the parliament often was the focus of historical, economic and political science research since its perceived weakness was to a large extent made responsible for the success of Hitler and the rise of his National Socialists. Until now, however, literature on this topic only provides theoretical suggestion and hypotheses based on some qualitative evidence. A quantitative test of these hypotheses has never before been attempted. My study provides the missing link between theory and historical evidence by providing a descriptive and econometric analysis of the voting behaviour of the different parties over the time of the Weimar Republic. It shows surprising results.

Despite the instability and the often changing governments, the parliament's decision making process seems to have worked quite well until the early 1930s. Parties voted coherently, and informal coalitions, i.e. similar voting behaviour without codified coalition agreements, were determined by political distances between parties. The Median legislator, the *Zentrum Party*, won most of the votes and was represented in almost every government. The closer a party was politically to the *Zentrum*, the more often did it win a vote. Neither the huge amount of small parties nor the increasing power of the extreme parties caused trouble for the governing coalition and made their voting more difficult. Thus, the difficulties of the parliament to remain stable over longer time periods seem to have been caused outside parliament. My study provides evidence that this was indeed the case. I compare voting behaviour in the context of different political issues and find that issues concerning reparation payments and the Treaty of Versailles caused problems for the governing coalitions, indicating that pressure from the allies made the government incapable of action. Another surprising find is the influence of unemployment. It is well known that unemployment severely influenced the voting behaviour of the electorate in the constituencies in general elections, but my study further provides evidence that rising unemployment also caused disturbances between the election in the parliament.

**Sigfrido Ramírez Pérez** (Evry-Val d'Essonne)

*The Marshall Plan and the European automobile industry, 1945-52*

The historical scholarship concerning the Marshall Plan in Europe has progressively shifted researchers' attention from its economic impact to its political role in the stabilization of postwar Europe (Burk; Wall; Spagnolo). This shift is to a certain extent the result of the conclusion of the controversial debate that the Marshall Plan was not necessary, but just useful for European states and industries (Milward; Eichengreen; Herrigel and Zeitlin). The automobile industry is one central industry from where to analyse the relative utility of the Marshall Plan in the transfer of financial resources, technology and management methods (Bigazzi; Fridenson; Tolliday) between both sides of the Atlantic. This paper discusses in comparative perspective the French and Italian cases (Esposito) from 1945 to 1952 using first-hand archival sources from French and Italian business archives.

The introduction starts with a review of the literature about the Marshall Plan and the automobile industry. Then, it presents the research question of to what degree European automobile companies modernized thanks to the Marshall Plan aid in raw materials, machinery, technology or managerial techniques to catch up with American corporations. The counterfactual is whether, in the absence of the Marshall Plan, private arrangements with American business circles could have sufficed to provide the European automobile industry with what it required for its recovery.

The first part of the paper deals with the American trips of European automobile managers and engineers, who confirmed that in their view, the European automobile industry was perfectly capable of competing with American companies in worldwide markets. The fundamental competitive handicap of European companies with American firms was more the high price of European steel and coal than any organizational, managerial or technological gap. It also includes the contacts and joint ventures between European companies and American multinationals before and during the Marshall Plan, proving that, contrary to what is generally held (McGlade), American companies were also extremely interested in acquiring European products, technology and markets, and were ready to pay for them.

A second section enquires the effective Marshall Plan financial aid and machinery received by the automobile industry in these two countries. It concludes that to a certain extent, the distribution of aid was oriented by the political strategy of Americans to encourage the uniting of Europe and the strategic interests of American multinationals. If the amounts received were very important and helped European companies to catch up, it will be considered whether they could have found them otherwise by the sale of non-strategic assets or by agreements to import raw materials from elsewhere.

The conclusion aims to put in perspective what we still need to know about the impact of the Marshall Plan in the European automobile industry, suggesting a research agenda to fill the important gaps which exist about this question.

## V/A Inequality

Chair: **John S Lyons** (Miami)

**David Meredith & Deborah Oxley** (Oxford)

*A tale of two cities: gender and health inequality in London and Glasgow in the nineteenth century*

There is a new frontier in biometric history, and that is the use of body mass. Human height has offered tremendous insights into net nutritional status accumulated from conception to maturity. Stature captures some twenty-years or more of a balancing act between nutritional intakes and a host of out-takes including energy for work and play, fighting disease and cold, coping with stress, and growing. Velocity of growth (changes in height by age) and trends in terminal heights have been the key instruments by which individual measurements have been transformed into a collective tale of nutritional well-being over time and between populations and elements therein

Body mass offers something more. Height is essentially unchanging; weight is highly variable. Weight adjusted for height – body mass – measures current nutritional status. It directly measures net consumption and therefore access to resources, revealing both individual levels of welfare and food adequacy. Likewise, it registers if there are energy constraints on labour productivity. Indirectly, it indicates health status, because of the strong connection between body mass, morbidity and mortality risk traced out in the famous Waaler curves. Moreover, because body mass is a variable quantity, it acts to measure resource allocation, labour productivity and health status *over the lifecycle*. It therefore offers insights into the history of ageing.

Body mass is potentially most useful to historians when considering populations under stress, where food adequacy is questionable and health environments are struggling. When times are tough, how are resources allocated within families, and with what ramifications? This paper pushes biometric history in this new direction, measuring the impact of industrialization and urbanization on poor working-class bodies. It uses body mass to examine the distribution of health and welfare between men and women of different ages, living in the rapidly transforming cities of London and Glasgow in the Victorian era.

These were indeed cities under stress. London was by far the largest city in the United Kingdom, with a population in the vicinity of 2.5 million by mid-century. At that time, Glasgow (along with Liverpool) was the next largest with more than 300,000 residents. It was not simply the sheer size of these places that posed difficulties for those living within their confines, significant though this challenge was: it was their *rate* of expansion. Immigrants from overseas and job-seekers from within Britain added to natural increase to fuel the burgeoning of these cities. Despite high mortality, the pace of population growth outstripped existing infrastructure, constantly ran ahead of new building, and – without past experience or vast resources to draw upon – civic authorities floundered. Urbanization highlighted the inadequacy of sanitation, and typically brought with it overcrowding at home and work with elevated risk of communicable diseases. Health and well-being were further compromised by matters such as poor lighting, inadequate heating, social dislocation, crime, and more. Cities offered far fewer opportunities for self-provisioning, compelling people to rely on markets which might be imperfect, delivering foodstuffs and other goods of sometimes dubious quality. Mutual aid was also less forthcoming in the cities than in rural communities with social obligations of long standing. The badly housed and poorly nourished faced the greatest health risks. One widely recognized cost of urban growth was premature death, shown in elevated mortality rates. Another (related) cost was bodily stunting and wastage, which increased vulnerability to ill health.

Were these both the best of times and the worst of times? Rising demand for labour at comparatively high wages attracted immigrants, while overcrowding and insecurity promoted



poverty, disease and death. Just how evenly were these benefits and costs distributed? If the poor shouldered the brunt of these developments, what decisions did they make in their own households about the distribution of scarce resources? When food was short, who ate? And while London and Glasgow topped Britain's urban rankings, there was a magnitude between them. Did this likewise transform the level of disamenities experienced? Was it better to be poor in Glasgow than in London? These questions of the distribution and severity of cities' growing pains requires a new approach. Unlike mortality rates, which capture a critical event at one moment in an individual's existence, body mass tells a story of changing fortunes across a lifetime. By colonizing data on weight as well as height, we are able to examine current nutritional status for individuals at different stages of the life cycle.

The paper commences with a grounding in the method, exploring the relationship between body mass and health outcomes in the modern world, before considering how these standards and relationships can be applied to the historical populations in question. The paper then examines cross-sectional data on over 40,000 prisoners detained in London and Glasgow. It is argued that these were mainly working poor, those at greatest risk of economic calamity and vulnerable in various ways. Using body shapes and sizes, the paper identifies lifecycle nutritional status among the poor. It summarizes the results for London reported in a recent paper by Horrell, Meredith and Oxley (*Explorations in Economic History* forthcoming 2009), and compares these with the findings from Paisley Prison in Glasgow. In particular, it notes how the fortunes of men and women shifted over the course of their lives, fortunes that were in many respects inversely related. Body mass and health inequality were not evenly spread, even within poor households, and gender and age were important determinants of welfare. These results are then explored for their implications regarding the complex interactions between labour markets, household resources, family decision-making and intergenerational transfers. The paper suggests that, like a magnifying lens, the heightened pressures of urban disamenities on those in crisis sharpens our focus on important factors shaping the human response to economic change.

**Michael Pammer** (Johannes Kepler)

*Inter-regional and intra-regional inequality in nineteenth-century Austria*

The paper addresses income and wealth inequality for the major part of what is Austria today, including the provinces of Lower and Upper Austria, Vienna, Salzburg, Styria, Carinthia, Tyrol, and Vorarlberg. It relies on wealth data gained from probate inventories established in these provinces between 1820 and 1913. These sources cover the whole population, including even unpropertied persons; although some series of files have been discarded probate inventories are preserved well enough to allow a thorough examination of wealth inequality in Austria. The analysis is based on a sample that consists of about 7,000 cases, all of them persons who died in the period between 1820 and 1913. Therefore wealth data offer a good basis for the examination of inequality in the long run; income data are not available for Austria for most of the nineteenth century.

The paper starts with the analysis of wealth distribution on an aggregate level, i.e. including all Austrian regions. We ask whether inequality became more pronounced in that period and whether the end of the nineteenth century is a turning point leading back to a more equal distribution. For this analysis we use the Gini coefficient as a measure of inequality. As a result, the Gini coefficient rose indeed until about 1890 and became lower afterwards; however, both changes are moderate. In other words, the Austrian economy follows a Kuznets curve but rise and decline are not particularly steep.

In the following sections these results are compared with the development within the regions. Again, we start with Gini coefficients for every region. This analysis yields quite different results for the regions involved, for example, high inequality in Lower Austria and Carinthia, and a relatively even distribution in Vorarlberg. These differences and the factors that determine wealth distribution in the regions are discussed with respect to considerations

about what determines the Kuznets curve in general.

Following Kuznets' basic ideas about the changes in inequality in a growing economy we would expect the most unequal distribution in the most advanced regions in the late nineteenth century. From that point of time on, in these regions the distribution might become narrower again. In the backward regions, on the other hand, the distribution of wealth would be relatively equal for most of the time considering the slow changes in the sectoral structure and the low degree of urbanization in those regions; we would not expect much of a change in wealth distribution by the end of the nineteenth century.

The Austrian regions, however, show a quite different pattern of wealth distribution in advanced and backward regions. There is no consistent picture of advanced regions with a high degree of inequality and backward regions with an even distribution: We find high-income regions like Lower Austria with an uneven distribution, but also advanced but equally structured Vorarlberg. On the other hand, the Gini coefficients for backward Carinthia have high values.

For an explanation, we consider the regional specifics in areas like sectoral structure, urbanization, class structure, family structure and patterns of inheritance. Clearly sectoral structure and the degree of urbanization differed greatly between regions: Lower Austria and Vorarlberg had the lowest proportion of agriculture, Lower Austria had a large urban centre (Vienna), while Vorarlberg had none. Apart from Vienna, only one major urban centre (Graz in Styria) existed in the country. Most regions had specific class structures and family structures, partly in connection with regional specifics in inheritance patterns: In all regions except Vorarlberg entailed property was the rule; the mountain regions had high rates of domestic servants in agriculture, Upper and Lower Austria had higher rates of day-labourers; Carinthia and parts of Styria had extremely high rates of illegitimate births (up to 45 per cent) which were different in different strata of society; in the law of succession illegitimacy could decide whether a person had a hereditary title or not. All these factors created a specific situation in every region concerning the accumulation of wealth and handing over wealth from one generation to the next. In some regions this resulted in classes of wealth owners which remained relatively static and might represent an unequal distribution of wealth even in a backward society, in other regions quick fluctuation of wealth and a relative openness of social classes resulted in a relatively even distribution.

Altogether, this paper tries to break down inequality measured on the national level to its sources on a regional level and to reach an explanation of changes in inequality which has in mind both processes which worked universally and processes which worked differently in various regions.

## V/B Poverty and Affluence

Chair: tba

**Ian Gazeley & Andrew Newell** (Sussex)

*The end of destitution: poverty among working households in Britain*

In Gazeley and Newell (2008) we presented estimates of the rate of poverty among British working households in the early twentieth century on the basis of Bowley's basic needs. We found a higher poverty rate than previously thought.

In that paper we took the data from the original returns of the 1904 Board of Trade household expenditure survey and then adjusted it to make it more representative, using weights derived from the adult male wage distribution from the 1906 Earnings Census. In this paper we repeat that process to estimate poverty in 1937/8 and then compare the results of the two exercises. We exploit the extant data (just over 600 cases) of the Ministry of Labour 1937/8 working class household expenditure survey. About 10,800 working-class budgets were originally collected for this survey, with expenditure records completed over four separate weeks in 1937-38. As with the 1904 household expenditure survey, there is a contemporary Earnings Survey, taken in 1938, to use as a benchmark against which to check the poorer families in the samples.

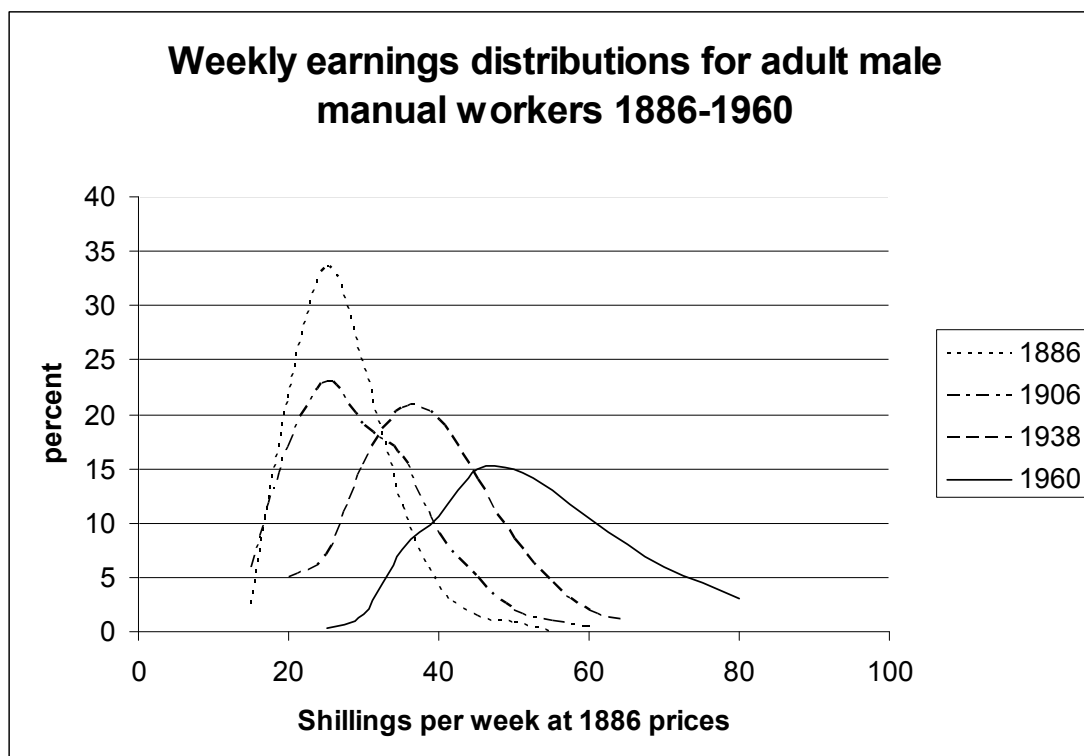
In October 1938, the Ministry of Labour surveyed the earnings and hours of individuals working in manufacturing and some of the principle non-manufacturing industries. The enquiry was sent to all employers with 10 or more workers and a random sample (amounting to about 20 per cent) of all those employers with less than 10 workers. In this way, weekly earnings data was collected for about 5.5 million adult men and women and juveniles, which amounted to 70 per cent of all workers in the industries included in the enquiry. Analysis of this enquiry was reported in the Ministry of Labour *Gazette* in August 1944 and February 1945 and in more detail by Ainsworth (1949).

We employ two different poverty lines: one devised by Bowley (1911) and the more generous line devised by George (1936). Using a long-run cost-of-living index, we reflate/deflate the poverty lines from the year they were devised to the year of the survey. Using a deflated version of Bowley's 1911 poverty line, we find 12.1 per cent poverty among working households in the 1904 data. When we adjust the rates to reflect the under-representation of less-skilled workers in the 1904 data, using the 1906 earning survey, this figure rises to about 17.9 per cent. For 1937/8 we find about 3 per cent poverty, again using Bowley's 1911 line deflated to 1938. If we compare the earning distributions of the 1937/8 expenditure survey with the 1938 Earnings Survey we find less low-paid adult males in the earning survey, so 3 per cent is our upper estimate for 1938. Adjusting for the over-representation of relatively poor heads of households in our sample, we find about 2 per cent poverty in 1938 using Bowley's poverty measure. Using George's more generous poverty line, we estimate household poverty to have been just over 4 per cent in 1938. Thus we estimate the near elimination of abject poverty among working households. Even if we take the uncorrected results we find the poverty rate using Bowley's measure declining from 12 per cent in 1904 to 3 per cent in 1938.

*1937/8 poverty rates, raw and adjusted using 1938 wage survey*

<i>Weekly expenditure or earnings level in shillings</i>	<i>Share with this level of expenditures in single earner households in the 1937/8 Ministry of Labour Survey</i>	<i>Earnings of men over 21(1938 Earnings Survey)</i>	<i>1937/8 Bowley poverty rate</i>	<i>George poverty rate</i>
<40s	10.2	6	26.1	30.4
40 and <50s	10.9	8.3	6.0	18.0
50 and <60s	16.3	18.5	0	0
60 and <70s	15.5	21.7	0	1.3
70 and <80s	16.1	19.8	1.2	3.7
80 and <90s	11.3	12.1	0	0
90 and <100s	8.0	6.5	0	0
100 and <110s	7.3	3.2	0	0
110 and <120s	4.4	1.8	0	0
over 120	8.0	2.1	0	0
Bowley household poverty rate	3.3	2.3		
Bowley headcount	4.4	3.8		
George household poverty rate	5.5	4.3		
George Headcount	8.0	7.4		

We have independent supporting evidence for the marked decline of abject poverty among working households by 1938. We compare the adult male wage distributions from the 1886, 1906 and 1938 earnings surveys, made comparable by deflating to 1886 with the COL index. We add the 1960 distribution for reference. Note how about 24 per cent of workers in 1886 and 1906 had weekly earnings of £1 or less at 1886 prices, and how this fell to around 5 per cent by 1938. By chance, the Bowley poverty line for a typical family, in 1886 £s, was just under a pound in both 1886 and 1904. The graph illustrates that £1 (=20s) leaves a large fraction of the tail of the adult male weekly wage distributions for 1886 and 1906. By 1938, however, not only had wages risen substantially in real terms (on average by 10s at 1886 prices), but also, because family size had dropped so much over the period (from 3 children per household in 1904 to 1.4 children per household in 1937/8), the Bowley poverty line for the typical 1938 family falls by one-third, to about 13s at 1886 prices. So, unless the shape of the tail of household income distribution shifts a lot, then about 60 per cent of the near-elimination of Bowley poverty among working households is due to real wage growth and about 40 per cent is due to the fall in family size.



Of course this begs a lot of questions. For instance, why did the variance of (log) earnings stay roughly constant? Are we sure there was no contraction at the lower end due to minimum wages, the introduction of unemployment insurance and so on? But these are big questions and leaving them unanswered doesn't detract from the central finding of our paper.

So, in brief, we find that the rate of abject poverty among working households, of the type the early social investigators observed in the early 1900s, was almost eliminated, falling 75 per cent, by the late 1930s, before the introduction of the Beveridge welfare state. We estimate that 60 per cent of this reduction is due to real wage growth and 40 per cent to the fall in family size.

### **Shinobu Majima** (Gakushuin)

#### *Affluence in the making: the household budget enquiry of 1953-4*

In a disused salt mine in deep Cheshire, a bulk of old survey returns have been hidden for more than half a century. They are the handwritten records of everyday lives of 13,000 families who lived in Britain in 1953-4. This paper draws upon this trove of information to reveal how the state and the nation strove to reconstruct their identities after the Second World War. It has often been said that material affluence was the biggest weapon that the West possessed during the Cold War years. As if foreseeing the power of blue jeans that brought down the Berlin Wall, the United States then propagated the 'fact' that its citizens could purchase five times more bread compared to the Russians for the same money. Britain and Europe under Marshall Aid lagged far behind America but were encouraged to catch up materially. In this war, budget surveys themselves were deemed to serve as a cultural weapon. Although statistics was still an expensive state apparatus in the Hollerith years, nonetheless the government had to try in order to make 'the creation of the Welfare State seem a greater change than it actually was' (Abel-Smith & Townsend, 1965). On the eve of the survey launch, Aneurin Bevan gave a 'good night' radio speech, to which the people responded – making a more impressive list of expenditures; making themselves look more affluent than ever before. This hype was also fuelled by the Festival of Britain, the Coronation, and the ending of rationing.

In the past, those who drew upon family budget surveys have centred on poverty and the effectiveness of National Assistance (Rowntree & Lavers, 1951; Abel-Smith &

Townsend, 1965). Historians have argued that a large-scale survey had been long awaiting to be the mediator of the collective bargaining (Wright, 1984). This paper looks both at the continuities of concerns from the prewar Britain, and at the changes in the postwar world in which statistics as a scientific technology came to play a bigger role since the wartime mobilization. The possibility of peace-time control loomed large, and the family budget survey provided an important tool box for fixing the retail price index and making taxation policies – measuring and identifying the coming of an affluent era. Statistics was in a sense making the new realities and possibilities then – but probably in a more limited capacity than sociologists of statistics might otherwise suggest (Barns, 1998; MacKenzie, 1993; Latour, 1990). The latter part of this paper considers the everyday shopping habits of the survey respondents, using an unconventional technique of data visualization. However, tackling a quarter of a million pages of handwritten survey returns is no easy task. Therefore, a preliminary result will be presented, taking detailed sample records of 500 Londoner families, coding and digitizing the data for individual shoppers, and by performing a multi-dimensional analysis on their expenditure data (Majima, 2008; Bourdieu, 1983). Besides offering the cognitive maps à la Bourdieu, this project also aims to draw a geographical map of Londoners to compare with Booth's poverty maps.



## V/C The Ties that Bind

Chair: tba

**Mark Wilson** (Australian National University)

*The impact of Common Law developments on the development of the tied-house system: 1890-1915*

After 1890, the tied-house system, whereby retailers of beer and ale operated subject to an exclusive supply agreement with a particular brewer, was transformed from one in which trade-ties were predominantly manifested in loan documents and supporting agreements to a system where brewers acquired real property and enforced trade-ties through tenancy agreements (Knox 1958; Gourvish and Wilson 1994; Hawkins and Pass 1979). The extant literature identifies and supports three primary factors underpinning this ‘scramble for property’ in the UK: a significant increase in investment in brewing capacity soon followed by a fall in aggregate demand (Gourvish and Wilson 1994), a profound increase in the availability of financial capital to brewers in the stock market booms of the late 1880s and late 1890s (Gourvish 1985; Knox 1958) and rapidly increasing property prices which flowed through to the funding requirements of prospective tenants of public houses (Hawkins and Pass 1979). With respect to the Australian market, Stubbs (1996) notes the impact of tariff policy and the imposition of the Federal beer excise as additional explanatory factors. The extant literature, however, ignores contemporaneous developments in the common law relating to the enforceability and duration of trade-ties incorporated in loan contracts, which are likely to have greatly encouraged brewers to secure their trade by purchasing real property. This paper reconsiders the transformation of the tied-house system in the light of these legal developments, whose impact is evidenced in transcripts of evidence to New South Wales Select Committees, and the documents in the private archives of Tooth & Co Ltd, Australia’s largest brewer at the turn of the twentieth century. In particular, a marked change in brewers’ forward integration strategies is apparent in the years following the case of *Biggs v. Hoddinott* [1898], the decision in which created great uncertainty as to the enforceability of brewers’ loan-tie agreements.

**Tim Leunig, Chris Minns & Patrick Wallis** (LSE)

*Why did apprentices quit in early modern England?*

Apprenticeship was the central formal institution for transmitting skills in premodern Europe. Yet little is known about how apprenticeship functioned in practice. This paper analyses the internal characteristics of apprentices’ service in two of England’s major centres of training, London and Bristol, in the 1690s and 1700s. We examine several fundamental issues: How many apprentices remained with their masters for the full term of their contracts? What factors influenced the likelihood that an apprentice would complete their contract? If they quit, when did they leave? These issues are crucial to our understanding of the effectiveness of apprenticeship contracts, and by implication the institutions that enforced them. Indeed, they are central to our understanding of this mode of training more generally. Was premodern apprenticeship inflexible and exploitative, as some have charged, or was it relatively open and responsive to the needs and opportunities of apprentice and master?

We address these questions by reconstructing the households of master artisans and traders in London and Bristol in the 1690s and early 1700s. In outline, we have linked tax, guild and civic records to identify samples of freemen whose households were recorded in detail in a 1695 tax listing for a new tax on Births, Marriages and Deaths. By reconstructing masters’ households over time using tax records, we observe apprentices’ movements during their training, including the stability and failure of contracted relationships, and the extent of involvement before and after the period of formal contracting. Our analysis confirms suspicions that large numbers of apprentices left their masters prematurely. We find

distinctive differences between patterns of apprenticeship in the two cities. We also develop the first analysis of factors explaining different trajectories through apprenticeship. By analysing the various elements of information we have about the social, economic and geographical backgrounds of apprentices (from apprenticeship contracts) and the wealth and trade of their masters (from guild and tax records) we can identify which factors shaped the paths of training in premodern England. We conclude that the structures for acquiring human capital in premodern England were significantly more flexible and fluid than has traditionally been thought, but that the legal and reputational advantages of completion still had a large influence on apprentices late in their term.

## V/D Postwar Britain

Chair: tba

**Sean Nixon** (Essex)

*Understanding the ordinary housewife: advertising and consumer research in Britain 1948-67*

The paper reflects on the ways market research in Britain helped produce understandings of and information about the ‘mass housewife’ in the 1950s and 60s. The paper does this through a case study of the market research used and generated by the London subsidiary office of J Walter Thompson advertising London. This was the largest advertising agency in Britain in the 1950s and 60s and was known as the ‘mum’ agency because of the amount of work it did for companies in the groceries sector who targeted the ‘mass housewife’. The paper focuses on three key client accounts – those for the Pin-up home perm, Brillo soap pads and Oxo cubes – as well as the agency’s non-product specific research, as a way of exploring how it sought to understand the ordinary housewife and her consumption habits.

In exploring JWT London’s approach to the ‘mass market’ housewife, the paper draws on recent sociological arguments about advertising and market research that have conceptualized these commercial practices as technologies or socio-technical devices for ‘making-up’ the consumer; that is, devices for formatting and framing consumer dispositions. In particular, I draw on the arguments of Nicholas Rose & Peter Miller (Miller & Rose, 1997).<sup>594</sup> In an influential essay, they foregrounded the role played by market research in shaping the relationships between consumers and the world of goods. In particular they documented the influence of ideas of the human personality and techniques of group discussion derived from the psychological sciences to argue that these research techniques worked to draw out and render instrumentalizable the inner motivations of consumers. In other words, they contended that market researchers sought to forge connections between consumer’s desires and specific goods by forcing these feelings into the open in the research encounter. Miller & Rose described this process as ‘mobilizing’ the consumer’: that is, ‘affiliating ... needs with particular products ‘ and ‘simultaneously making up the commodity and assembling the little rituals of everyday life that give that commodity meaning and value’ (Miller & Rose, 1997:4). Out of this process, they argued, comes ‘an unprecedented and meticulous cartography’ of everyday life and consumption’ through the technology of market research (Miller & Rose, 1997:4).

Miller & Rose’s conception of the capacity of market research to ‘mobilize’ the consumer and their vivid sense of the ‘meticulous cartography’ of consumption that it helps to generate are instructive ideas in making sense of the role played by consumer research in the promotional economy. In particular, they enable us to grasp the way research opens up the practical uses, symbolic dimensions and the emotional dynamics of everyday goods in the lives of consumers. In exploring the use made of market research by JWT London, however, this paper also seeks to revise certain aspects of Miller & Rose’s essay whilst continuing to draw on their broad insights. Firstly, the paper proposes a more differentiated sense of the various marketing and market research paradigms that were used by advertising agencies. Postwar market research in Britain was alive with controversies about the best way to measure markets, define consumers and understand consumption. This disputation and struggle for professional leadership amongst differently constituted practitioners disappears in Miller & Rose’s essay. Moreover, they occlude these intellectual and practical debates by privileging the influence of the psychological sciences upon market research. In doing so, they come close to rehearsing an argument, evident in both contemporary postwar accounts of

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<sup>594</sup> See also the work of Michel Callon and his co-authors on the material devices of consumption for a similar approach to the ‘making up’ of the consumer. In particular, Callon & Muniesa, 2005; Callon, Meadel & Rabeharisoa, 2002.

advertising and in more recent scholarship, that postwar market research was subject to growing sophistication under the influence of the psychological sciences. The evidence developed in this paper suggests that an agency like JWT London used different ways of measuring markets, apprehending the consumer and understanding the use of goods by consumers. This certainly included the application of forms of psychological knowledge, but the agency's overall approach to consumers and consumer markets reveals that these were neither the only nor necessarily the most important forms of research. In this regard, JWT London was broadly typical of British advertising and market research. This should prompt us to qualify those claims that see Freudian thought as triggering some kind of 'Copernican turn' in marketing in this period (Arvidsson, 1998:254; Packard, 1957).

Secondly, the paper seeks to bring a more international and specifically trans-Atlantic dimension to the understanding of postwar market research than is the case in Miller & Rose's essay. One notable feature of postwar market research in Britain was the influence of commercial techniques first formulated in the United States, including applied psychological knowledge. Like many other aspects of advertising in the 1950s and 60s, market research moved in an Eastward direction across the Atlantic. US advertising agencies and market research companies dominated this movement and their actions were underpinned by the investment of US manufacturing companies in Britain and by the initiatives of government departments on both sides of the Atlantic that sought to facilitate the transfer of commercial know-how from the US to Britain. JWT London's parent company was an important player in this world and through its offices on both sides of the Atlantic it helped to disseminate research methods and techniques first pioneered in the USA to Britain. These US-derived techniques formed a visible presence within postwar British market research and constituted a key point of reference for British-based practitioners. Of course, this influence was neither totalizing nor did it go unchallenged. Staff at JWT's London office, like colleagues elsewhere in British advertising, selectively appropriated and reworked elements of US market research, frequently combining it with more indigenous traditions of social research. Nonetheless, even as they rejected elements of 'American' approaches to the consumer they still had to reckon with their intellectual authority and commercial force in this period.

### **Hugh Pemberton (Bristol)**

#### *The cross-class alliance against earnings-related pensions in Britain in the 1950s*

By the mid-1950s it was becoming clear that there were significant holes in the Beveridge welfare settlement in the field of pensions, with the flat-rate approach limiting the level of contributions to the level payable by the poorest worker, and thus keeping the state pension at a low level as well – what Helen Fawcett has called the Beveridge 'straitjacket'.<sup>595</sup> Alarmed by the prospect of the large number that would become eligible for a state pension in 1958, having paid contributions for only ten years, the Treasury was loth to address the problem. The pension was raised periodically to reflect postwar inflation, but each rise was conceded grudgingly and eventually the state pension fell below the rate of national assistance. At a time when the living standards of workers in Britain were rising at an unprecedented rate, therefore, Britain's system of state pension provision looked increasingly inadequate. In a tight labour market, the demand of workers for their pension better to reflect rising real wages was increasingly met by employers, with occupational pensions provision rising rapidly. As Richard Titmuss noted, however, the result was the opening up of a gap between, on the one hand, a 'privileged minority' lucky enough to benefit from generous occupational pension schemes and on the other hand the 'unprivileged majority' who must necessarily fall back on an inadequate state pension.<sup>596</sup>

<sup>595</sup> Helen Fawcett, 'The Beveridge strait-jacket: policy formulation and the problem of poverty in old age', *Contemporary British History*, vol. 10 (1996), pp.20-42.

<sup>596</sup> Richard Titmuss, *The social divisions of welfare* (Liverpool, 1956).

To address this problem, in 1957 the Labour Party (advised by Titmuss and two of his LSE colleagues, Brian Abel-Smith and Peter Townsend, published radical proposals for a new pension scheme (dubbed 'National Superannuation'). In return for higher contributions, this would pay an earnings-related pension as a top-up to the basic state pension. In conjunction, a worker on average earnings could expect about 'half-pay on retirement', as Labour's 'sound-bite' had it. The scheme would embody an element of redistribution to lower-paid workers, and from the young to the old. But its most radical element was perhaps Labour's intention to invest the very large funds that would accrue to the scheme in stock markets. The very large state-controlled fund that this would produce (which, using constant prices, Labour estimated would be worth £7.8bn by 1980, equivalent to about £450bn today when revalued in terms of GDP) would be used not just to finance better pensions but to help the country carry through the large-scale capital investment in British industry that seemed to contemporaries to be so essential if the country was to break out of its relative economic decline.

Ultimately this radical idea (which in some ways prefigures present attempts by the British government to raise pension savings through a system of 'personal accounts', though current proposals lack key social democratic elements of the 1957 policy package being non-redistributive and with no state control of investment) failed to catch the imagination of voters in the 1959 general election. As a result, Britain's first experience of a state earnings-related 'occupational' pension was the much more limited 'graduated pension' implemented by the Conservatives in 1961 (though this offered contributors such a poor return on their contributions that it amounted to what we would now term 'misselling', being little more than an excuse to raise contributions and solve a looming deficit in the National Insurance Fund).

In part, this failure of National Superannuation to gain public approbation was the product of dedicated political lobbying and an unusually sophisticated public relations campaign by the financial sector, which feared that the scheme would mark the end of a lucrative occupational pension scheme business.

At the same time, an important part in the failure of National Superannuation was also played by the trade unions. Traditionally, trade unions have generally been seen as an important factor in the establishment and extension of welfare states. In this case, however, many unions actively opposed Labour's proposals and, in doing so, forced Labour to make compromises which severely limited the scope of the scheme as well as weakening its viability. This paper explores why this was the case. It highlights the way in which unions acted in the best interest of their members rather than of the wider working class. This was true not just of unions whose members tended already to be covered by company schemes but of unions who, in a decade in which occupational provision was expanding at breakneck pace, hoped shortly to be so. In the process, the TUC resisted both Labour's attempt to embed within National Superannuation an element of redistribution from higher-paid to lower-paid workers and the party's attempt to make membership of National Superannuation compulsory. The result was that Labour was forced to make concessions that weakened National Superannuation's financing, prejudiced its viability, dramatically reduced the value of the likely long-term value of its fund, and helped to ensure that occupational pension provision would continue to expand.

The paper considers the implications of this cross-class alliance between capital and labour in terms of 1) a possible missed opportunity to build a 'developmental state' in the UK; 2) the entrenching of a major role for the private sector in British pension provision; and 3) the perpetuation of exactly the 'two nations in retirement' that Labour had set out to abolish.



## V/E Human Capital, Institutions and Growth

Chair: **tba**

**Branko Milanovic** (World Bank), **Peter Lindert** (California) & **Jeffrey G Williamson** (Harvard)

*Ancient inequality*

Is inequality largely the result of the Industrial Revolution? Or, were pre-industrial incomes as unequal as they are today? For want of sufficient data, these questions have not yet been answered. This paper infers inequality for 29 ancient, pre-industrial societies using what are known as social tables, stretching from the Roman Empire 14 AD, to Byzantium in 1000, to England in 1688, to Nueva España around 1790, to China in 1880 and to British India in 1947. It applies two new concepts in making those assessments – what we call the inequality possibility frontier and the inequality extraction ratio. Rather than simply offering measures of inequality, we compare its observed level with the maximum feasible inequality (or surplus) that could have been extracted by the elite. The results, especially when compared with modern poor countries, give new insights into the connection between inequality and economic development in the very long run.

**Darrell Glaser & Ahmed Rahman** (United States Naval Academy)

*From sail to steam and beyond – the skill bias of technological change in the US Navy, 1860-1910*

This paper explores the role of technical skill in officer performance in the United States Navy during the latter half of the nineteenth century. This period is a critical juncture in our economic history, for many modern skill-intensive technologies can trace their roots to the turn of the twentieth century. Yet our knowledge of this period is limited because individual-level data collected consistently over time is typically not available until the second half of the twentieth century. Arguably then, this is a great arena to explore the historic role of technical skill, for navies are both excellent indicators and creators of a nation's economic and technological strength.

Navies have always been technologically sophisticated. Yet innovation has also been met with hostility and even resistance from many officers. Although the adoption of steam technology spread quickly in the years directly after the Civil War, a backlash within the service developed against both steam engines and the engineers who ran them. The introduction of increasingly complex warships formed a rift between those who felt that engineers and line officers should have distinctly separate training and functions, and those who stressed the importance of standardized engineering training for all officers of the line. The resolution of this debate is ultimately an empirical matter – did technical skill actually correlate with naval career success? And did officers with specialized engineering training fare better than officers with only general training?

We analyse the relationship between skill and performance by compiling data on naval officers documented in the US Navy registers. These registry books, arranged in annual volumes, chart the rank, station and pay of every serving naval officer over time. We match this data with the scores these officers earned in different subjects as students at the Naval Academy (compiled in the Naval Academy registers) as well as data tracking the characteristics and stations of the fighting ships to which each officer is ultimately assigned each year (compiled by the Naval Historical Society). The final merged dataset provides us with one of the earliest examples of detailed individual measures of education, experience and work performance of which we are aware. Furthermore, this data, while studied extensively by naval historians, has hitherto never been codified, and thus has never been systematically studied.



We proxy for officer job performance by alternatively using measures of earned wage profiles, speed of promotion, and duration of naval service. Preliminary findings reveal that good general education scores and past experience on commissioned vessels are positive predictors of job performance. Interestingly, those who scored better in engineering compared with general seamanship, and those who specialized as engineer cadets, perform worse than the average group during 1860s and 70s, but perform better than the average group during the 1880s and 90s. This suggests that with the rising technical complexity of warships, the old paradigm of separate roles for engineers and line officers became increasingly infeasible – by the turn of the century, all naval officers needed an engineering training to succeed.

## V/F Economics of Investment

Chair: tba

**Abe de Jong & Henry van Beusichem** (Erasmus)

*The changing role of dividend policies: an empirical analysis for the Netherlands 1945-2006*

Dividends are the payouts of profits to shareholders. In addition to these payouts, the shareholders are entitled to sell their shares and benefit from increases in the stock price, over the period of the share ownership. Undistributed profits are added to the firm's equity and allow the firm to build reserves and invest the retained earnings to engage in new entrepreneurial activity. From the perspective of a firm, dividends require additional – external – financing in case a firm has many investment plans, and thus reduces the discretion of the management. For shareholders, dividends are perceived as a signal of confidence in the future, i.e. that upcoming investments can be financed from future profits. These diverging perspectives induce a tension in financial markets, where as a result dividend policies are informative about the balance of power of managers and financial markets.

An early contribution to the dividend policy literature is the seminal work of John Lintner (1956). He developed a model to explain dividend changes based on interviews with US managers:

$$\Delta D_{it} = A_i + C_i (r_i E_{it} - D_{i(t-1)}) + U_{it}, \quad (1)$$

where  $\Delta D_{it}$  is the change in dividends per share for firm  $i$ ;  $A_i$  is the intercept term for firm  $i$ ;  $C_i$  is the speed of adjustment coefficient for firm  $i$ ;  $r_i$  is the target payout ratio for firm  $i$ ;  $E_{it}$  is the earnings after taxes per share in period  $t$  for firm  $i$ ;  $D_{i(t-1)}$  are the dividends per share paid out last period for firm  $i$ ; and  $U_i$  is the error term for firm  $i$  in period  $t$ . Lintner transformed equation (1) into a testable equation:

$$D_{it} = a_i + bE_{it} + dD_{i(t-1)} + \mu_{it}, \quad (2)$$

where target payout ratio  $b$  equals  $C_i r_i$  and adjustment coefficient  $d$  equals  $(1 - C_i)$ . Lintner tests his model for the period from 1918 to 1951 and confirms the conclusions from interviews, i.e. that dividends are stable and adjustments rare. In later literature Lintner's findings are found to relate to the so-called signalling theories (Bhattacharya, 1979 and Miller and Rock, 1985). The Lintner approach has been replicated extensively, as early as Brittain (1964, 1966) and Fama and Babiak (1968), as well as recently by Foerster and Sapp (2006). However, there are only very few studies that cover an extensive period and investigate the time variation in the applicability of the Lintner model.

We describe the development of dividend policy and its determinants in the Dutch setting over a long horizon, 1945-2006. First, we describe the evolution of the dividend levels and the changes over time. Second, we estimate a Lintner model with structural breaks, in order to measure changes in the Lintner coefficients in our panel. Our large long-run sample allows us to take into account the changes in the Dutch institutional setting (Van Zanden, 1997; Sluyterman, 2005; De Jong and Röell, 2005). Third, we investigate the impact of firm size, age and industry on the Lintner model by analysing subsamples. Our results will be outlier and autocorrelation robust. In summary, this study gives better insight into the development of dividend policy and the factors affecting it in the Netherlands.

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**Brooks A Kaiser** (Gettysburg College & Hawaii)

*Long run outcomes of conservation expenditures: watershed destruction, rehabilitation and protection in Hawaii*

### Overview

We examine the deterioration and subsequent rehabilitation of forest watersheds on Oahu, Hawaii, in order to determine the long run outcomes of conservation activities that occurred in the early twentieth century. Our analysis allows for the generation of a long run accounting of the net benefits of the conservation activities to date. We incorporate remote-sensing data on forest cover, expert opinion on the state of the watersheds today, and an integrated economic and hydrological model of Oahu's freshwater supply and demand with detailed reports of annual conservation activities from 1910-60 to assess these long run benefits. We find a current 2.3 per cent annual increase in groundwater recharge levels for Oahu from forest replantings and other conservation activities in the first half of the twentieth century. We estimate these actions have generated a benefit-cost ratio of 7.1 - 9.5 to date. Understanding the ecological and policy interactions of the past is currently important for the state as water demand continues to grow with population and prosperity.

### Historical background

At the turn of the twentieth century, the ecological connection between healthy forests and water supply was becoming well known. In no place was this perhaps clearer than in Hawaii, where after only a little more than a century since the first western contact, hillsides were denuded from sandalwood logging and degraded from feral ungulates, and water supplies were visibly decreasing.

By the mid 1800s, virtually all the sandalwood had been extracted, with much associated damage to the forests, and with the addition of the cattle, forest cover did not return. New economic uses for the land evolved. Cattle ranching competed with other agricultural uses. The Hawaiian sugar industry was born on Kauai in 1856, using existing irrigation infrastructure and developing additional extensive tunnel and irrigation systems. It spread rapidly in the 1860s due to demand from the Northern United States, requiring vast amounts of water (10,000 gallons per day per acre). Water was moved from the wet, windward forests to the agricultural plains.

After water crises on Oahu in the 1870s and a realization that maintaining healthy upland forests would increase water supplies, the first watershed reserves were created in 1904, and were expanded throughout the first few decades of the century.

### Model and empirics

Economic welfare generated by the conservation activities is evaluated and summed according to the (first-best) value of the water saved.<sup>597</sup> The conservation optimization problem can be specified as

$$\max_{m_{it}} \sum_t \beta^t \left( \sum_a \int_b^{q_{at}} D^{-1}(x_t) dx - \sum_a c_{aq}(M_{at}, h_{at}) q_{at} - \sum_i m_{it} \right),$$

Where  $\beta$  is the discount factor,  $q_{at} \geq 0$ ,  $b \geq 0$  is the capacity constraint on zero marginal cost surface water ( $q_{at}$  is groundwater extraction from an aquifer, so that demand is estimated (in thousand gallons per day)),  $M_{t+1} = \sum_i m_{it} + (1 - \delta)M_t$ , and  $\delta$  is the depreciation rate for

conservation investments. Demand is calibrated with historical records. The forest quality determines the overall freshwater supply and costs of extraction through the hydrological cycle, explicitly incorporated into the model. Groundwater extraction costs are a decreasing function of aquifer head levels, which are in turn an increasing function of forest ground cover and thus conservation investments.

Within this framework, we first calculate a maximum  $Q$ , or water availability, for Oahu by dividing Oahu into spatial cells (200m x 200m) and, using data on the hydrological properties of the land, including precipitation, slope, soils, and land cover, estimating potential groundwater yield for Oahu's conservation district, as split between the two groundwater aquifers,<sup>598</sup> if the forest quality is healthy.

We then estimate the impact of the nineteenth century devastation to the forest by using current information on non-conservation district lands to recreate a denuded watershed and calculate the losses at the time. Then, using the 1910-60 reforestation data, we reconstruct the returns to conservation in terms of the net surplus generated by the additional groundwater captured.

For each year, using the additions to groundwater recharge and information on quantity demanded at the time, we estimate the net welfare gain of the conservation activities. We are simultaneously able to generate the reverse; overall estimates of the long run net welfare losses actually and potentially generated by the initial destruction of natural capital. The actual losses are reduced by the conservation activities undertaken, while the welfare loss that would have occurred had no conservation activities taken place are the potential losses to the watershed degradation. From these figures, we can calculate the long run return to the conservation investments. Further, by investigating the incremental benefits of annual conservation activities over 50 years, we can examine long run marginal benefits of ecosystem conservation.

<sup>597</sup> Note that there are other considerable benefits to the reforestation, in particular aesthetic appeal and species habitat. Quantitative analysis of these hard-to-measure benefits is set aside for now with the understanding that our analysis generates a lower-bound estimate of net benefits. With respect to aesthetic appeal, we expect benefits will not differ with the type of conservation activities as long as they result in a lush, tropical environment. With respect to species habitat, returns on conservation activities that favour particular native (and perhaps endangered or otherwise highly valued) will suffer more from underestimation than those that do not.

<sup>598</sup> This assumes that the surface water capacity constraint is met.

## **Economic History Society Annual Conference**

**26 – 28 March 2010**

**University of Durham**

### **Call for Academic Papers**

The 2010 annual conference of the Economic History Society will be hosted by the University of Durham from 26 to 28 March. Accommodation and some meetings will be located in Collingwood College and the majority of sessions in two adjacent buildings on the Science Site. The College is a 10-minute walk from the Science Site and shuttle buses will be provided at certain times of the day.

The conference programme committee welcomes proposals in all aspects of economic and social history covering a wide range of periods and countries, and particularly welcomes papers of an interdisciplinary nature. Preference may be given to scholars who did not present a paper at the previous year's conference. Those currently studying for, or who have recently completed, a PhD should submit a proposal to the New Researcher session; please contact Maureen Galbraith ([ehsocsec@arts.gla.ac.uk](mailto:ehsocsec@arts.gla.ac.uk)) for further information.

The committee invites proposals for individual papers, as well as for entire sessions (3 speakers, 1.5 hours duration). The latter should include proposals and synopses for each paper in the session, although the committee reserves the right to determine which papers will be presented in the session if it is accepted. If a session is not accepted, the committee may incorporate one or more of the proposed papers into other panels.

For each proposed paper, please send (preferably by e-mail) a brief c.v. and a short abstract (including name, postal and e-mail addresses) of 400-500 words to:

Maureen Galbraith  
Dept of Economic & Social History  
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Lilybank House, Bute Gardens  
Glasgow G12 8RT  
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E-mail: [ehsocsec@arts.gla.ac.uk](mailto:ehsocsec@arts.gla.ac.uk)

For full consideration, proposals must be received by 14 September 2009. Notices of acceptance will be sent to individual paper givers by 16 November 2009.

Should your paper be accepted, you will be asked to provide the following:

- An abstract of the paper for inclusion in the conference booklet (by 14 December 2009).
- A brief non-technical summary of your paper for the 'Media Briefings' section of the Society's website (by 1 February 2010).
- An electronic copy of your full paper or a web address where the paper is available for consultation (by 1 March 2010).

It is the normal expectation that speakers who submit a proposal for a paper to the Conference Committee should be able to obtain independent financial support for their travel and conference attendance. However, a very limited support fund exists to assist overseas speakers who are unable to obtain funding from their own institution or from another source. Details of this fund and an application form can be obtained from the Society's administrative secretary, Maureen Galbraith ([ehsocsec@arts.gla.ac.uk](mailto:ehsocsec@arts.gla.ac.uk)). It is important that a completed application form is included with the paper proposal and the brief c.v. which are submitted to the committee for the September deadline. Only in exceptional circumstances will later applications for support be considered.

## **Economic History Society Annual Conference**

**26 – 28 March 2010  
University of Durham**

### **Call for New Researcher Papers**

The 2010 annual conference of the Economic History Society will be hosted by the University of Durham from 26 to 28 March. Accommodation and some meetings will be located in Collingwood College and the majority of sessions in two adjacent buildings on the Science Site. The College is a 10-minute walk from the Science Site and shuttle buses will be provided at certain times of the day.

The annual conference opens with papers presented by new researchers. They offer those completing doctorates the opportunity to present their work before professional colleagues and to benefit from informed comment.

The session will be held on the afternoon of Friday 26 March 2010. Those wishing to be considered for inclusion in the programme at Nottingham must submit a synopsis by 7 September 2009. This should provide a firm title, a succinct summary of the principal themes and methodology of the paper, and an outline of probable conclusions.

The synopsis should be of not more than 500 words. It must be accompanied by a clear statement of the progress of research, intended date for submission of thesis, and a statement of support from the supervisor. Please note that proposals from researchers at an early stage of their work will not normally be accepted.

Those selected for inclusion in the programme will be asked to submit a paper, 2,250-2,750 words in length, by 14 December 2009 for circulation in the conference booklet. Each new researcher will have the opportunity to speak for twenty minutes, followed by ten minutes of discussion. Two prizes of £250 will be awarded for the best papers presented at the Conference by new researchers. The procedure for judging papers will be circulated to all participants.

The Economic History Society is able to offer limited financial support to enable new researchers to attend the conference when this is not available from their institution.

Synopses, in MSWord, (including name, affiliation, postal and e-mail addresses) and any enquiries should be directed (preferably by e-mail) to:

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