

THE ECONOMIC HISTORY SOCIETY

Annual Conference

University of Cambridge

1 – 3 April 2011

Programme including

New Researchers' Papers

&

Abstracts of the other Academic Papers

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Welcome to the University of Cambridge

Welcome to Robinson College and the University of Cambridge. The University is the second oldest in the UK and dates its origins to 1209. It is a confederation of colleges and faculties. The oldest of the 31 colleges, Peterhouse, was founded in 1284, whilst Robinson, one of the newest, was founded in 1979. Today, Cambridge is widely recognized as one of the world's leading universities.

Robinson College is just across the river Cam from the historic city centre and is situated in the former open-fields of West Cambridge (enclosed 1798). It was founded with a donation by the entrepreneur and philanthropist Sir David Robinson and formally opened in 1981. The distinctive red brick complex at the heart of the college was built between 1977 and 1980 to a design prepared by the Glasgow firm of architects, Gillespie, Kidd and Coia. The college is set in beautiful landscaped grounds which are a fusion of ten pre-existing gardens which are subtly linked while still retaining their distinctive character. The last time the Annual Conference was in Cambridge was in 1976 when the venue was Churchill College.

The Faculty of History is one of the largest in the world with over 100 individuals engaged in teaching and research and around 600 undergraduates and 450 graduate students at any one time. The University has played an important role in economic history since the subject first emerged as an academic discipline in the late nineteenth century and today supports a large and diverse group of economic and social historians across a number of departments and faculties with the largest concentrations being in History, Economics and Geography. For further information see: <http://www.econsoc.hist.cam.ac.uk/index.html>

The University has exceptionally good research facilities. A few minutes walk from Robinson is the University library, which is one of five legal-deposit libraries in the UK, and houses over seven million volumes as well as large manuscript collections. It is probably the largest open-shelf access library in Europe. In addition there are numerous departmental and college libraries, and the archives of many of the colleges have been of great value to generations of economic and social historians. Cambridge University Press, founded in 1584, is a leading academic press, the world's oldest continuously operating publishing house, and a major publisher of economic and social history.

Cambridge is fortunate in having one of the country's highest concentrations of internationally important museum collections outside London. Full information on the University's museums can be found at: <http://www.cam.ac.uk/museums/> Most of these are within easy walking distance of Robinson. The best known is undoubtedly the Fitzwilliam Museum, which has a world-class collection of art and antiquities whilst the most unusual and charming is Kettle's Yard, a former private home chock-full of twentieth-century art works. Other nearby sites of interest which are particularly recommended include: King's College Chapel, an outstanding example of perpendicular architecture, Trinity College and St John's College. Clare College Fellows' Garden is one of the most beautiful of all the college gardens. Somewhat further afield (but en-route between Robinson and the train station) are the very attractive University Botanic Gardens which occupy a 40-acre site.

We hope you enjoy your stay at Robinson at what promises to be a very intellectually stimulating conference and also find some time to visit the rest of Cambridge.

Leigh Shaw-Taylor (Local Organizer)

Maureen Galbraith (EHS)

Summary Conference Programme

(See Contents for details of each session)

Friday 1st April

0915-1045	EHS Publications Committee Meeting	Seminar Room
1045-1345	EHS Council Meeting	JCR
1200-1800	Registration	Auditorium Foyer
1400-1530	New Researchers' Session I	
I/A	<i>Politics and the Economy in 19th and 20th-century Britain</i>	Games Room
I/B	<i>Fiscal and Monetary Policy</i>	Music Room
I/C	<i>Early Modern History</i>	Garden Room
I/D	<i>Pre-Colonial and Post-Colonial History</i>	Linnett Room
I/E	<i>Women and the Economy</i>	Auditorium Lounge
I/F	<i>Trade</i>	Umney Theatre
1530-1600	Tea	Marquee
1600-1730	New Researchers' Session II	
II/A	<i>Scotland</i>	Games Room
II/B	<i>Institutions and Rules</i>	Music Room
II/C	<i>Post-Second World War Europe</i>	Garden Room
II/D	<i>Land</i>	Linnett Room
II/E	<i>Manufacturing, Productivity and Value-Added</i>	JCR
II/F	<i>Marriage and the Family</i>	Umney Theatre
1730-1830	Open meeting for women in economic history	Linnett Room
1815-1900	Council reception for new researchers & 1st time delegates	Garden Rest.
1900-2015	Dinner	Dining Hall
2030-2130	Plenary Lecture: Professor Richard M Smith <i>Demography and the Great Divergence: Reconsidering the European and Asian evidence</i>	Auditorium
2135-2145	Meeting of new researcher prize committee	Seminar Room
Bar available until late		Bar

Saturday 2nd April

0800-0900	Breakfast	Garden Restaurant
0900-1045	Academic Session I	
I/A	<i>Taxation and Medieval State Formation</i>	Games Room
I/B	<i>Long-Run Economic Change in Asia</i>	Music Room
I/C	<i>Inequality</i>	Garden Room
I/D	<i>Business Cycles in the 19th and 20th Centuries</i>	Linnett Room
I/E	<i>British Economic Thought</i>	JCR
I/F	<i>Big Society</i>	Umney Theatre
1045-1115	Coffee	Marquee
1115-1300	Academic Session II	
II/A	<i>Medieval Trade and Agriculture</i>	JCR
II/B	<i>Economic and Social Life in London's Eastern Suburb, c.1580-c.1700</i>	Games Room
II/C	<i>Work and Authority in 18th- and 19th-Century Britain</i>	Umney Theatre
II/D	<i>Italian Economic Development since 1861</i>	Garden Room
II/E	<i>Living Standards</i>	Music Room

Conference programme

II/F	<i>Economic History and Business History</i>	Linnett Room
1300-1400	Lunch	Garden Restaurant
1415-1600	Academic Session III	
III/A	<i>Elite Consumers, Spaces and Practices in 18th-century England</i>	JCR
III/B	<i>Transport and Development</i>	Games Room
III/C	<i>Migration and the North Atlantic Economy</i>	Garden Room
III/D	<i>The Late Tsarist Economy</i>	Linnett Room
III/E	<i>Welfare</i>	Umney Theatre
III/F	<i>Banking, International Finance and Comparative Crises</i>	Music Room
1600-1630	Tea	Marquee
1615-1715	Meeting of Schools & Colleges Committee	Seminar Room
1630-1730	Plenary session	Auditorium
1730-1830	Economic History Society AGM	Umney Theatre
1930-2000	Conference Reception	Dining Hall Balcony
<i>(Supported by the Department of History, University of Cambridge)</i>		
1930-2000	Book launch <i>(supported by CUP)</i>	Dining Hall Balcony
2000	Conference Dinner	Dining Hall
Bar available until late		Bar

Sunday 3rd April

0800-0900	Breakfast	Garden Restaurant
0915-1015	Academic Session IV	
IV/A	<i>Technology and Growth</i>	Umney Theatre
IV/B	<i>Demography and Economic Development: New Techniques</i>	Games Room
IV/C	<i>Business History I</i>	Garden Room
IV/D	<i>Agricultural Markets and Prices</i>	Music Room
IV/E	<i>Demography</i>	JCR
IV/F	<i>Financial History I</i>	Linnett Room
1015-1045	Coffee	Marquee
1045-1145	Academic Session V	
V/A	<i>Twentieth-Century Agriculture</i>	Games Room
V/B	<i>Gender and Property</i>	Garden Room
V/C	<i>Business History II</i>	Music Room
V/D	<i>Labour Supply</i>	Linnett Room
V/E	<i>Social Mobility</i>	Umney Theatre
V/F	<i>Financial History II</i>	JCR
1145-1300	Tawney Lecture: Professor Hans-Joachim Voth <i>Debt, default, and empire: state capacity and economic development in England and Spain in the early modern period</i>	Auditorium
1300-1400	Lunch	Garden Restaurant
1400	Conference ends	

Brief guide to conference arrangements

The conference will take place at Robinson College, University of Cambridge. All residential accommodation, meetings and conference sessions will be located in the College.

Conference accommodation on campus

Ensuite and standard accommodation will be provided in the College.

Check-in for residential delegates

All **residential** delegates should please check in at the Porters' Lodge, Robinson College, situated on the corner of Grange Road and Herschel Road, (see map on page xi), where keys will be available from 1.00 p.m. onwards; a luggage storage facility is available for those arriving before this time. The Porters' Lodge is manned 24 hours per day, however, if you plan to arrive after 6.00 p.m. you should please advise Maureen Galbraith (ehsocsec@arts.gla.ac.uk).

Registration

Registration will take place between 12.00 and 18.00 in the Auditorium Foyer (a College Plan can be found on page xiv of this booklet). The registration desk will be staffed for the duration of the conference.

Alternative Accommodation

Information on Cambridge hotels can be found by following the links at:

<http://www.visitcambridge.org/VisitCambridge/WhereToStay.aspx>

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

Car parking

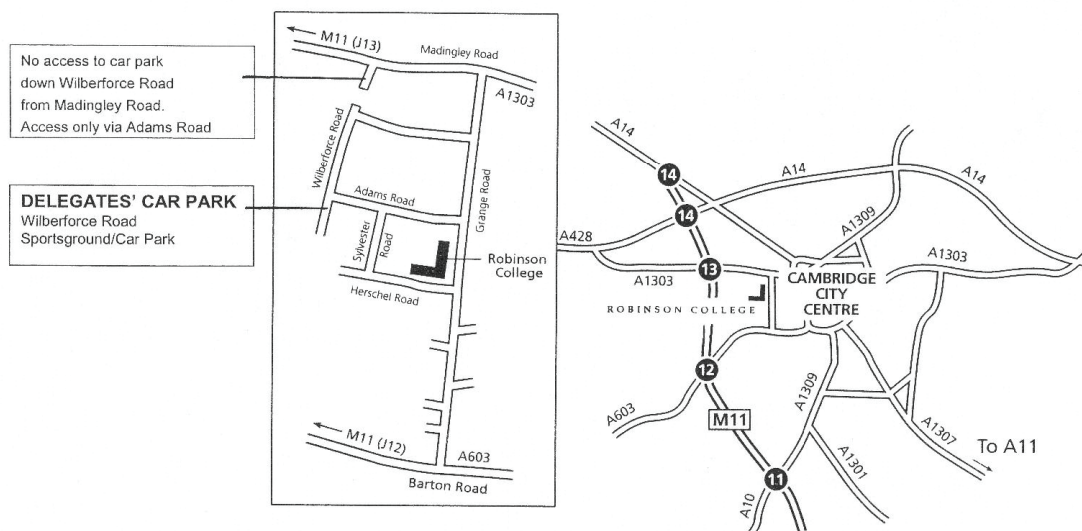
Robinson College has arranged with the University of Cambridge for the use of the car park at their Wilberforce Road Sports Ground by delegates attending conferences. The Ground is only some 500 yards from the Porters' Lodge and provides ample car parking space.

Neither the College nor the Sports Ground accept responsibility or liability in respect of loss or damage to any property, including motor cars and items left in motor cars, brought onto the parking area by or on behalf of any persons. **A parking permit is available on request from Maureen Galbraith.** For security reasons please display your permit in an obvious position.

The entrance to the car park is on the corner of Adams Road and Wilberforce Road. Once inside the Sports Ground please follow the signs to the parking area. The main entrance to Robinson College is at the corner of Grange Road and Herschel Road. A location map can be found on page xi.

ROBINSON COLLEGE, CAMBRIDGE

WILBERFORCE ROAD SPORTS GROUND CAR PARK



Book displays

Publishers' and booksellers' displays will be in a marquee at Robinson College.

Meals and Morning Tea/Afternoon Coffee

Breakfasts and lunches will be served in the Garden Restaurant, dinners in the Dining Hall and teas/coffees in the Marquee (all located at the College).

Receptions and Bar

All receptions and the bar will be located in the College.

Meeting rooms for New Researchers, Academic Sessions etc

All meeting rooms will be located in the College.

Internet Access

There is wireless internet access in all public areas of the College and wired internet access from bedrooms; delegates should provide their own Ethernet cable. Computers with internet access are located in a café on campus. Instructions and passwords will be provided on site.

Useful Contacts

Robinson College: Tel: +44 (0)1223 332 859	Email: conference@robinson.cam.ac.uk
Maureen Galbraith Tel: +44 (0)141 330 4662	Email: chsocsec@arts.gla.ac.uk

How to reach Robinson College

Comprehensive information on travel to Robinson College, as well as maps, can be found by following the links at: <http://www.robinson.cam.ac.uk/conferences/contact.php>

By Road

The College is situated in Grange Road, close to the centre of Cambridge. Grange Road runs between Barton Road and Madingley Road and is parallel to Queens' Road (the 'Backs').

The best way to approach the College by road from the north, south or east is from Junction 12 of the M11.

From Junction 12 of the M11, the A603 towards Cambridge

- Take the A603 (Barton Road) towards Cambridge.
- Pass Wolfson College on the left.
- About 1.5 miles from the M11 you will reach the traffic lights of a pedestrian crossing. Grange Road is the turning on the left, directly after this pedestrian crossing, opposite the Hat and Feathers public house.
- Once in Grange Road you will pass the CU Rugby Club on the left.
- The road narrows slightly immediately before the next turning on the left which is Herschel Road. Robinson College is the new redbrick college 0.5 miles along Grange Road on the left, on the corner of Grange Road and Herschel Road.

From the North (A14)

- From the M6/M1 (Junction 19) interchange join the A14 (signposted to Kettering).
- Follow the A14 past Kettering and Huntingdon towards Cambridge.
- From the A1 at Brampton join the A14 (signposted for Stansted and Cambridge).
- Follow the A14 and signs for Cambridge.
- Get in lane for the M11 once you have passed the exit for Dry Drayton, Oakington and Cottenham. (M11 is outside and middle lanes.)
- Join the M11 following the signs for Stansted.
- Leave the motorway at the next exit, Junction 12.
- Take the A603 in the direction of Cambridge (to the left).
- Follow the directions from the M11, Junction 12, as above.

From the East (A14 from Newmarket)

Avoid the city centre

- From the East (A14 from Newmarket).
- Follow the northern by-pass to join the M11.
- The exit for the M11 is after the junction for the B1049. It is signposted 'M11 London (A10), North, A1, Midlands'.
- Once you have taken this exit, STAY IN THE LEFT HAND LANE and join the M11.
- Leave the motorway at the next exit, Junction 12.
- Take the A603 in the direction of Cambridge (to the left).
- Follow the directions from the M11, Junction 12, as above.

From the South (A10)

- At the signpost 'M11 The North, Huntingdon (A14), Bedford (A428), Ely (A10)' turn left and join the M11.
- Leave the motorway at the next exit, Junction 12 signposted 'Cambridge, Sandy and the A603'.
- Take the A603 in the direction of Cambridge (to the right).
- Follow the directions from the M11, Junction 12 as above.

From the West (A428 from Bedford)

- Along the A428 from Bedford and St Neots take the exit for the A1303, signposted for the M11 London.
- Passing the American Cemetery on the left, continue straight on at the traffic lights.
- Pass the turning for the M11 to London on your right.
- At the next traffic lights the Madingley Road 'Park and Ride' is on your left, continue straight on.
- Pass High Cross on your right and Madingley Rise (Observatory) on your left.
- There are a set of traffic lights at a pedestrian crossing. Immediately after these get into the right hand lane.
- Turn right into Grange Road at the next set of traffic lights.
- Once in Grange Road pass Clarkson Road on your right and continue for about 0.5 mile.
- Robinson College is the new redbrick college 0.4 miles down Grange Road on the right, situated between Adams Road and Herschel Road.

Directions for Cyclists and Pedestrians

From Market Square in the town centre

- Go past Great St Mary's, heading towards Senate House.
- Follow Senate House Passage, then turn right onto Trinity Lane.
- Turn left 30 yards later onto Garret Hostel Lane.
- Continue over the footbridge until you reach Queens' Road.
- Cross Queens' Road and continue on the footpath running past the University Library.
- Arrive on Grange Road, directly opposite Robinson College.

Route Planner

Here are two links to good route planners:

- The AA: <http://www.theaa.com/route-planner/index.jsp>
- Multimap: <http://www.bing.com/maps/?FORM=MMREDIR>

The postcode at Robinson College is: CB3 9AN.

Local Bus

Two local bus routes service the College.

Citi 4 (to/from Kings Hedges):

(www.stagecoachbus.com/PdfUploads/Map_4831_%20Cambridge%20citi%204.pdf).

U4 (to/from Addenbrookes):

(www.stagecoachbus.com/PdfUploads/Map_7267_%20uni%204.pdf).

Both go to/from Cambourne. Pick this route up from Silver Street and Brooklands Avenue.

National Bus / Coach Routes

There is a frequent express bus service between London and Cambridge and a coach service several times a day between Heathrow, Gatwick and Stansted airports and Cambridge. Details can be obtained from National Express, telephone 0870 580 8080.

- Bus Services in Cambridge: <http://www.cam.ac.uk/local/travel/bus.html>
- National Express Coaches: <http://www.nationalexpress.com/home.aspx>

How to reach Robinson College

From the bus or train station

Robinson College can be reached by taxi (10 minutes from the train or bus stations) or a 20-minute walk. Head into the city and aim for Market Square. A map for directions to the College can be found at: http://www.robinson.cam.ac.uk/contact/robinson_location_map1.pdf

By Rail

The fastest trains (the Cambridge Cruiser from King's Cross) take only 48 minutes. Cross country rail services link Cambridge with the Midlands and the North, via Birmingham.

Trains to and from London: <http://www.cam.ac.uk/local/trains/>

National Rail timetable: <http://ojp.nationalrail.co.uk/en/s/planjourney/query>

By Air

Cambridge Airport has some domestic services and facilities for charter flights. Stansted Airport is approximately 40 minutes by road from Cambridge; Gatwick and Heathrow Airports are about 1.5 - 2 hours by road from the College. Buses from all these airports run regularly into the City Centre. Trains run directly to Cambridge from Stansted (35 minutes) and via London from Heathrow and Gatwick.

Taxis

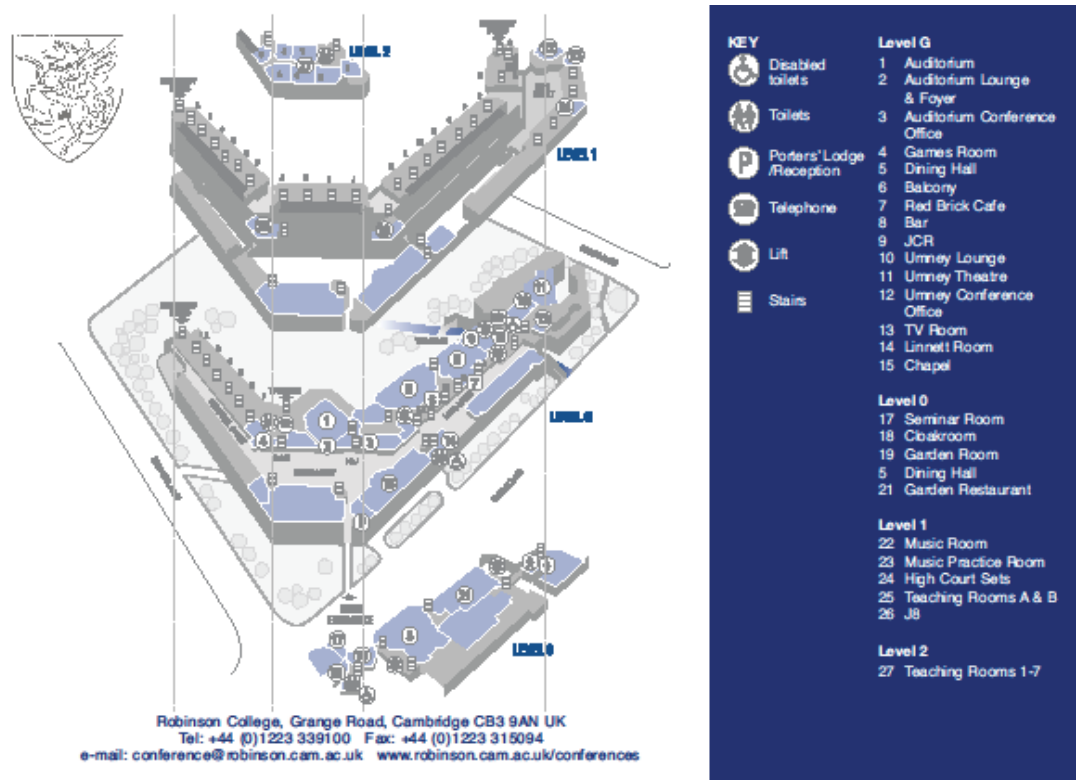
Panther +44 (0) 1223 715715

CamCab +44 (0) 1223 704704

A1 Taxis +44 (0) 1223 525555

Robinson College Plan

(A copy of this plan can be found at: http://www.robinson.cam.ac.uk/about/college_plan.php)



NEW RESEARCHER PAPERS

The outsider as insider: foreign-born economic advisers in the first Wilson governments

Agnes Simon, Independent Scholar
(agnes.simon@cantab.net)
Supervisor: Professor Martin Daunton

This paper is about Thomas Balogh¹ and Nicholas Kaldor,² the two Hungarian-born former economic advisers of the Labour party. Balogh was special adviser to Harold Wilson and Kaldor served Jim Callaghan, the Chancellor of the Exchequer, in a similar role in the 1964-70 Labour governments. The two economists were outsiders both because they were émigrés from interwar central Europe and because they were the first notable examples of the special adviser, a temporary, political, and expert appointee in the regular civil service. Balogh and Kaldor were close to leading Labour politicians for decades prior to the party's return to power in 1964. As such many viewed them as bad or misleading foreign influences on Labour, and potentially harmful for Britain and the British economy. The paper will describe their positions as advisers in government and outline briefly the policy advice the two offered in order to show what their overall plan for the British economy might have been. What is interesting is to see not just what they thought and advised, but how effective they were as advisers. Ultimately, the question is whether they were in any way different from the 'native' economic advisers in their thinking and if their notoriety as advisers was justified at all.

Known as the 'Hungarian twins', 'B and K' after Soviet leaders Bulganin and Khrushchev, or 'Buda and Pest', the two were curiously always treated as a unit by their contemporaries. Their appointments were part of the great influx of economists into government service after 1964 and the two émigrés were clearly the focus of attention regarding this development, acquiring a 'celebrity status not seen since Keynes's day'.³ There was a stir in the media with serious reverberations in the Establishment. They were also favourites of press cartoonists who depicted the two as either the *eminences grises* behind Labour politicians and policies, with Kaldor as the successor of Keynes in the position of chief economic mastermind, or as a sinister eastern European experiment launched on the British people.⁴ As the *Financial Times* put it at the time:

... it is on this two that suspicious eyes will undoubtedly be turned. Since they are both left-wing and Hungarian, they are often bracketed together; but in fact they could hardly be more different. Kaldor is small, round, genial and immensely popular; Balogh is tall, acid, and sometimes seems to enjoy making enemies. Balogh is what Cambridge men call a 'typical Oxford economist' – he is shaky on theory and woolly on statistics ... he is essentially worldly and political ... Kaldor is what Oxford men call typically Cambridge – essentially unworldly, he is happiest in the remoter reaches of theoretical abstraction. But he

¹ J. Morris, *The Life and Times of Thomas Balogh. A Macaw among Mandarins* (Brighton, 2007).

² A.P. Thirlwall, *Nicholas Kaldor* (Brighton, 1987), F. Targetti, *Nicholas Kaldor. The Economics and Politics of Capitalism as a Dynamic System* (Oxford, 1992) and J. King, *Nicholas Kaldor* (Basingstoke, 2009). On Kaldor as adviser see Thirlwall, 'Kaldor as policy adviser', in T. Lawson et al, eds. *Kaldor's Political Economy* (London, 1989), pp. 121–39.

³ R. Middleton, *Charlatans of Saviours? Economists and the British Economy from Marshall to Meade* (Cheltenham, 1998), p. 247.

⁴ Balogh's Cabinet Office files contain newspaper cuttings showing Downing Street's interest in their adviser's personal image. See 'Dr Thomas Balogh', The National Archives (hereafter TNA), Kew, CAB 160/1–2. The Kaldor papers contain several boxes of newspaper cuttings and cartoons that he collected during his public life. See Nicholas Kaldor Papers, Modern Archive Centre, King's College, Cambridge (hereafter NKP) 12.

is somewhat naive about the real world, which is no doubt why governments, after taking his advice on taxation, have had to call out the riot squads.⁵

The two economists led remarkably similar lives. First, they had similar social and cultural roots, as both were born into assimilated, middle-class Jewish families in early twentieth-century Budapest. Both decided to study economics as a result of living through the First World War and the dissolution of the Austro-Hungarian Empire, and the experience of the ensuing economic and financial chaos.⁶ They also decided roughly at the same time to leave Hungary amid growing anti-Semitism and the threat of persecution, and the rise of right-wing regimes in the region. Balogh and Kaldor joined the largest wave of mass migration of intellectuals and academics in the last century. Mostly Jewish with left-leaning sympathies, these people left German-speaking central Europe behind to become important members of Anglo-American academic and intellectual circles.

Second, unlike most of their fellow émigrés who went to the United States, Balogh and Kaldor settled in Britain. They joined the Keynesian Revolution in economics and found their niche in academic economics. As well-known economist-experts, they contributed to the wartime debates on the reconstruction of the British and world economies. Although as foreign-born experts they were barred from official Whitehall jobs. Being outside official circles also meant that they were more radical. With similar political inclinations, they became part of the Labour party hinterland. In fact, Balogh was the epitome of the extreme left-wing economist seeking complete control over the economy. Kaldor firmly established himself as an applied economist with his work on national income accounting and deficit finance as a contributor to the second Beveridge Report on full employment and while working for the new United Nations Economic Commission for Europe working on the international aspects of full employment policies.⁷ There was disagreement between the two regarding exchange rate policy and the devaluation of sterling in 1949, which was supported by Kaldor but fiercely opposed by Balogh.⁸ With the party in opposition in the 1950s and early 1960s, Balogh and Kaldor actually found themselves in opposing ideological camps within Labour. While Balogh was adviser to the Bevanite left, Kaldor was closer to the revisionist Gaitskellite right. Both were, however, active in the various working groups set up to revise party policy and formulate what is now known as the Wilsonian left-of-centre technocratic programme involving economic planning, enhanced investment and technological innovation, together with fiscal reform. Both Kaldor's vital role as taxation policy adviser⁹ and Balogh's influence via his *Planning for Progress*, a Fabian pamphlet, on Wilsonian economic planning ideal have been acknowledged.¹⁰ The very idea that expert appointees should serve a government minister independently from the regular civil service had been propagated by Balogh at the same time.¹¹

⁵ 'Mr Wilson's S.C.R.', no date, newspaper cutting, NKP, 12/1/578.

⁶ T. Balogh, *A német pénzromlás oknyomozó története* [An investigative history of the German inflation], (Budapest, 1928); Kaldor, 'The economic situation of Austria', in *Harvard Business Review*, vol. 11 (1932), October, pp. 23–34.

⁷ N. Kaldor 'The quantitative aspects of the full employment problem in Britain', in W. Beveridge, *Full Employment in a Free Society* (London, 1944), republished in Kaldor, *Essays on Economic Policy I* (London, 1964), pp. 21–42; Kaldor, 'Employment policies and the problem of international balance', in *Essays on Economic Policy I* (London, 1964), pp. 82–95.

⁸ Balogh, *The Dollar Question* (Oxford, 1949).

⁹ Kaldor, 'Memorandum of dissent to the final report of the Royal Commission on the Taxation of Profits and Income, 1955', in *Reports on Taxation I* (London, 1980), pp. 1–114; R. C. Whiting, *The Labour Party and Taxation* (Cambridge, 2000), p. 101.

¹⁰ Balogh, *Planning for Progress. A Strategy for Labour* (London, 1963); J. Tomlinson, *The Labour Governments 1964–1970. Economic Policy* (Manchester, 2004), pp. 71–73.

¹¹ Balogh, 'The apotheosis of the dilettante', in H. Thomas, ed. *The Establishment* (London, 1959), pp. 83–126.

Finally, they were not only academic economists and well-known foreign-born intellectuals participating in British public life, but with the election of the Labour government in 1964, they also became special advisers in the British government. Special advisers, not least because of the interest generated by modern day examples, have attracted considerable attention recently. Briefly, the first Wilson governments were a high point in terms of the employment of outside experts in government amid the general 1960s angst about perceived British economic decline and the generalist nature of the civil service. However, it has been claimed that the 'irregulars' had little impact on policy, best symbolized by the political decision not to devalue sterling in 1964.¹² The findings of this research are to be kept in mind when discussing the possible contributions of individual advisers.

The actual appointments came early in the life of the new government. Kaldor was named 'Special Adviser (part-time) to the Chancellor of the Exchequer on the economic and social aspects of taxation policy.' His remit was given as the reviewing of long-term economic and social aspects of taxation policy.¹³ The appointment was due to an earlier pledge by Hugh Gaitskell to bring him in to advise the next Labour government. Kaldor switched from a part-time to a full-time position in late 1965 but his enthusiasm waned after the resignation of Callaghan following devaluation in November 1967.¹⁴ His working relationship with Callaghan was initially very good, as Kaldor belonged to a small group of economists advising the future chancellor in the run-up to the 1964 election. Kaldor was liked and appreciated by Callaghan, a fact best demonstrated by his intervention after a particularly unpleasant attack in the media when Kaldor's tax proposals were compared to Hitler's *Mein Kampf*.¹⁵ Robert Neild, installed as Economic Adviser to the Treasury, was Kaldor's friend and former colleague at the UN. Thirlwall asserts that Kaldor had direct access to Sir William Armstrong, the permanent secretary, but not the chancellor.¹⁶ However, according to Professor Neild's recollections, Kaldor spent a lot of time with Callaghan due to their shared interest in tax reform and fiscal policy.¹⁷

Balogh's title and brief, by contrast, was not so clearly defined causing much confusion. Balogh was appointed Economic Adviser to the Cabinet. Sources differ as to what his actual role was intended to be. According to contemporary media reports, he was brought in to advise on general economic matters with particular reference to international liquidity.¹⁸ However, Alec Cairncross, head of the newly created Government Economic Service, thought that Balogh was to advise on development economics.¹⁹ As a long-standing friend, he was really the personal economic adviser to the Prime Minister. The friendship went back to their time working for the Oxford Institute of Statistics during the war. They kept in touch while Wilson was a member of the Attlee governments and when both acted as Bevanite theoreticians in opposition. Balogh was a close aide during Wilson's leadership campaign and a family friend of the Wilsons' as well.²⁰ Contemporaries were aware of the special status Balogh enjoyed in Downing Street,²¹ although he himself was in constant battle with civil servants for access to politicians, papers and to be included in committees.²²

¹² Middleton, pp. 97-98; A. Blick, *People Who Live in the Dark. The Special Adviser in British Politics* (London, 2004), pp. 61, 70-75.

¹³ I. Bancroft to N. Kaldor, 27 October 1964, NKP 10/1/2.

¹⁴ Thirlwall, 'Kaldor as policy adviser', pp. 130-33.

¹⁵ K.O. Morgan, *Callaghan. A Life* (Oxford, 1997), p. 208.

¹⁶ Thirlwall, *Nicholas Kaldor*, pp. 231-32.

¹⁷ Robert Neild in interview, 25 July 2005.

¹⁸ TNA CAB 160/1.

¹⁹ A. Cairncross, *The Wilson Years. A Treasury Diary, 1964-69* (London, 1997), p. 10.

²⁰ B. Pimlott, *Harold Wilson* (London, 1993), p. 264.

²¹ T. Benn, *Out of the Wilderness. Diaries, 1963-67* (London, 1987), p. 319.

²² Balogh to Sir Burke Trend, 'Papers', 19 November 1964 TNA CAB 21/5248; Difficulties Faced by Thomas Balogh: Attitude of the Civil Service, 1964-1968 TNA CAB 147/75.

Some believed that the two Hungarians had an intellectual dominance when it came to economic policy of the Wilson governments. Andrew Graham, assistant to Balogh in Downing Street, thought that Kaldor's chief contribution was the idea that 'by pressure of demand and various other devices ... it was possible to raise the growth rate'. Balogh 'had two enormously important contributions when he insisted that the growth rate could only be raised if you find some other way of controlling inflation than unemployment and there had also to be direct action on supply'.²³ However, when coming into power, advisers found themselves having to respond to day-to-day issues and the administration of the economy but still keep up longer term efforts in order to facilitate growth. Contradictions in the economic policy issues of the age, in fact, meant that, in a fixed exchange rate regime, a drive for economic growth could cause balance of payments and sterling problems.²⁴ Offered jointly, the very first piece of policy advice by Balogh and Kaldor was to address both the immediate concern about the foreign deficit and also competitiveness and exports.²⁵ Recommended by Balogh, the scheme was worked out by Kaldor and constituted a system of payroll subsidies to labour in manufacturing industries to be financed out of a value added tax.²⁶ Although rejected outright as too complicated, a modified version was introduced as the Selective Employment Tax (SET), which was a payroll tax paid in the service sector and used to keep costs down in manufacturing.²⁷ These policy ideas show a firm belief in the connection between fiscal policy, export promotion and economic growth, and were rooted in Kaldor's famous growth laws, the first of which was about how manufacturing was the engine of growth.²⁸ Other areas of policy where they contributed were, still, tax reform and Kaldor's Capital Gains Tax and Corporation Tax were introduced. Also, close to Balogh's heart were, of course, economic planning and the reform of central government.²⁹ Although no document could be found showing his personal involvement with the setting up and running of the new Department of Economic Affairs.

Contemporary opinion regarding exchange rate policy also had similarly important roles attributed to the two. Apparently, there were various concentric circles around important individuals and institutions. There was one such circle around Kaldor, who was already a supporter of flexible exchange rates, and one around Balogh and another one around the Bank of England opposing both devaluation and flexible rates.³⁰ Balogh, was the only one among the special advisers who opposed devaluation and influenced Wilson on this matter. In fact, it has been suggested that this was his one important contribution to the economic policies of the Labour government.³¹ Kaldor's support for flexible exchange rates was well known. It also originated in his applied theories of growth and export-driven expansion. Kaldor's long memorandum propagating this was submitted, in vain, to the planning committee for devaluation established in the Treasury.³²

In conclusion, it was quite extraordinary how two Hungarian-born high-profile economist-experts ended up advising the British prime minister and chancellor at the same time. Their approaches to economic issues and solutions differed. Kaldor's belief in classic

²³ A. Seldon, 'The influences on economic policy. Anthony Seldon interviews Andrew Graham', in *Contemporary British History*, vol. 10 (1996) no. 1, p. 153.

²⁴ R. Middleton, *The British Economy since 1945. Engaging with the Debate* (Basingstoke, 2000), pp. 87–89.

²⁵ Balogh to the Prime Minister, 21 October 1964, TNA PREM 13/32.

²⁶ Kaldor, 'Tax instrument for adjusting the balance of payments', 25 October 1964, TNA T 320/455.

²⁷ Kaldor, 'The case for a payroll tax and for new incentives for exports', 6 April 1966, TNA T 171/813.

²⁸ See Kaldor, *Causes of the Slow Rate of Economic Growth of the United Kingdom: An Inaugural Lecture* (Cambridge, 1966).

²⁹ However, he produced general memoranda on planning on a longer time scale. See, for example, Balogh to the Prime Minister, 'Very long term planning', 5 October 1965, TNA PREM 13/268 and papers in TNA CAB 147/11 Long-term planning, November 1964–September 1966.

³⁰ S. Brittan, 'Symposium: The 1967 devaluation', in *Contemporary Record*, vol. 1 (1988), p. 47.

³¹ Blick, p. 80.

³² Kaldor to Armstrong, 'Fixed or flexible rates', 22 July 1965, NKP 10/2/25–44.

macroeconomic management and fiscal innovation to encourage particular economic behaviour and even growth was noted. Balogh was known for his more *dirigiste* approach, favouring direct action on the supply side and hands-on intervention. As special advisers, they had real influence in working out the Labour party's economic programme before 1964, but were limited in their contributions amid the day-to-day management of the economy once in power. Balogh and Kaldor were also hindered by their notoriety. There were several policy items that clearly originated with them, including tax and government policy-making reforms. Regarding the problem of exchange rate policy, Kaldor's early support for flexible exchange rates was revolutionary in the sense that it questioned the very basis of the Bretton Woods system.

Public social and welfare spending in the UK, 1830-1950: data, trends and explanations

Martin Earley, University of Bristol
(mfearley@hotmail.co.uk)
Supervisor: Professor Roger Middleton

Introduction

How did the United Kingdom's public social and welfare spending (PSS) develop from 1830-1950: were there any differences in the trends for sub-periods; what are the best explanations of these trends? This thesis fills the acknowledged gaps in the data and tests and assesses specific explanations for the trends. It provides annualized data for the whole period for the three territories within the United Kingdom, for six public social and welfare programmes linked to classifications used by the Central Statistical Office after 1946 (CSO, 1956) and OECD/SNA (Castles et al, 2010, pp. 123-5): Income Support (IS), Education (ED), Health (HE), Lunacy (LU), housing (HO), and Active labour Market (ALM). These are further disaggregated into seven aspects: central government; local authority; spending independent of these levels of government; total capital; loan repayments; administrative costs; and total current. The objective is to measure the size of government effort which, as in Lindert (2004), is taken as PSS/GDP. The data were summarized to establish trends, initially, over the three sub- periods, 1830-73, 1873-1913 and 1913-50 but as it emerged that in the early 1890s there was a decisive change of trend, analysis by the periods 1830-1890 and 1890-1950 was employed also.

There is no complete annualized trend series for PSS for this period: only 1920-38 is covered thoroughly.³³ Trends have been noted (Mallet, 1913; Hicks, 1938; Peacock and Wiseman, 1967; Middleton, 1996) but these are not based on annual data over the whole period. There has been considerable research into PSS as part of the general growth in government spending but explanations usually relate to the period after 1950, are rarely on a single country time series and mostly concern public spending as a whole. There is, however, a time series for various measures of Gross Domestic Product (GDP) for the UK from 1830 (Officer, 2007). We use GDP at market price, rather than factor price, for convenience of comparison before 1855 and for any comparisons after 1975. The generally accepted best measure of government effort is the proportion of total GDP spent: we consider also some per-capita PSS in each programme, particularly education. We make reference to alternative measures of government effort such as regulations (particularly important in the 1830-73 period), legislation and policy activity, and public employment. Outcome measures such as the Human Development Index are cited but we consider public social and welfare spending provides the best indicator for statistical analysis. Castles (2009) takes social spending as still the prime determinant of government effort and counters too great an emphasis on other indicators but advocates more analysis of the individual programmes to explore the differences between countries, and over periods, in policy spending priorities. The price deflators are taken from Officer (2007) as a single measure for PSS and GDP. This is largely for convenience. There is limited and targeted use of correlations and regression analysis to better establish possible relations between variables and to support the adoption of a trend analysis without extending to multivariate analysis. The political narrative is not neglected, but this is an historical quantitative analysis which emphasizes economic factors. We concentrate on budget decisions although legislation and policy-making are also considered. National history, in the context of the British Empire, is emphasized with limited comparative analysis.

³³ The Utting manuscript, much cited in these works, has not been traced. The Feinstein papers were perused, and Cambridge and LSE libraries consulted, without success.

The foundation of the research lay in a comprehensive examination of the British Parliamentary Papers (BPP) from 1830; a review of the literature for each sub-period period successively so that an initial impression was formed before considering the next; and then a consideration of the general explanations for trend changes. This order was deliberately chosen to mitigate the inclination to read backwards into the history, although the formation of hypotheses is necessarily an iterative and continuous process. This procedure re-weights the usual historical narrative in several aspects.

- Macro-economic analysis, social accounting and Keynesianism are not given the more usual emphasis post-1930.
- Redistribution is mainly considered in the period after 1945.
- Public works has a higher profile to 1870.
- There is no underlying theme that the UK was ‘evolving’ towards a welfare state.

Additionally the decision not to include public health spending and the early factory regulation in PSS skews the historical narrative by comparison with the leading social historians of the period (Harris, 2004) and different spending patterns (which may have been in competition with PSS) are not explored.

Previous work

Feinstein (1972) has authoritative data from 1900. We can go further back as we are estimating PSS, not total public expenditure. Poor relief and education spending are particularly well documented from 1830. In *British Historical Statistics* (1988, p. 571), Mitchell notes that the wealth of detail increases from central government from the early nineteenth century but for local authorities it is ‘scattered, discontinuous and collected with little regard for uniformity amongst the various local authorities’. We make fuller use of sources as a basis for estimates before 1855 and thereafter to 1890. Peacock and Wiseman (1961, second edition 1967) is the pioneering work on public expenditure in the UK, its trends and explanations. Their aim was to present facts about the behaviour of TPE since 1890 and to explain that behaviour by reference to basic propositions about the character of government and the history. There are continuities and differences with this work but we have more extensive annualized data and disaggregate it far more. Whilst we explore several of their main ‘determinants’ or explanations we also consider a great number of others and emphasize the economic rather than the political. We consider variations around a trend, then displacements of the trend. They encourage similar work for other nations rather than cross-sectional data and our work is a time series for one nation. Albeit in different language our methodology is the same: a theory would provide a detailed analysis of the independent variables governing the changes through time in the dependent variable (government expenditure).

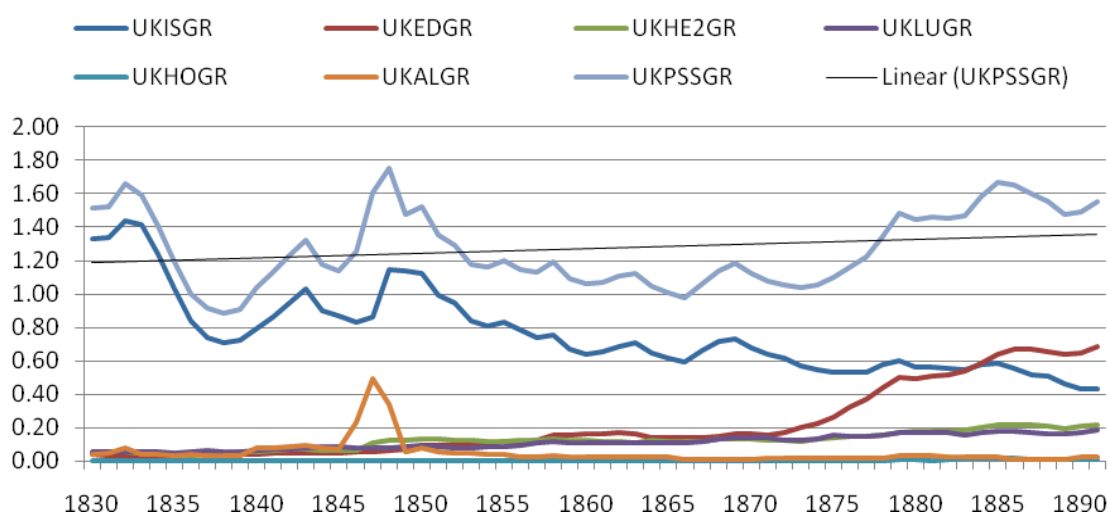
Few works concentrate solely on PSS within TPE so some comparisons with TPE growth will be made, leaning a good deal on Middleton (1996), which is the major authority on public expenditure, and Daunton (2010) which, in this and other works, provides a thorough political-economic background. Flora et al (1981) has an encyclopaedic compilation of data for Europe and theories for growth in public spending. This flows from the HIWED project, a major study of long-term time series for European democracies over a century and more. The data is mainly for comparative purposes and is very general. The other major long-term project on public social spending, (Wilensky, 1985), the Berkeley project is for post-Second World War and, although we refer to some of its explanations and categorizations, it is a more socio-economic approach than adopted here. Lindert (2004) is a model study in his level of quantification, his work on the earlier periods and his development of plausible intermediate explanations, clearly stated and tested. We make considerable reference to his explanations of government growth.

Data sources

The British Parliamentary Papers for session were gone through item by relevant item. The annual Public Income and Expenditure accounts for the UK were particularly useful for the period before 1870. Miscellaneous Statistics, I-XI, from 1858 to 1882 were a singular source with a rather different scope to the Annual Abstract of Statistics (SA). The SAs were used at largely 15-year intervals from 1855. Periodic use was made of the annual Appropriation Accounts, relating to central government. After the mid-1840s there are annual reports on many aspects of social policy by separate Commissions for all three territories which are increasingly statistical. The Annual Local Taxation Returns for local government were essential sources after 1862 for England, after 1882 for Scotland and after 1866 for Ireland. All three sets of Local Government Board reports from about 1870 to 1920 were used. The Ministry of Health Reports for England and Wales from 1920 to 1940 were checked alongside the 'Drage' reports on Public Social Services 1920-37. After 1921 the Ulster Year Books were a source for Northern Ireland. The Board of Education memorandums from 1920 were particularly useful for England and Wales.

The trends

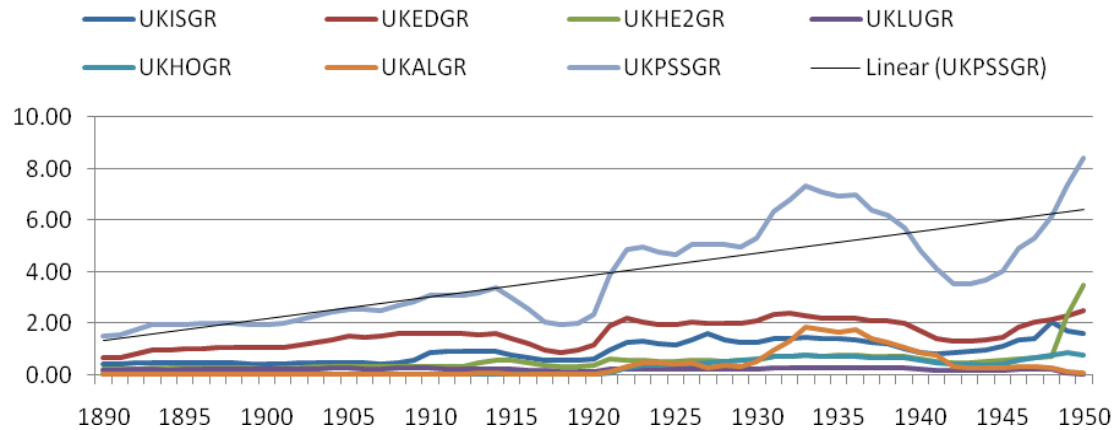
Figure 1 UK: PSS programmes/GDP Ratios 1830-91 with trend line: %



Source: appendix tables

The division at 1890 is illuminating. The actual ratio of PSS/ GDP is much the same at the end as the beginning with the spending on the Irish Famine interrupting a downward trend which is reversed as education spending drives overall PSS from 1873. Housing spending is negligible and most of the lunacy and health public spending is only significant because it is separated from the poor law totals which partly explains the fall in the IS figures. Capital spending (see figure 4) is a negligible part of overall capital investment. Central Grants to local authorities begin to form a substantial part of total PSS towards the end of the period (figure 3). Retrenchment within the context of a fiscal constitution that promotes minimum balanced budgets prevails, under increasing strain.

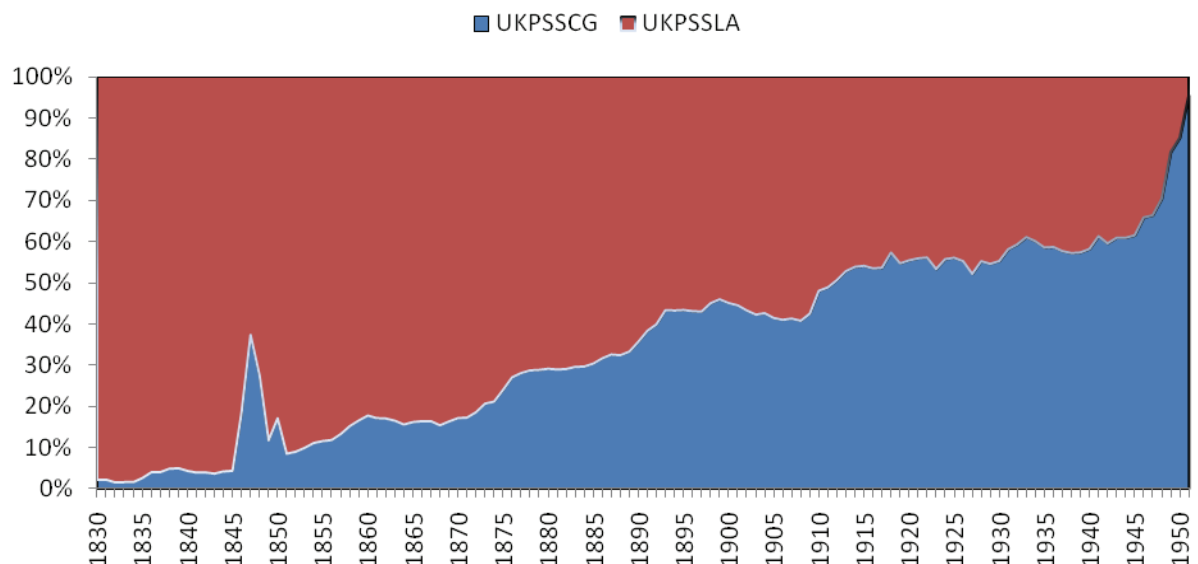
Figure 2 UK: PSS programmes/GDP 1890-1950 with trend line: %



Source: appendix tables

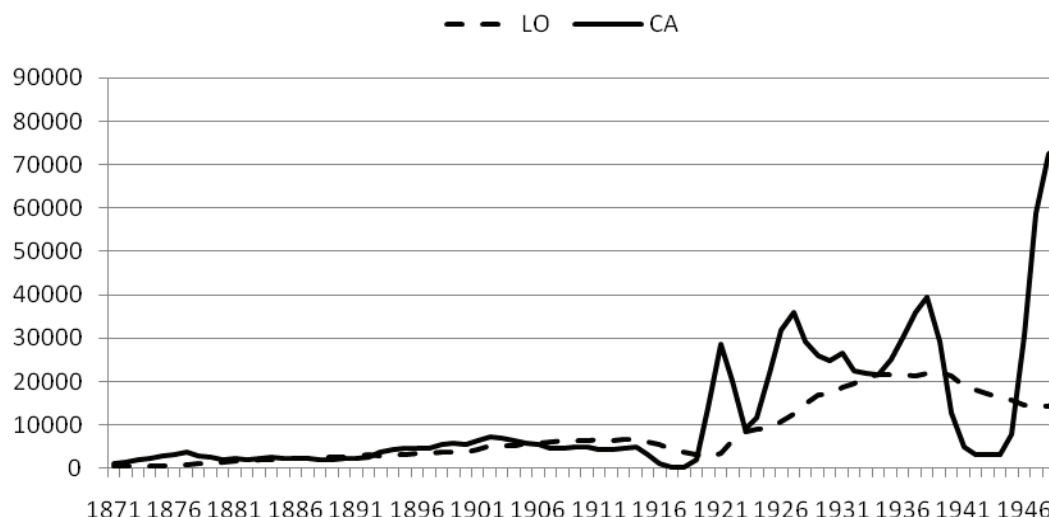
Clearly there was a very sharp change of trend in or about 1890, which thereafter tends to support Wagner's Law. The composition of the overall PSS also alters as spending becomes more diversified (a process begun before within the Poor Law). The most significant changes are in education from 1870-1913, the old age pensions in 1909, family allowances in 1946, housing after 1920, ALM in two periods separated by 70 years and health after 1948. Most of these were concentrated in the central government. The variations around the trend are very marked in the two World Wars (this seems to contradict the displacement theory if one sees the succession period as a 'rebound to trend') and in the 1930s. The post-1945 period sees a return to trend but with significant spending above this, mainly in health. The increase in taxable capacity (Daunton, 2010) may have facilitated this and the market failures of the interwar period (Middleton, 2004), in particular in labour market, led to increased central government intervention and spending.

Figure 3 UK: CG spending against local authority for PSS, 1830-1950



Source: appendix tables

Figure 4 UK: PSS Capital (CA) and Loan repayments (LO), 1871-1950, real, £000s



Source: appendix tables

The facilitation of local authority capital loans allowed increased spending but it is noticeable how LO matched these until the 1920s, when public housing capital spending increased. After 1946, CA became very significant and allowed for fiscal stimulus from the PSS sector. This also reflected the view that nationalization was necessary to ensure adequate capital investment.

Explanations

We are most interested in general rather than disaggregated explanations. A wide range of these, many for public expenditure in general and many for after 1945, were summarized and a selection made. Our thesis is that economic explanations (which we attempt to separate from socio-economic and political economy) will best explain the medium and long-term trends for each sub-period and the variations around this trend. Political explanations, such as partisan government, the median voter, democratization, and market and government failure (which is in the field of political economy) are assessed in the text. It is perhaps surprising how some of the most intuitively plausible, and widely accepted, explanations are difficult to sustain with historical evidence – particularly the impact of the extension of the franchise, partisan government and the determining role of the median voter. Equally Lindert's emphasis on a narrow aspect of demography, the aged and children under 14, is a minor explanatory factor.

A selection of economic and fiscal forces is chosen to see if these explain the trends. Modernization is accepted as the underlying force, particularly on origins, but is not assessed as such. Some explanations have more value at different periods, some do not seem to help at all – Rodrik (1998) on openness of trade, the displacement effect of war, fiscal substitution between defence and PSS, and counter-cyclical spending. Others are plausible but difficult to test against the data or relatively insignificant – permanent income effects, the flypaper effect and fiscal illusion. The best are:

- (1) Wagner's Law which states that the elasticity of demand for public goods against GDP growth is >1 (this is only one formulation) but this raises many questions – why did this not operate until 1890, why does it vary in elasticity thereafter, and is it an economic 'law' or the expression of a regularity which has non-economic causes?
- (2) Baumol's theory, which links the increases in PSS/GDP to differential productivity in the public and private sectors. The problem is the lack of data on public sector productivity

(3) Equity and efficiency elements within market or government 'failure'. This explains some of government intervention and the extension of spending to more areas but, again, without precise measurements.

(4) The link between PSS and the labour market manipulation. This is undoubtedly the case but we try to isolate extra spending rather than employ a generalized socio-economic theory and it explains particular policies introduction as much as spending changes.

Convergence (Boyer, 2007) is potentially a fruitful area of study. Taxable capacity is fundamental to explaining the supply side of PSS and the reinforcement of trends. The changes after 1942 may link to solidarity considerations (Baldwin, 1990). The decision to isolate and assess economic explanations followed from the failure of other theories. If these, in turn, do not succeed then political, social and cultural forces return centre stage.

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An overview of the growth and economic effects of Estate Duty in Britain, part one: precedent taxes and genesis

Marie Fletcher, University of the West of Scotland
(marie.fletcher@uws.ac.uk)
Supervisor: Professor Sam McKinsty

Introduction

This paper is part of a larger study on the effects of estate duty in the UK between 1894 and 1975. Estate duty was the first substantive tax on capital and over its life has redistributed wealth in the UK, contributing to the decline of the aristocracy and its economic, political and social power.³⁴ From the post-First World War period, but especially in the 1940s and 1950s, the level of estate duty also caused problems for private family companies as inheriting shareholders faced large estate duty bills as a result of high valuations placed on their non-listed shares.³⁵ This caused them frequently to sell out to large corporations, losing control and shifting the UK family economy towards a corporate one. None of these areas has been researched in detail.

This paper will examine the impulses that created estate duty through studying the political debates and environment surrounding this duty's predecessor taxes, collectively known as the *death duties*. Of particular interest is the causation for these taxes and also estate duty: did the taxes arise as a result of pressures for revenue, or pressures for redistribution, and from whom? The paper will show that theory mattered little.

The Duties

Four related duties preceded estate duty, probate duty (1694), legacy duty (1780), succession duty (1853) and (temporary) estate duty in 1889. These taxes contain principles which were subsequently integrated into the Estate Duty Act in 1894 and thus it is necessary to look into their genesis.

Probate Duty

Probate duty took the form of a stamp duty and was initially only intended to help towards the cost of the war against France. It was a flat rate of tax and was charged on personal moveable property and leaseholds but land and freehold estates, termed *real property* were excluded. There were many criticisms levelled at the duty over the years but it seemed the deficiencies were easy to identify but difficult to remedy. In 1853, the Liberal chancellor, Gladstone, reviewed the death taxes as a whole prior to introducing succession duty and he acknowledged the problems without offering a solution. He did return to the issue in 1881 and between him and his predecessor, Northcote, the Conservative chancellor, they are credited with reforming the duty.

Legacy Duty

The second of the *death duties*, legacy duty was again created to meet the cost of war, this time the War of Independence. It was a stamp duty like probate, but its passage through parliament was more protracted and it was not passed until its third reading. It was realized that expenditure had been approved to build the naval fleet and that revenue had to be found. The Whig politician Fox advised the Commons to '... recollect what was the consequence of

³⁴ Cannadine D, *The Decline and Fall of the British Aristocracy*, Penguin, 2005.

³⁵ Colli A, *The History of Family Business, 1850-2000*, Cambridge University Press, 2003.

refusing to vote the supply? ... the navy could not be equipped, the army could not be sent out ...³⁶

Legacy duty was still only charged on *personal property* despite Pitt's best efforts to extend it to *real property*, however, there was a significant difference in this tax as it did not have a single scale, but varied according to the relationship between the recipient and the deceased so for example, brothers and sisters and their descendants would pay a 2 per cent tax but great aunts and uncles would pay 4 per cent. These consanguinity scales increased twice and were eventually extended to encompass children and their descendants, leaving only the widow untouched, a situation which has remained to the present day.

One criticism of the duty was that it never achieved its anticipated yield and between legacy and probate duties the contribution was just over 3 per cent of public income.

Succession Duty

This duty, introduced in 1853, will be discussed more fully as it widened the charge to *real property* and so opened the door for estate duty. This period saw the start of the gradual loss of political power by the landed elite who had traditionally controlled both parliamentary houses. The Parliamentary Reform Act 1832 began the extension of the franchise, a process which continued beyond succession duty with the 1867 and 1884 Acts. Thereafter, there was a shift in political power as the House of Commons saw genuine representation whilst the power of the landed interest went into decline.

Britain was fairly prosperous when succession duty was first proposed but politically it was a time of flux. The traditional two parties had spawned a breakaway faction of Liberal Conservatives, commonly referred to as Peelites. They were in power 1852-55 when succession duty went through parliament with William Gladstone holding the post of Chancellor of the Exchequer. The key change with this duty was that *all* property would now be chargeable. This meant that the debates were extended over many months.

Succession duty was a significant part of the Budget but the mechanics of the tax were rather vague, which spurred most of the debate. The chancellor offered an incentive to accepting the proposal stating '... without that tax upon successions it would be impossible that we could hold out any other expectation of the termination of income tax ...'.³⁷ The repeal of income tax was never a real possibility, as history demonstrates, and the yield for succession duty did not even come close to that of income tax, however, the seed of hope had been planted.

The main argument used in support of the duty was the equalization of the tax burden but there were also plenty of counter arguments. Many saw a disparity within the pre-succession duty system whilst others reasoned that this disparity was balanced by other taxes paid exclusively by landowners. These points were generally well made but time and again they were ignored. Those who opposed it were not against equalizing the tax burden but they did not believe the tax burden was being fairly measured. The debate necessarily became extremely numerical with examples and explanations of a technical nature. It is clear that some confusion existed in the Commons as one Mr Aglionby referred to '... the various minute points, the bearings of which he certainly could not see, and which, he believed, no one but an experienced accountant or actuary could explain ...'.³⁸ Others appear to have been similarly confused, which may have been a deliberate ploy by the chancellor. Was he relying on ignorance? The debates show general disagreements on basic principles but no side comes out on top. However, the political expediency of accepting the tax was outlined by the former Conservative chancellor Goderich who ventured to point out the advantages of agreeing because 'It would be a great benefit to the landed class if that impression (of being unjust and

³⁶ Hansard, Volume XXI, April 1780.

³⁷ Hansard, Volume XXIV, March 1853.

³⁸ *Ibid.*

unequal) could be removed from the minds of the people',³⁹ suggesting that the perception of injustice, whether real or imagined, existed in the views of the voting public.

The debates took place at a late hour and in some instances, with very late notice given, which meant some members were unable to get to London on time, perhaps a tactical manoeuvre on the part of the government. Indeed, they were directly accused of underhand tactics by one of the staunchest critics of the tax, Sir John Pakington. Other critics reiterated the very reasonable precaution of looking into the existing burden of the landowners before the Bill went further. All of these counter arguments were largely ignored and the Bill passed through its latter stages with some haste. The government continued to ignore valid points which in turn saw the dissenters giving up as the futility of their attendance became clear and as the inevitability of the Bill's progression became evident.

When the Bill reached the Upper House, the purpose of the tax was again outlined. Industry would be relieved from tax burdens as a result of this tax, although no explanation was given as to how this was to be achieved and there was a repeat of the claim that income tax would be repealed. There were no figures produced, perhaps because it would have been immediately apparent that this tax alone would *not* be sufficient to satisfy these two lofty ideals. This is borne out by the amounts subsequently collected for succession duty which amounted to £564,697 in 1858-59 compared to income tax of £11.6 million in 1858.

The Bill continued its quick progression in Lords where again the counter arguments were ignored or sidelined. Many protagonists of the tax put forward logical and reasoned arguments, which were disregarded and the tactical manoeuvres resumed with the printing of the Bill only taking place the day before the debate. This ensured that many in the House were not yet familiar with its content. The Bill's detractors pointed out it was creating inequality rather than eliminating it if they ignored the other charges *real property* had to pay. The majority of the dissenters were happy to bear the same burden as *personal property*, 'but no more, as that would be unequal'⁴⁰ thus, the discord was only in relation to the lack of research.

The Duke of Argyll, the government spokesman, pointed out that the change was inevitable and that eventually the tax would be calculated on the *capital value* and not the proposed *life interest*. This is an important point for the modern reader as it can be seen that a form of damage limitation was being executed. The Bill was passed on 28 July 1853 after only six days in the Lords.

Mechanics of Succession Duty

The calculation of the tax was to be guided by Tables provided in the Act and was to be based on a *life interest* valuation for property. It was also to resemble legacy duty by taking into account the relationship between the deceased and the recipient. The yield for the tax, however, bore no resemblance to the predictions, achieving £600,000 over a four-year period, considerably lower than the anticipated £2 million pounds Revenue estimate. However, the three death duties were bringing in a more substantial yield reaching £5.75 million in 1876 and over £6 million by 1880, bringing the total revenue contributed by death duties to 9 per cent.

Temporary Estate Duty

The immediate predecessor of Estate Duty initially bore the same name but has been retrospectively changed to avoid confusion. It was introduced by the Conservatives in 1889 and the chancellor, Goschen, acknowledged that the death duties were in need of reform, however, he chose to add to the list rather than amalgamate or update the existing duties. His motives were clearly set out in his Budget speech, 'not so much to reform the death duties as

³⁹ Hansard, Volume XXIV, March 1853.

⁴⁰ Hansard, Lords, Volume CXXIX, July 1853.

to get £800,000 into the Exchequer⁴¹ It is clear that Goschen merely used this tax to raise revenue rather than for wealth redistribution.

Political and social context

The period between succession duty and temporary estate duty saw tremendous change with extension of the franchise and consequently the balance of power slipping away from the aristocracy. There was also a general depression in British agriculture during the last quarter of the nineteenth century to contend with. The economic downturn experienced in Britain was mirrored throughout the industrialized world and the continued support for free trade meant agriculture was being left to fend for itself. Hobsbawm (2003) commented that in Britain alone, even Conservative statesmen were prepared to abandon agriculture 'in spite of the ancient commitment of such parties to protection'.⁴² This led to a backlash against the landed gentry with a call for a break-up of great estates. This uprising was not confined to their territorial power but also against their political power. The Reform Acts of 1867 and 1884/85 extended the vote further and redistributed seats, however, the legislative programme was still effectively controlled by the Upper House. The Liberal government found its plans thwarted by the Conservative majority in Lords. This led to calls for the abolition of Lords at public meetings because the predominantly aristocratic and non-elected members were viewed as out of touch. Despite a brief rallying by Lords and a flurry of defections by Liberal lords who increased the Conservative majority, it was clear the system would need to change. It was in this climate that estate duty was introduced.

Estate Duty

The Liberal government with Sir William Harcourt as chancellor, had to find extra revenue to expand the naval fleet, and thus turned its attention to *death duties*. Harcourt believed that succession duty did not go far enough as it did not tax capital value and he proposed to change this, a real blow to landowners who still dominated both Houses.

Harcourt's Budget speech in April 1894 highlighted the positive state of Britain's finances but noted that *death duties* were not showing a good enough return. He believed the low yield was caused by the application of consanguinity rules which meant that as property was generally inherited by offspring rather than more distant relations, it was taxed at a lower rate. He proposed to simplify the entire system by abolishing probate, account and temporary estate duty and replacing them with a new estate duty. Legacy and succession duties were to remain in place and were to be brought into line with each other effectively leading to two death duties instead of five. This alteration was anticipated to ultimately increase revenues by between £3.5 and £4 million and this is borne out by public finance information with death duties yielding almost ten million in 1894 rising to over £15 million in 1898. However, in real terms this represents an increase of 3 per cent when taken as a proportion of total tax income.

The system of estate duty which Harcourt proposed introduced a graduated system of tax culminating in a maximum of 8 per cent. Goschen led the Opposition in a speech which was not only brilliant but prophetic when he stated that he was 'anxious that this graduation should not become a kind of scaffolding for plunder'.⁴³ Successive governments did just that but, as predicted by opposition members, those who were able to afford good legal advice were able to avoid the tax. The dramatic escalation of the duty is displayed below.

⁴¹ Mallet B, *British Budgets 1887-1913*, Macmillan, 1913.

⁴² Hobsbawm E, *The Age of Empire (1875-1914)* Abacus 2003.

⁴³ Coffield J, *A Popular History of Taxation*, Longman 1970.

Summary of estate duty rates

Tax Years	Top rate of tax
1894-1907	8%
1907-1909	10%
1909-1914	15%
1914-1919	20%
1919-1930	40%
1930-1939	50%
1939-1939	55%
1939-1940	60%
1940-1946	65%
1946-1949	75%
1949 on	80%

Summary and further research

An extensive review of Hansard shows that the *death duties* were used as both a political and financial tool and that they had bipartisan support. It does appear that the development of the predecessor taxes involved a blend of two factors. Initially, they were created to meet the needs of war but once the principle had been accepted they could be manipulated to suit the government of the day either to help them gain public support for redistribution, as the later taxes demonstrate, or simply to help them cope with higher expenditure requirements.

Succession duty opened up the field to *real property* for the first time, however, the debates show that there was some kind of hidden agenda as it was steamrolled through both Houses. There is a strong suggestion that the public perception was being considered and the unrest stirring over the power of the landed gentry motivated the change. This approach helped gain political support from the public whilst still allowing for some mitigation or control in the hands of those who would be affected by taxes on capital.

The *death duties* had a profound effect on the middle part of the twentieth century as consecutive governments tweaked and tightened the Act. The effects of valuation methods used to establish a value for non-listed shares will be studied in detail. The various debates and papers which were circulated by government, professional bodies and trade societies as well as legal cases disputing the high valuations given will also be analysed.

The restoration of the gold standard after the US Civil War: a volatility analysis

Max Meulemann, D-MTEC ETH Zürich
(mmeulemann@ethz.ch)
Supervisor: Professor Bernd Wilfling

The Civil War was not only a decisive moment in American history but also a fundamental turning point in financial development. The return to the gold standard constituted an important signal to financial markets worldwide since this monetary regime was appreciated by almost all major countries until the First World War, and ultimately let the US dollar inherit the role of the leading world currency from the British pound. However, within the US, bullionists and inflationists fought a fierce political battle over the expected distributional consequences of either monetary regime.

In this paper we study the period between the end of the American Civil War and the return to gold in 1879 and contribute to the theoretical debate on the factors that may drive exchange rates. In the literature covering this debate two opposing opinions predominate. On the one hand, monetarists like Friedman (1963) argue that exogenous macroeconomic fundamentals like money supplies, price inflation and price parities cause the high premiums on gold. This view is supported, *inter alia*, by Kindahl (1961), and Officer (1981). On the other hand, Calomiris (1992, 1988, and 1985) strongly opposes this view by stating that expectations are more important to the greenback exchange rate than the classical fundamentals. Consequently, Calomiris supports the research pursued, among others, by Mitchell (1903), and Willard (1996) who attempt to incorporate news and significant events in their study of the greenback markets. Besides these opposing views other authors (e.g. Smith [1997]) argue that both, expectations and macroeconomic fundamentals, did play a role in the evolution of the greenback exchange rate.

Our work contributes both to the financial history of the US and to the debate on the factors that drive exchange rates. To this end, we implement a so-called Markov-switching GARCH model that has recently emerged in the macrofinance literature (see for example Wilfling [2009]) and which enables us to analyse time-varying conditional variances of daily greenback-gold exchange rates.

More explicitly, this methodology helps us to identify distinct phases (regimes) of high and low exchange-rate volatility. Since such distinct exchange-rate volatility regimes can easily be reconciled with market participants' expectations on future changes in the exchange-rate (rather than with changes in fundamentals), we interpret our results as empirical evidence that agents had anticipated the exchange-rate fixing associated with the return to the gold standard beforehand. In particular, our econometric analysis detects a regime switch from high to low exchange-rate volatility some months before the actual resumption thus supporting Calomiris' view that expectations may have mattered more than macroeconomic fundamentals.

This method also offers a new means by which to gauge the Civil War and the postbellum period. Initially, seen through the eyes of the financial investor, our results reflect the considerable political uncertainty that characterized the postbellum years. Against this background however, the switch to a low volatility regime well before the actual resumption date demonstrates that policy makers were surprisingly able to commit to their announced resumption plan.

Historical background⁴⁴

Before the Civil War the money supply of the US consisted of gold and silver coins, copper pennies, and notes issued by state or private banks. All non-specie money could principally be converted into gold. There was no paper money issued by the government. However the US was practically on a gold standard because the relative price of gold to silver was higher than the world market price, so not many silver coins were in circulation. At the beginning of the Civil War of 1861-65 the Unionist government had difficulties selling enough bonds to finance its war efforts, which led to the suspension of specie payment by private banks and the government on 30 December 1861. As a response to this problem the government issued an inconvertible currency soon known as the 'greenback' to cover the war expenditures. Three Legal Tender Acts in February 1862, July 1862, and in January 1863 put around \$450 million greenbacks into circulation.

However, greenbacks were not a perfect substitute for gold dollars, because transactions with foreigners and the payment of customs duties or tariffs required gold. Therefore, a market emerged soon after the issue of greenbacks and they depreciated from par. The main reasons for the depreciation were the increased demand induced by the government's war spending, the expansionist fiscal policy, and negative trade balances, but also war news. Bad news induced hoarding in an expectation of a higher gold price, and good news made people sell gold because the price would drop. Nevertheless, contemporaries believed that this would be a temporary measure and that the parity would be restored after the war, although nothing had been specifically declared and greenbacks served as legal tender in most of the country.

The time after the Civil War was marked by a huge decline in commodity prices due to the contraction efforts by the Treasury and the additional 'natural growth' as the money stock was held fairly stable. When the Resumption Act was passed during the lame-duck session in 1875 no one really believed it would ever be carried out, because the political situation was very unstable. The White House was commanded by a Republican, the House of Representatives controlled by the Democrats, and the Senate went into a stalemate. After all attempts to repeal the resumption had failed, the treasury started to build up a large gold reserve and the premium on gold fell constantly. On 17 December 1878 par was reached for the first time since 1862 and in the days that followed resumption, only a few notes were redeemed and in fact more gold was exchanged for paper money. Overall, the struggle between bullionists and inflationists created a very uncertain political environment during the greenback era and it was not before summer 1878 that the public had realized that resumption would actually happen.

Data

The data we use has been provided by Mitchell in a book called 'Gold, prices, and wages under the greenback standard' (1908). Mitchell used historic publications of the stock exchanges in New York, daily and weekly press, and the detailed reports by J.C. Mersereau from the annual issue of 'American Gold, 1862-(date of issue)'. Since the prices were telegraphed to all other important US cities and regarded as authoritative, there is no need to take account of prices in other cities. The volume of transaction at the New York Markets was reported to be very large and, especially during the Civil War period, speculations were regarded as problematic.

⁴⁴ For this chapter we rely on some of the established historical literature: (Unger 1964), (Mitchell 1903), and (Friedman and Schwartz 1963).

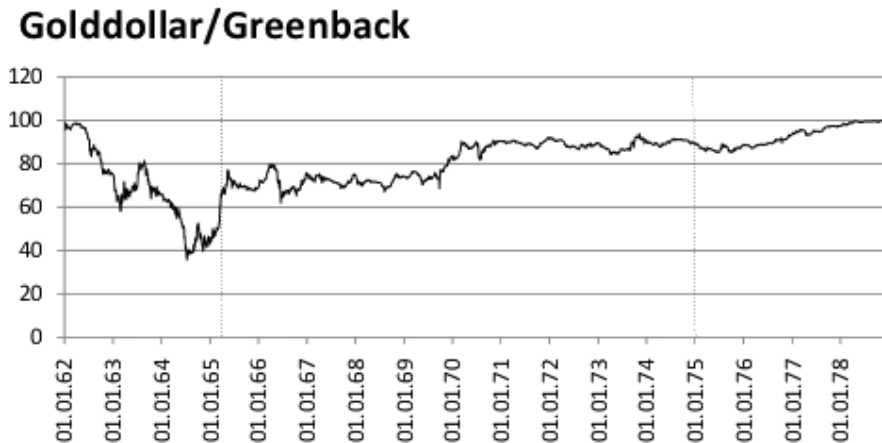
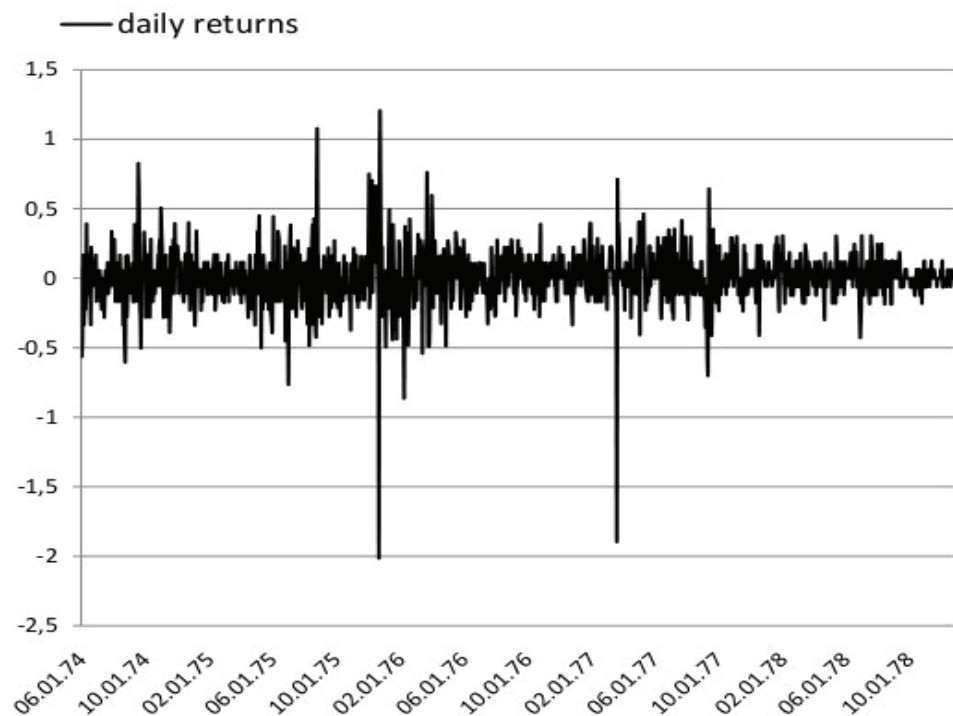
Figure 1: *Gold/greenback exchange rate from 1862 to 1879*

Figure 1 shows the whole dataset. The vertical lines denote the end of the Civil War and the passage of the Resumption Act. To show the volatility development figure 2 plots the daily return rates that will be analysed by the Markov-switching GARCH model from 1 June 1874 until 1879.

Figure 2: *Daily returns from June 1874 to December 1879*

One can see the diminishing volatility from spring 1878 onwards and the drop of the returns to an extremely low level several months before the resumption. Altogether, there are only a few volatility clusters around February 1876 and summer 1877. Concerning the mean, it is obvious that it flutters around zero and does not change very much over time. The standard deviations of the equally sized parts do differ significantly as $\hat{\sigma}_1 = 0.21$ and $\hat{\sigma}_2 = 0.15$ and the advantage of the first part increases the more observations are included in the first part.

The standard deviation from June 1874 until April 1878 is $\hat{\sigma}_1 = 0.20$ and $\hat{\sigma}_2 = 0.067$ for the remainder which indicates a volatility regime switch as supposed.

The model

Empirics have shown that complex macroeconomic models have poorer forecasting quality than descriptive time series models. Among this class of models GARCH models use their own lagged values and innovation terms to forecast future values. To show the idea of GARCH models, a single regime model is briefly introduced. We use the nominal spot exchange rate X_t to calculate the exchange rate return R_t as the dependent variable.

$$(1) \quad R_t = 100 * [\ln(X_t) - \ln(X_{t-1})],$$

The data generating process (DGP) for a single regime model can be described as:

$$(2) \quad R_t = \mu + \varepsilon_t.$$

μ describes the mean of the DGP and ε_t is a t -distributed error term with mean zero and v degrees of freedom and variance h_t :

$$(3) \quad \varepsilon_t \sim \text{student-t}(0, v, h_t).$$

The variance h_t is assumed to follow a GARCH (1, 1)-Process where b_0 serves as a constant term, b_1 as the parameter for the lagged residual, and b_2 for the lagged variance:⁴⁵

$$(4) \quad h_t = b_0 + b_1 \varepsilon_{t-1}^2 + b_2 h_{t-1}.$$

However, the estimation would fail to differentiate times of high and low volatility. That is why the influence and persistence of large shocks would be overestimated and the goodness of fit would be reduced. Adding a switching structure will not only help to improve the forecasting quality but allows a better understanding of the economic mechanisms behind volatility persistence, because regime switching models could be more than just an improved technical tool to measure volatility. In consequence, we will differentiate between two regimes: a high volatility regime 'regime-1' and a low volatility regime 'regime-2', and allow the parameters of the GARCH equation to change.

To this end, a state variable S_t is introduced which can take on the value one with probability (p_{1t}) and the value two with probability ($1 - p_{1t}$). In order to establish the probabilistic structure of the regime switch, the state variable S_t is supposed to follow a first-order Markov-process with constant transition probabilities. A finite-space Markov-process can be described by a probability matrix T where each element p_{ij} accounts for the probability to switch from state i to state j in the next period. The transition probabilities have to sum up to one, and form the following matrix T :

$$(5) \quad T = \begin{pmatrix} P & 1-P \\ 1-Q & Q \end{pmatrix}$$

and therefore the conditional probabilities unfold as follows:

$$(6) \quad \Pr(S_t = 1 | S_{t-1} = 1) = P,$$

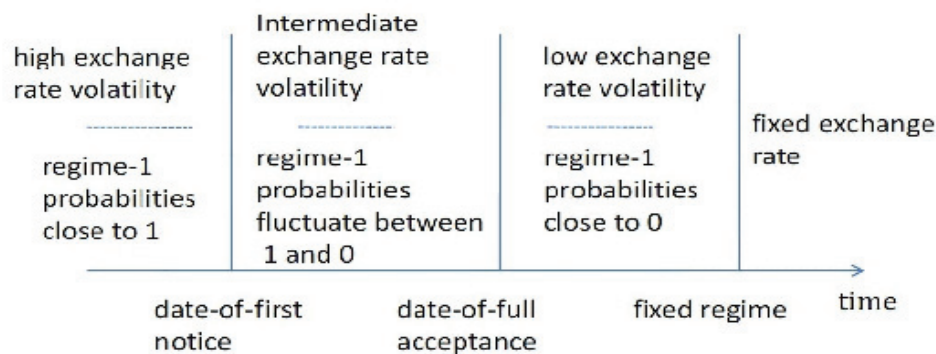
$$(7) \quad \Pr(S_t = 2 | S_{t-1} = 1) = 1 - P,$$

$$(8) \quad \Pr(S_t = 1 | S_{t-1} = 2) = 1 - Q,$$

$$(9) \quad \Pr(S_t = 2 | S_{t-1} = 2) = Q.$$

Using a recursive form we can calculate the ex-ante regime-1 probabilities p_{1t} . The plot of the ex-ante probabilities serves as the key result of our work, because it enables us to identify a regime switch in the data. Figure 3 illustrates the whole idea of the model.

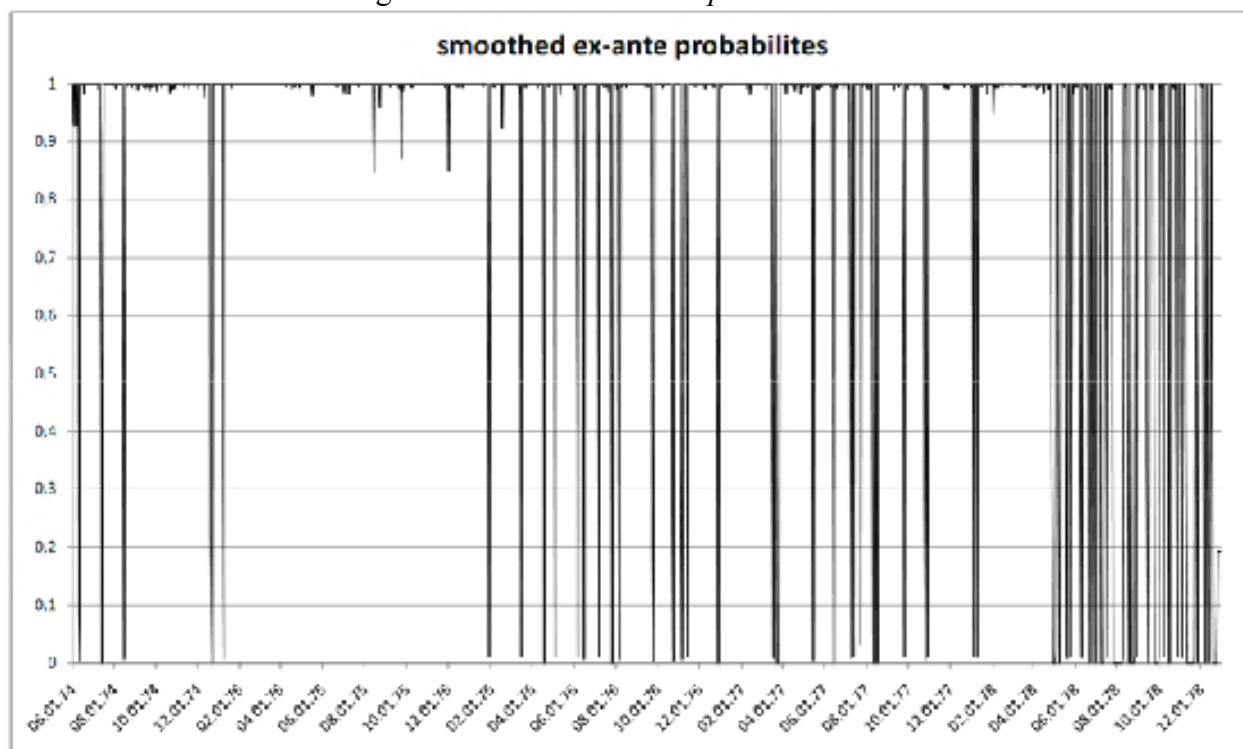
⁴⁵ Dueker (1997), p. 4.

Figure 3: *Illustration of the regime switching structure*

The timescale shows the assumed development of the fiscal policy change from a floating regime to a fixed one as happened after the US Civil War. At first the exchange rate switch is announced, later accepted by the markets and finally applied. The volatility would gradually fall from a high level to a low level which would indicate acceptance by the markets. The regime probabilities for the high volatility level or 'regime-1' would evolve in the same way. Obviously, the date of first notice and the acceptance date do not fall on the same day and in the case shown here the regime switch was accepted by the market before the actual policy change. We would expect the same thing to have happened during the time period we observe.

Results

The whole model is estimated using numerical maximization. As expected the GARCH parameters for the first regime are much higher expressing the higher volatility persistence. The transition probabilities are high but only the first regime shows strong persistence which may explain the high amplitude of the regime-1 probabilities shown in figure 4. In a perfect market we had hoped to find one clear regime switch, but we can see that several months before the resumption the model switches frequently to the low volatility regime. This indicates an increasing certainty about the resumption, but several outliers suggest that some market participants were not certain about the resumption.

Figure 4: *Smoothed ex-ante probabilities*

At the beginning of the sample period we can see that the model stayed in the high volatility regime which shows that the Resumption Act was not taken seriously and it even increased the volatility. During the interim period from 1876 until 1878 the DGP switches over to the low volatility regime for several occasions but still remains mostly in the high volatility regime. The results for the interim may imply that the model had difficulties in identifying the state of DGP, so perhaps a third intermediate volatility regime would improve the estimation. Some blips coincide with distinctive historical events. For instance, after Hayes had won the presidential elections in November 1876, more blips occur during several months in 1877. Hayes was well known for his sound money opinion which may have encouraged the belief in the Resumption Act. There is a more persistent switch to the low-level regime at the end of 1877 which may be based on the vain attempt to repeal the Resumption Act shortly before that. The Bland-Allison Act of January 1878 may have kept the DGP in the high-volatility regime, although its influence on the resumption credibility is doubtful. Only after the Silver Act of 31 May 1878, which did not affect the legal commitment to resume on 1 January, did the ex-ante probabilities begin to fall frequently and the model stays in the low volatility regime for some subsequent time steps.

Although the model does not remain in the low-volatility regime for a long time, the more persistent change of the ex-ante probabilities after May 1878 strongly implies a change of the agents' expectations. This complies with the historical narrative that Sherman's efforts to accumulate a sufficient gold reserve for resumption were taken seriously. Summing up, the model is able to find a date on which the resumption was most likely taken for granted. It can be seen that after June 1878 the model mostly stays in the low volatility regime which shows confidence in resumption. At the start of the resumption process however, almost no one really believed that the Act would be put through as it was planned and the greenback faction fought against its success. Therefore, the transition period appears to be not as smooth as modern experiences show for the European Monetary Union. Instead, the model flickers between states, which can be taken as additional evidence for the high degree of uncertainty the USA experienced after the Civil War. Finally, we regard our results to be confirmative of expectation based models of financial markets.

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A unified Italy? Sovereign debt and investor scepticism

Stéphanie Collet, Université Libre de Bruxelles/LSE
(stephanie.collet@ulb.ac.be)

Supervisor: Professor Kim Oosterlinck

Sovereign debt and states unification

Sovereign bonds face a paradoxical situation. On one hand, given the official nature of the issuer, sovereign obligations are often considered risk free assets. The state, being entitled to raise taxes and to issue currency, cannot in theory go bankrupt. On the other hand, the real capacity of investors to force reimbursement is limited. A sovereign state can unilaterally decide not to repay its debt, leaving the investors without any legal recourse.

Typically, extreme events lead to the repudiation of sovereign debts. Recent papers have attempted to determine the impact of certain events on sovereign bonds' expected rates of return. The impact of various war-related events has been analysed for the American Civil War, for the Second World War and for the Russian Revolution. The reaction of financial markets in the case of annexation-related events has been investigated for the Texan and Hawaiian debts.

Another event can disturb sovereign bond markets: state unification. This paper focuses on the implications for state bonds of a country which faces a unification risk. It will detail the evolution of sovereign debt prices when a country unifies (or when such a probability exists) and investigates sovereign debt integration. Puzzlingly, in spite of the importance of the amounts involved, there has been little investigation on the financial impact of a state's unification. Since international law requires continuity of rights and obligations, sovereign bonds would normally be carried over to the new country. However, exceptions such as war debt exist. The impact of state unification and sovereign debt integration has a contemporary echo and is regularly evoked in European debt debates.

This paper investigates Italy's unification in the nineteenth century to study how the sovereign debts reacted to the progressive states' unification (1848-70) and sovereign debt integration (1862-63). Italy resulted from the unification of seven entities which took place gradually. Italy's unification is outstanding for academic purposes because each entity has its own bond premium and own history with events unrelated to the other entities. Moreover, since the unification of Italy was carried out gradually, only the debts of the territory about to be attached were impacted. This offers an opportunity to investigate the financial impact of sovereign debt integration.

On the road to Italy: historical context and sovereign debts

In 1815, the Vienna treaty was signed and Austrian domination was restored in the northern part of Italy. According to this treaty, Italy was to be divided into seven territories: the Kingdom of Piedmont-Sardinia, Lombardy-Venetia, the Papal States, the Two Sicilies, the Duchy of Parma, the Duchy of Modena and the Duchy of Tuscany. At this time, Italy's unification was unlikely in view of the huge heterogeneity existing among the entities.

Italian unification, also called the Risorgimento, was instigated initially in the Kingdom of Piedmont-Sardinia. The first initiative took place during 1848-49 but failed. The second tentative took place in 1859 and lasted until 1861. On the 17th of March 1861, Italy was proclaimed a kingdom by Victor Emmanuel II, king of Italy. Only Venetia and Roma weren't attached to Italy as Rome was still a Papal possession and Venetia belonged to Austria. Italian unification was completed by the third independence's war (1866-71). Venetia was attached to Italy on the 21st of October 1866 after the Austrian defeat during the Seven Weeks War (24/06/1866 – 23/08/1866). Italian unification was achieved when the French withdrew from Rome in September 1870.

The individual sovereign debts of the pre-Italian bonds are linked to their respective entity events. Detailed information on these individual bonds is listed in table 1. The converted amount represents the total amount of the debts converted in 1863 in the first Italian sovereign debt. For example the Naples bonds represent 25.6 million francs out of the 32.8 sovereign debt of the Kingdom of the Two Sicilies. The 25.6 million value is an overall value for all the markets issuing Naples bonds. The conversion column shows if the sovereign debt is converted or not.

On the 1st of January 1863, the Italian debt only included a few funds due to the conversion of old funds from the various states annexed to the new Italy's kingdom funds. New Italian debts of 5 per cent and 3 per cent were emitted in July 1861. These loans could be partly exchanged against debts of annexed countries until October 1862. As a result, the majority of the annexed states' funds were converted in equitable⁴⁶ proportion in a new Italian unified debt. Detailed information on the post-1863 bonds on the Paris and Antwerp markets is provided in table 2. Nevertheless 15 per cent⁴⁷ of the Piedmont-Sardinia debt and 40 per cent⁴⁸ of the Tuscan debt were not converted. A Lombard loan related to notarial guarantees as well as two loans of Modena and Parma were also not converted.

Three reasons might be advanced to refuse converting some of the loans. Firstly some debt represented negligible⁴⁹ amounts. A second reason for non-conversion was a close completion date.⁵⁰ Finally, bonds with lottery features were often left as they were. The Piedmont-Sardinia Loan of 1844 provides an example of such a loan. This loan of 36fr paid back 41fr plus a premium dependent on the lottery. In 1863, this loan was quoted 55.5fr given the lottery premiums. In the same way, Piedmont-Sardinia 1849, 1850 and 1851 were lottery-based loans. This type of loan was strongly influenced by the lottery outcomes and would therefore continue to be traded separately.

Empirical analysis: data series and methodology

The sovereign debt prices of the various Italian entities were collected manually from the archives. The data consist of weekly prices stretching from 1st January 1847 to 3rd January 1873. The paper assembled a 26-year long database coming from two markets: the Paris market through the archives of *Bourse de Paris Cours Authentique seul officiel* and the market of Antwerp via *Bourse d'Anvers Cours Officiel* archives.

Overall, 27 different Italian sovereign bonds were traded on those two markets during the period. Lottery debts were excluded from the sample because of their unique features. Also taking the insufficient data series out, four data series were constructed representing the four biggest pre-Italy states (see figure 1): the Two Sicilies series, the Piedmont-Sardinia series, the Lombardy-Venetia series and the Rome series. Nevertheless, some values were missing. However, they are neither during the war nor during the annexation periods.⁵¹ The peace periods with some missing values seem to indicate low trading levels. As the methodology requires continuous data, the last trading price is then applied. The pre-Italian and Italian sovereign bond prices have all been converted into yield to maturity given their characteristics. Using yields permits us to focus on more long-term anticipation changes. Those sovereign debt yields will be investigated to identify the large and lasting yield shifts.

⁴⁶ The differences resulting from the different times of coupons payment are compensated in cash. Neapolitan foreign exchange rate is fixed at 4.25 the ducat and the Lombard-Venetian is fixed at the exchange of 86 C. 41/100 Austrian pound.

⁴⁷ It is about Piedmont-Sardinia (1834, 1844, March 1849, 1850, 1851, 1855, 1859, and 1860).

⁴⁸ It is about Tuscany (1847, 1849, and 1851).

⁴⁹ Amount lower than 100,000 francs.

⁵⁰ Completion date before 1/1/1865.

⁵¹ Except the Antwerp and Paris market closing.

Table 1: Pre 1863 Italian Bonds

Entities	Converted Amount (million)	Unconverted Amount (million)	Debts on Anvers and Paris Market	Issue Date	Amount (million)	Nominal Value (fr)	Interest	Payback	End Date	Conversion	Data Start Date	Data End Date	Market
The Two Sicilies Kingdom	32.80	0	Naples Bonds	1806	25.6	114	5%, 1st January and July	payback at 114fr	-	Y	01-Jan-47	19-Sep-62	Paris
The Piedmont-Sardinia Kingdom	55.29	8.55	Piedmont Bonds	1834, March 1849, 1850	1.8	1000	4%, 1st January and July	lottery	1870, 1885, 1886	N	01-Jan-47	15-Jan-64	Paris
			Piedmont 1848 Loan	June 1849	45.0	100	5%, 1st January and July	buyback at market price	-	Y	09-Nov-49	02-Jan-63	Paris
			Sardinia 1849 Loan								02-Nov-49	28-Dec-60	Antwerp
			English Piedmont	1851	4.5	various	5%, 1st June and December	lottery	-	N	02-Jan-52	09-Jan-63	Paris
Lombardy-Veneto	7.53	0*	Sardinia 36Fr Bonds	1844	0.1	36	0%, 1st May and December	lottery	1869	N	Not enough data		
The duchy of Parma	0.56	0*	Lombard Bonds	1850	2.0	various	5%, 1st January and July	buyback at market price	-	Y	01-Jan-58	02-Jan-63	Paris
The duchy of Modena	0.76	0*	-	-	-	-	-	-	-	-	-	-	-
The duchy of Tuscany	4.20	1.66	Tuscan Loan 5%	1848	0.8	840	5%, 30th June and December	payback at 924fr	1874	N	Not enough data		
			Italy's Center Bonds	1852	2.5	840	3%, 1st January and July	buyback at market price	-	Y			
			Tuscan Loan 3%										
The Papal States	-	-	Rome Bond Anvers	1831-1857	-	various	5%, 1st June and December	buyback at market price	-	N	01-Jan-47	03-Jan-73	Antwerp
			Rome Bond Paris								01-Jan-47	03-Jan-73	Paris
			Rome Certificate							N	01-Jan-47	03-Jan-73	Antwerp

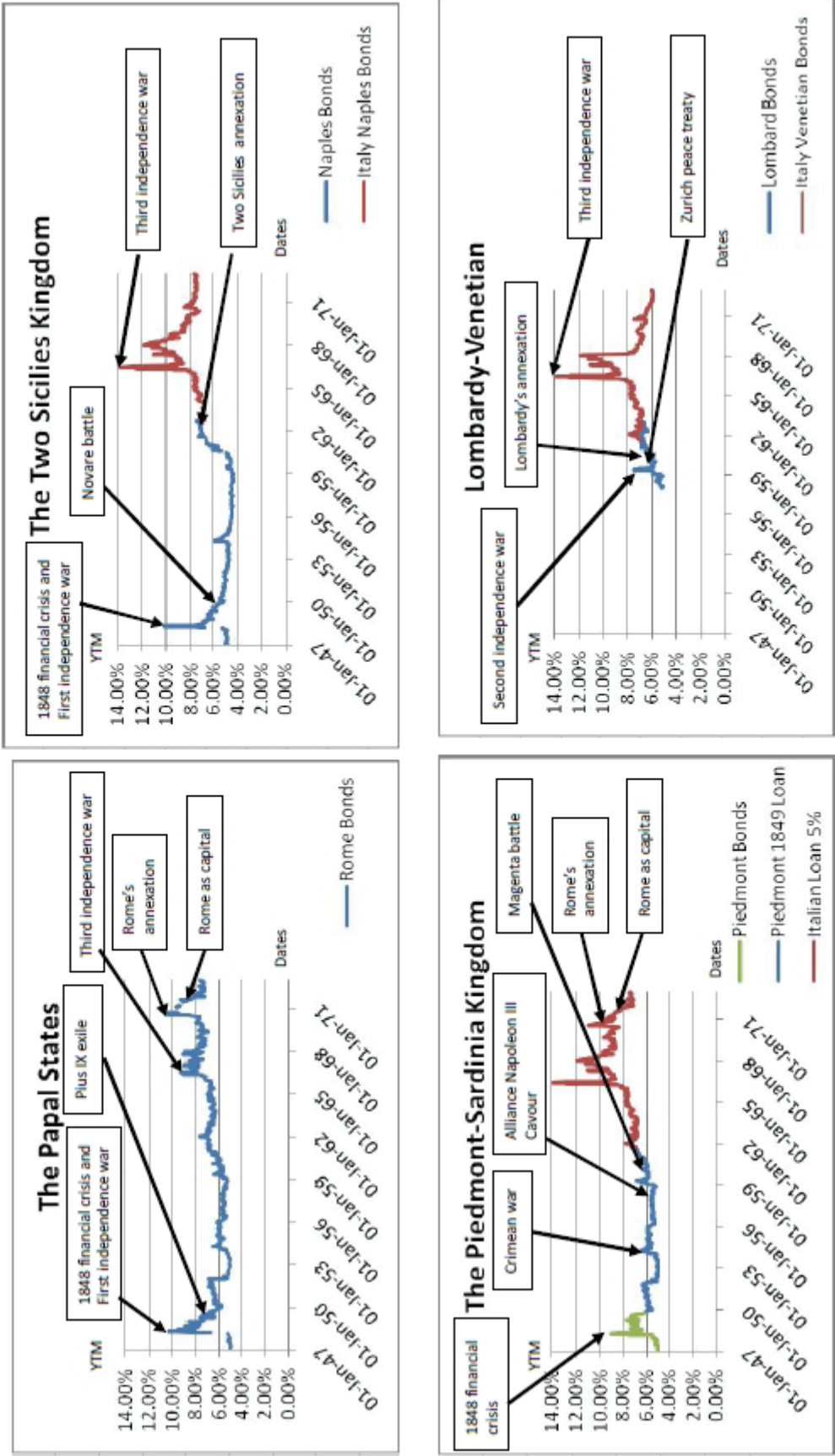
Sources : Bourse de Paris Cours Authentique seul officiel ; Bourse d'Anvers Cours Officiel ; Companies des agents de change 1880, 1881, 1882 ; Courtois 1863, 1878, 1883, Vitu 1864 and Gille 1965.

Table 2: post 1863 Italian Bonds

Entities	Debts on Anvers and Paris Market	Issue Date	Nominal Value	Interest	Payback	Data Start Date	Data End Date	Market
Italy	Italian Loan 5%	1861	various	5%, 1st January and July	-	09-Aug-61	03-Jan-73	Paris
	Italian Loan 3%	1861	various	3%, 1st April and October	-	Not enough data		
	Italian Line Bonds	1861	various	3%, 1st April and October	-	Not enough data		
	Italy tobacco Bonds	1868	175	-	lottery	01-Jan-69	03-Jan-73	Paris
	Italy-Venetian Bonds					21-Feb-68	03-Jan-73	Antwerp
	Italy-Lombard Bonds					21-Feb-68	03-Jan-73	Antwerp
	Lombard Lines Bonds	1866	500	-	lottery	27-Jul-66	03-Jan-73	Paris
	Italy-Neapolitan Bonds					04-Dec-68	03-Jan-73	Antwerp
	Victor-Emmanuel Loan guaranteed by Italy	1863	500	3%, 1st April and October	lottery	02-Jan-63	03-Jan-73	Paris
	Victor-Emmanuel Loan	1864	500	3%, 1st April and October	lottery	03-Jun-64	11-Feb-70	Paris
The Papal States	Rome Bonds Anvers	1831-1857	various	5%, 1st June and December	buyback at market price	01-Jan-47	03-Jan-73	Antwerp
	Rome Bonds Paris					01-Jan-47	03-Jan-73	Paris
	Rome Certificate					01-Jan-47	03-Jan-73	Antwerp
	Rome Loan	1862	500	3%, 1st January and July	lottery	03-Jan-62	03-Jan-73	Paris
	Pontifical Loan 1860	1860	100	5%, 1st April and October	payback at 100fr	21-Feb-68	03-Jan-73	before 1872 : Antwerp from 1872: Paris
	Pontifical Loan 1866	1866	100	5%, 1st April and October	buyback at market price	30-Apr-69	03-Jan-73	before 1872 : Antwerp from 1872: Paris

Sources : Bourse de Paris Cours Authentique seul officiel ; Bourse d'Anvers Cours Officiel ; Companies des agents de change 1880, 1881, 1882 ; Courtois 1863, 1878, 1883, Vitu 1864 and Gille 1965.

Figure 1: the four sovereign bond series



The aim is to investigate how people perceived Italy's unification and sovereign debt integration. Using an empirical analysis on the sovereign bond market permits us to capture events as well as beliefs at that time. To assess the perception of the past, this paper's methodology is based on a combination of break points in the sovereign debt yield and a Dynamic Factor Model.

The break points methodology (Bai and Perron, 1998 and 2003) supposes the data time series follows an autoregressive process. A break occurs when the intercept of the autoregressive process suddenly changes. This sudden shift in mean value represents a change in investors' perception at that time. The identification of those shifts is done in two steps. First, a succession of rolling regressions on 140-day data series windows was computed. The regression analysis is based on autoregressive process with five⁵² lags of the dependent variable.

$$Y_t = \beta_0 + \sum_{q=1}^5 \beta_q Y_{t-q} + \varepsilon_t \quad (1)$$

Where Y_t is the yield of the bond on day t is, ε_t is the white noise error and β the parameters to be estimated by the regression. The process is repeated for the entire period: 1/1/1847 – 3/1/1873. This first step permits us to highlight windows where turning points are more likely to happen.

Second, the equations were then re-estimated in these windows adding a week dummy variable in the equation.

$$Y_t = \beta_0 + \sum_{q=1}^5 \beta_q Y_{t-q} + \gamma_s D_{st} + \varepsilon_t \quad (2)$$

Where D_{st} is the dummy variable with value 1 on and after the day s and zero before. β and γ_s are the parameters estimated by the regression.

For each window, the F-statistic associated with a Wald Test on γ_s is computed and the date that maximizes the statistic provides a potential turning point. Finally, this methodology is repeated for each pre-Italian bond.

After the identification of the shifts, the Dynamic Factor Model (DFM) extracts the common component factor from the four series (Geweke, 1977; Arminger and Muthen, 1998). This has been done using a Bayesian Approach (Press, 1979 and 2003; Zellner, 1985) via the Gibbs sampling method (Gelfand and Smith, 1990). DFM represents the processes' dynamics driven by movements of latent variable, called the factor. The data series are then characterized by a latent common component that captures their co-movements and a series-specific idiosyncratic component:

$$Y_{i,t} = \lambda_i' f_t + u_{i,t} \quad (3)$$

Where $Y_{i,t}$ is the data series, f_t is the latent factor matrix, $u_{i,t}$ is the idiosyncratic component which is series-specific and λ_i' is the factor loadings. The latent factor captures the common dynamics of the dataset. As a result, the latent common component factor is Italy's unification measurement.

For f_t and $u_{i,t}$ an autoregressive (AR) process is assumed having the same characteristics as the AR process used for the break point analysis:

$$\begin{aligned} f_t &= \sum_{q=1}^5 \phi_q f_{t-q} + v_t \\ u_{i,t} &= \theta^i u_{i,t-1} + \psi_{i,t} \end{aligned} \quad (4)$$

⁵² This is based on the Akaike information criterion.

This supposes a stable form of the AR process. As a result the model restarts the dynamic factor analysis at each breakpoint found previously. In this way, the DFM provides through the factor loading a measurement of Italy's unification by extracting the common component of the four Italian data series.

Results: financial markets did not believe in Italy's Unification

The break dates found for the Two Sicilies, Piedmont-Sardinia, Lombardy-Venetia and Rome series are listed in table 3. The sign, the magnitude (in basis points) as well as the possible explanations are also provided.

The table demonstrates the impact of each independence war on the financial market. These wars affect the bonds of the entity which is more implicated. For example, the second independence war starts in the Piedmont-Sardinia Kingdom. It results in a break of large magnitude (see break points n° 8 and 10). Afterwards, it affects the Naples bonds through the Zurich Treaty as it reinforces the Piedmont-Sardinia position and weakens Naples' power (see break point n°11). Further, the table highlights the impact of the resulting annexation (see break points n° 12).

As each entity is successively added in order to create Italy, the entities' sovereign debts are individually affected by their own historical events. As a result, most pre-1863 breaks are 'individual' breaks as the bonds reacted in an idiosyncratic way. For example, when Cavour entered into two alliances, one with England and one with France, only the Piedmont Loan has a positive break point (see break point n°5 and 7). At the same time, this increase in Piedmont-Sardinia's power provoked a negative break point in the Naples bond as it was seen as a threat (see break point n°6). The alliance between France and Piedmont is sealed even further when Prince Napoleon asked to marry Victor Emmanuel's daughter. This resulted in a change of attitude between France and Austria. Here again, Naples reacted in an opposite way (see break point n°9) to the alliances.

Around the unification in 1861, yield increases are observed for all bonds. These risk premiums persist after the independence war, suggesting that they are not linked to the war but rather to the unification. An intuitive level of the new Italian yield bond based on the four series used with their pre-1861 yields and the amount they represent in the integrated debt suggests a yield of 5.35 per cent (see table 4) instead of the observed 6.9 per cent.

Table 4: intuitive yield

Bonds	Pre 1861 YTM	proportion	intuitive yield of 5.35%	End 1862 YTM	1870 YTM	Post 1871 YTM
Piedmont	5.70%	44%		6.90%	8.90%	7.50%
Lombardy	5.90%	2%		6.80%		
Two Sicilies	4.30%	25%		6.90%		
Rome	5.70%	29%		6.90%	7.80%	7.50%

Table 3: break dates

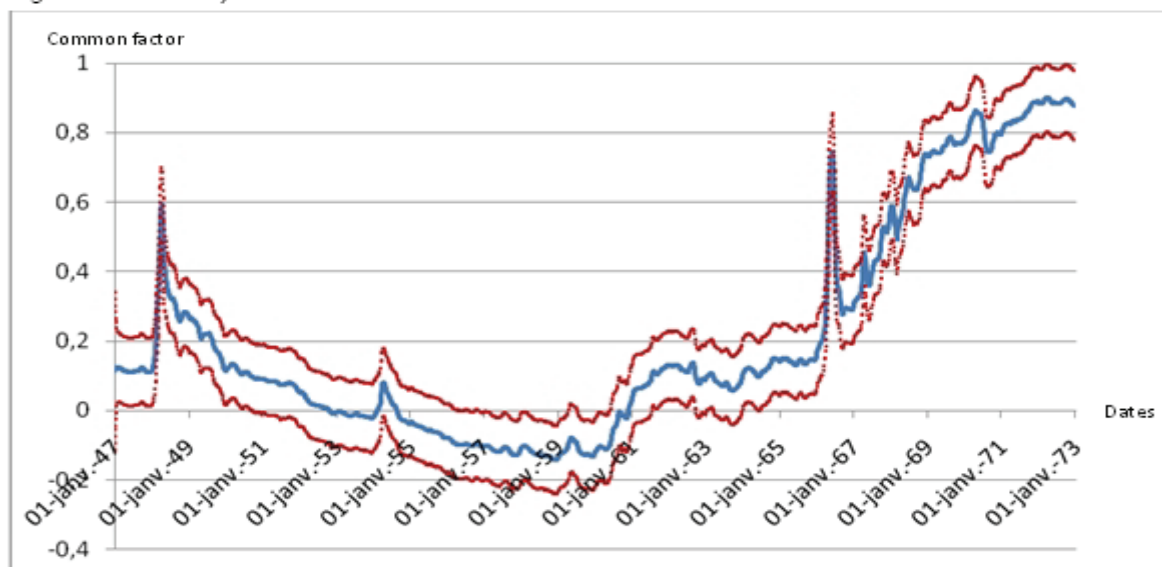
N°	Break Dates	Naples Bonds	Lombardy Bonds	Piedmont Loan	Rome Bonds	Potential Explanation
1	8/6/1849	- 4			+	19 French seized Rome and Garibaldi had to flee with his troops.
2	3/8/1849	- 7				Venetia capitulation. This marks the end of the first independence war.
3	14/11/1851				-	8 Unknown
4	23/7/1852			+	1	Cavour became prime minister.
5	26/1/1855			+	2	End of the Crimean war where Cavour played an important role. Piedmont-Sardinia entered the alliance between English and French--> Strengthening of Piedmont-Sardinia position. It has new powerful allies.
6	21/9/1855	- 9		+	4	
7	11/7/1856			-	58	The predicament of Piedmont against Austria
8	14/11/1856					
9	23/9/1858	- 3				On the 23rd of September 1858, the Prince Napoleon asked to marry Victor Emmanuel's daughter. The alliance between France and Piedmont is sealed.
10	22/7/1859			+	125	In July 1859, the Emperor Napoleon offered peace to the Emperor François Joseph, Austrian Emperor from 1848 until 1916, which was signed in Zurich.
11	25/11/1859	+	126			Zurich Treaty marks the end of the second independence war. This treaty stipulates the transfer of Lombardy to Napoleon III and then to Victor Emmanuel II. Austria is weakened.
12	16/12/1859		+	0.3		After the Zurich Treaty, strengthening position of Piedmont-Sardinia. Lombardy is attached to it.
13	24/2/1860	+	7		+	8 François II represses an insurrection in Sicily. Moreover, annexation of the region of Nice and Savoy to France.
14	14/6/1861 - 12/7/1861		- 1		-	64 Cavour death. His successor, Ricasoli, established a centralized administration dominated by the Piedmontese which didn't please other regions.
15	18/10/1861	- 168				
16	8/11/1861	- 189				
17	1/8/1862	- 12	- 1.6	- 1.4		
18	9/7/1864				-	8 Victor Emmanuel II refused the conquest of Rome by the Thousands
19	19/10/1866				+	17 Unknown
20	21/8/1868	- 7	- 7	- 7		
21	8/1/1869	- 12	- 12	- 12		
22	19/2/1869	+	+	+		
23	15/4/1870				-	127 Unknown Rome is attached to Italy.
24	10/3/1871	+	+	+		
25	28/7/1871	+	+	+	+	91 The Kingdom of Italy is proclaimed. Rome became the capital of the Kingdom of Italy.

The sign refers to effect on bond prices while the amplitude measures the shift in basis point. For example, a negative break is found in April 1870 and represents an yield increase of 127 bp

The reactions of financial markets to a possible unification provoked the largest breaks in the series. When a region votes for its annexation to the Kingdom of Italy, its sovereign debts are impacted and it results in a large lasting break (see break points n° 15, 16 and 23). Naples, which was the lowest yield bond, is affected the most by the possible sovereign debt integration. At that time, Naples' bonds had better ratings than the other sovereign debts given the city's importance.⁵³ Once the annexation occurred, a major break followed. This break results from a risk increase which can directly be linked to sovereign debt integration. On the other hand, Lombard bonds were less affected as their yield was higher.

The Dynamic Factor model provides the common 'Italy' factor of the series. Figure 2 gives the result of the DFM analysis with the error bounds. Unsurprisingly, during the 1848 financial crisis and the independence wars strong co-movement in the series resulted in a sudden increase of the common factor. The striking result is that the financial markets did not believe in Italy's unification until late in the 1860s. The rivalry between the different nations made the common factor decline after 1848. The proclamation of Italy in 1861 created a shift in the Italy common factor. However, it only returns to the 1847 level. The Italy common component crosses the 0.8 when Rome is attached. The highest common factor corresponds to Rome becoming Italy's capital. The results suggest that investors did not believe in the Italy case until Venetia and Rome were added to the unification.

Figure 2: the Italy Common Factor



The analysis identifies reaction phases on the financial markets using break point analysis and a Dynamic Factor Model. In a first phase, prior to the 1862 unification, the seven nations' bond prices reacted in an idiosyncratic way. Around the sovereign debt integration, large risk increases for low yields bonds are highlighted in the bond prices. Consequently, in this second phase, it appears that individual sovereign debts were impacted by the unification and reacted according to their date of unification. Finally, this paper proves that only from the late 1860s, in a third phase, did the financial market start to consider Italy as unified.

⁵³ Indeed, at that time, Naples was economically more important than any other city in Italy, even compared to Rome.

To conclude, this paper investigated the impact of Italy's unification on bonds. Based on an original database made of pre-Italian Bonds, the unification of sovereign debt gave rise to turning points at annexation dates. Italy's unification was a long-lasting process as, according to the Dynamic Factor Model, investors only start to believe in the unification when Venetia and Rome joined.

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Economic growth and living standards in the early modern Low Countries: The city of 's-Hertogenbosch, 1500-1650

Jord Hanus, Antwerp University
(jord.hanus@ua.ac.be)
Supervisor: Dr Bruno Blondé

In the traditional interpretation economic growth in late medieval and early modern Europe was generally unsustainable and checked by technological constraints, counterproductive population behaviour and diminishing returns on all sides. In recent years a more optimistic reading of Europe's pre-industrial economic history has hatched. It is now thought that Europe (and the world) experienced a series of growth spurts or *efflorescences* that broke the Malthusian shackles and lifted per capita incomes.⁵⁴ Thus a pan-European round of growth during the high middle ages (900-1300) was followed by golden ages in Castilian Spain, the Dutch Republic, Qing China, and so forth.⁵⁵ The major difference with modern economic growth rests in the unsustainable character of these pre-industrial/pre-modern growth spurts. The interplay of a plethora of (Smithian and Schumpeterian) factors raised total output and incomes temporarily, but in the longer run the efflorescent gains petered out. This has led scholars to discredit claims of the Dutch Republic being the *first modern economy*, since after its golden age real wages and population again progressed inversely.⁵⁶ On the other hand, independent GDP per capita estimates hint at a different chronology in which the income gains of the Dutch golden age were sustained in the following centuries.⁵⁷ To further complicate matters, at the same time a marked increase in income inequality was recorded in the Republic and more generally in most if not all regions experiencing (capitalist) accelerations in pre-industrial Europe.⁵⁸

It might be useful to expand the perspective habitually used to assess early or pre-modern growth experiences. Welfare and development economics have argued that the goal of development should not be growth in the narrow sense, but augmenting welfare and well-being in general.⁵⁹ This perspective is implicitly present in historical accounts of growth and development. Consider the confusion arising from the finding that in early modern Europe GDP per capita and real wages diverged between and within regions.⁶⁰ Or study industrializing England and its famed standard of living debate, where the most recent figures suggest a marked parting of ways of average and labour incomes during *Engels' pause*.⁶¹ Thus, although few would dispute the occurrence of important phases of efflorescence before the onset of modern economic growth, the social consequences (on living standards and income inequality) of these spells of pre-industrial growth are more difficult to interpret. Indeed, a number of Marxist scholars have argued for rising social and economic inequality and increasing levels of proletarianization and polarization between the late middle ages and the early nineteenth century. In this view, throughout Europe but especially in the large-scale commercial hubs such as Antwerp or Amsterdam, unfolding commercial, then industrial capitalism proceeded hand in glove with rising poverty levels and declining living standards for the masses.⁶²

⁵⁴ Jones 1994, Goldstone 2002.

⁵⁵ Van Zanden 2009a.

⁵⁶ The positive interpretation in De Vries and Van der Woude 1997; criticism in Lis and Soly 1997, Goldstone 2002, Van Zanden 2002.

⁵⁷ Most recently in Van Zanden 2009a.

⁵⁸ Lis and Soly 1979, Van Zanden 1995.

⁵⁹ Van den Bergh 2009.

⁶⁰ Angeles 2008.

⁶¹ Allen 2009b.

⁶² Lis and Soly 1979, Van Bavel 2010.

This paper explicitly seeks to take the measure of one such efflorescence: the sixteenth-century golden age of Brabant (Southern Netherlands). Building on a crucial legacy of medieval structural transformations in its urban economies, the cities of sixteenth-century Brabant were characterized by highly diversified economies supported by expansive export industries, important transit functions and often-underrated market and central functions.⁶³ The social consequences of this expansion are the subject of debate. For some the region was archetypical for the pessimist Marxist account, others couched a more optimist reading in what now would be called endogenous growth theory, stressing thriving artisanal middling groups whose specialization, differentiation and human capital accumulation allowed more than agreeable living standards.⁶⁴

In order to assess the region's growth achievement and the associated social consequences, I contrast estimates of real wages, population dynamics, and average and disaggregated real incomes for the city of 's-Hertogenbosch. This Brabantine city was in many ways typical for the urban economies of the Southern Netherlands, and fortuitously combines a series of exceptionally rich sources.⁶⁵

Interestingly, a superficial reading of the available evidence supports the pessimist case. Consider how during the opening decades of the sixteenth century the urban population expanded from 15,000 to more than 20,000 from the 1530s onwards. Stagnation ensued until the late 1570s when political, religious and military turmoil associated with the Dutch Revolt sent thousands of citizens scurrying for cover in the Northern Netherlands. Later on, after the recession of the last quarter of the century had faded, population recovered to some 16,000 inhabitants. Estimated average incomes confirm this chronology.⁶⁶ In short, per capita income expressed in PPP corrected Brabantine guilders of 1502 evolved from some 28 guilders in the opening decades of the sixteenth century (compared to 24 guilders established for Holland in 1510)⁶⁷ to 32 guilders by the middle of the century. In the closing quarter of the sixteenth century this figure contracted to 23.5 guilders, before returning to 28 guilders in the 1630s and 1650s.⁶⁸ Figure 1 expresses the same average incomes *per household* in *welfare ratios* (dotted black line). All in all the opening half of the sixteenth century coupled a 20 per cent population growth to a total rise in average income of some 15 per cent or a compounded growth rate of 0.2-0.3 per cent per year. Over the full period under study, population and average incomes remained fairly constant as is predicted by (neo)Malthusian learning.

At the same time, the real wage (the solid black line in figure 1) contracted quite dramatically. In 1502 a master mason labouring 250 days⁶⁹ earned more than 60 guilders, amounting to a welfare ratio of 2.4, or 2.4 times what was necessary to respectably feed a family of four.⁷⁰ In 1550 this number had dropped to 1.8 welfare ratios; in 1580 at the century's rock bottom a full year of schooled labour earned (respectable) subsistence minimum at a welfare ratio of 1.0. In the following decades nominal wages were adapted

⁶³ A general overview in Van der Wee 1975, 1988.

⁶⁴ Lis and Soly 1979, Van der Wee 1988.

⁶⁵ This paper cannot provide a detailed examination of its foundations, i.e. the series of income and house rent taxes levied in the sixteenth and seventeenth century (see references). Aside from the results presented in this paper, the combination of detailed house rent and income levies allowed estimating the income elasticity of housing (house rent) at 0.6-0.7. I leave to more knowledgeable readers to judge whether or not this figure approaches unity (as economic theory predicts) sufficiently for the habitual purposes. See for details in last instance Hanus 2010, Appendix.

⁶⁶ This paper is not the place to discuss the empirical and methodological foundations of these estimates of the 'Gross Urban Income' of 's-Hertogenbosch in detail. See Blondé and Hanus 2010, and especially Hanus 2010, Chapter 3.

⁶⁷ Van Zanden 2002.

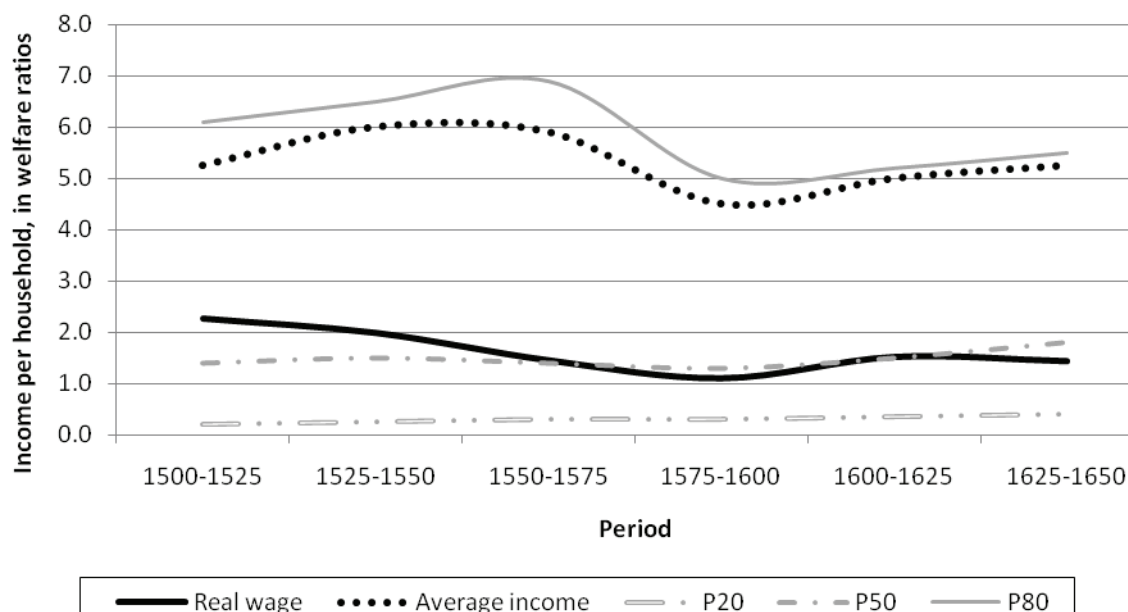
⁶⁸ Expressed in the usual currency of historical GDP estimates, the 1990 international dollar, these figures amount to 1,300\$ (28 guilders) and almost 1,500\$ (32 guilders).

⁶⁹ Which is a realistic assumption, see Blondé and Hanus 2010.

⁷⁰ Calculation based on Bob Allen's *welfare ratios*, see Allen 2001, 2009a.

more frequently to the soaring price revolution, resulting in a recovery of the real wage to 1.5-1.6 welfare ratios. The economic expansion of the sixteenth century was thus entirely extensive since population growth and shrinking real wages went hand in hand.

Figure 1. Trends of Real Incomes in 's-Hertogenbosch, 1500-1650



Between 1500 and 1650, in summary, average incomes and real wages tracked opposite trajectories. In the first half of the sixteenth century per capita incomes rose by some 15 per cent while real wages fell by 25 per cent. In the long run average incomes remained constant while real wages were reduced by roughly one-third. In addition to this grim tale for the 'labouring masses', income inequality was very high with a Gini coefficient amounting to 0.75 in the early and 0.76 in the middle of the sixteenth century. Alternatively, inequality in house rents contracted from 0.56 (1506) via 0.52 (1547) to 0.48 (1636) and 0.46 (1656).⁷¹ Even so, what is there to doubt that the long sixteenth century brought the majority of the urban population little joy, even though some (unsustained) economic growth was recorded in the first half of this period?⁷²

However, additional estimates of three income brackets suggest a different chronology. In particular, a focus on the median household (percentile 50) and the lower reaches at percentile 20 is illuminating. Figure 1 reveals that in spite of falling real wages during the first half of the sixteenth century, both brackets experienced modest (real) income growth. Whereas a fully employed master mason earned more than the middle household in 1500, the opposite was true by 1575. Over the long run, I conjecture a prolonged income rise for these lower reaches largely independent of the vagaries of real wage or average income. In the middle term (1500-70) budding profit incomes pushed up high-end and commercially made incomes while at the same time labour earnings depreciated markedly.⁷³

The income levels are perhaps of greater interest to counter the traditional trope of poverty and polarization than the long-term trends. Figure 1 demonstrates that throughout the long sixteenth century the median household of 's-Hertogenbosch continuously earned more than the respectable subsistence minimum. In other words, especially if we take into consideration that the lower on the income distribution the smaller the household size tended

⁷¹ Other inequality indices reveal a similar story, see Hanus 2010, Chapter 4. Compare similar figures reported for a range of European cities in Van Zanden 1995.

⁷² A similar pessimist account is defended in Van Bavel 2010.

⁷³ More details in Hanus 2010, Chapter 5.

to become (in the aggregate),⁷⁴ at all times less than 40 per cent of the population of 's-Hertogenbosch fell below the respectable welfare ratios depicted here. Additionally and in line with qualitative studies of poor relief, my calculations suggest that at most 15 per cent of the population was at risk of bare-bones subsistence. Without denying the societally problematic nature of this finding, it is worthwhile to consider the flip side of this coin. The same estimates reveal that the number of households making an income in excess of two respectable welfare ratios (thus able to properly feed and shelter a family of eight) amounted to 40 per cent in 1500, running up to 45 per cent in the seventeenth century.

The long sixteenth century, or at least the period 1500-1650, thus did not fundamentally alter economic reality for the inhabitants of 's-Hertogenbosch. Cautious capitalist development⁷⁵ did not lead to polarization in living standards, while in the long run economic growth and welfare gains petered out. At the same time the levels of welfare achieved in the Low Countries (at least in 's-Hertogenbosch) were relatively impressive. Large segments of the urban population were comparatively affluent – by and large the substantial income inequality characterizing the urban economies of this day was good news rather than bad for it implied that income rapidly expanded as one mounted the income distribution. Economic development in the medieval Low Countries had lifted average and disaggregated incomes to a markedly high level.⁷⁶ Interestingly, this finding erodes one of the basic assumptions underpinning the 'industrious revolution' hypothesis of Jan de Vries.⁷⁷ Without delving into the details of the argument and despite de Vries' otherwise excellent critique of the use and value of the real wage, in his idea households had to increase their (money) income by revising their production and utility maximizing strategies before this new and increasingly richly adorned material culture could root. The people of early modern 's-Hertogenbosch would surely beg to differ: either in 1500, 1550 or 1630, every time we find about half of all urban households more than capable of consuming lavishly if they had wanted to (one more than the other, of course).⁷⁸

Household incomes consisted of more than simple labour earnings: people from all income brackets enjoyed annuity-based income,⁷⁹ the sizeable group of self-employed artisans (amounting up to more than 50 per cent of the urban populace) combined labour, capital and profit incomes. Herman Van der Wee, who already in the 1960s emphasized human capital accumulation, was therefore spot on: in the very long run development of human capital through formal education in primary schools and learning-by-doing in craft guilds led to comparably high living standards for the majority of the population. Barring further corroboratory research, the combination of high living standards, substantial human capital formation and the possible early existence of the *European marriage pattern* consisting of a late marriage age, a small number of children and a high level of children's education add up to a strong case in favour of endogenous and unified growth theory.⁸⁰

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⁷⁴ See Hanus 2010, Chapter 4 for an in-depth discussion.

⁷⁵ Also see Blondé 1987, Van der Wee 1988.

⁷⁶ Van Zanden 2009, an opposing view in Van Bavel 2010.

⁷⁷ De Vries 2008.

⁷⁸ Whether these urban households actually did increase their consumption is the subject of ongoing research into the 'Material Renaissance' in the fifteenth- and sixteenth-century Low Countries (conducted at Antwerp University).

⁷⁹ Hanus 2007; Blondé and Hanus 2010.

⁸⁰ Van der Wee 1988, Van Zanden 2009; for unified growth theory see Galor 2005.

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The emergence of agrarian capitalism in early modern England: a reconsideration of farm sizes

Joseph Barker, University of Cambridge
(jdb44@cam.ac.uk)
Supervisor: Dr Leigh Shaw-Taylor

*Anything which distinguished England from other parts of Europe during the century preceding the industrial revolution is necessarily a subject of particular interest since it may throw light on the origins of that extraordinary and momentous period of rapid change which has transformed country after country across the face of the globe.*⁸¹

One of the things which distinguished England from much of the rest of Europe in the century before the industrial revolution was the precocious level of its agricultural development and the structures of its agrarian society. Not only had the total productivity of agriculture increased substantially in order to feed a population that grew sevenfold between 1520 and 1851, but it had done so whilst decreasing the proportion of the population employed in agriculture. Wrigley has estimated that the proportion of the population employed in agriculture fell from 76 per cent in 1520 to 36 per cent in 1800.⁸²

These changes in rural England involved two distinctive but entwined processes, known to historians as the agricultural revolution and the agrarian revolution. The agricultural revolution refers to the advances in productivity, especially yields, which enabled England to break the Malthusian trap; importantly these yield increases were achieved alongside an increase in labour productivity. The agrarian revolution refers to the changes in the structures of rural society which involved the breakdown of the manorial agricultural system of medieval England and the emergence of the highly developed agrarian capitalism of nineteenth-century England. Agrarian capitalism does not simply mean a market oriented agriculture, since in medieval England much production was for the market, but rather it refers to the way agriculture and rural society was organized, with land increasingly concentrated in a few hands, and a growing proportion of the population having little or no access to land and being dependent upon wage labour. In short it saw the creation of an increasingly polarized rural society, with increasingly wealthy farmers and a new rural proletariat. These developments did not only happen in England, but the scale and degree to which these changes occurred was unique to England.⁸³

The focus of this paper is on the agrarian revolution, and in particular on the emergence of agrarian capitalism. Since Tawney first wrote about the agrarian crisis of the sixteenth century in 1912 many historians have written about the agrarian revolution and agrarian capitalism.⁸⁴ The most important work of the last 20 years is by Allen who in a wide-ranging book argued that the revolution in yields had occurred by 1700 on small farms, whilst agrarian capitalism only emerged during a separate landlords' revolution of the eighteenth

⁸¹ E.A. Wrigley, 'A simple model of London's importance in changing English society and economy 1650-1750', pp. 133-56 in E.A. Wrigley, *People, cities and wealth*, (Oxford, 1987), p.134.

⁸² E.A. Wrigley, 'Urban growth and agricultural change: England and the continent in the early modern period', *Journal of interdisciplinary history*, 15, 1985, pp. 683-728.

⁸³ For a discussion of European agricultural development see: B.J.P. van Bavel and P. Hoppenbrouwers (eds), *Landholding and land transfer in the North Sea area (late middle ages-19th century)*, CORN publication series 5 (Brepols, 2004).

⁸⁴ R.H. Tawney, *The agrarian problem in the sixteenth century*, (London, 1912). Other key works include: E. Kerridge, *Agrarian problems in the 16th century and after*, (London, 1969). J. Whittle, *The development of agrarian capitalism: land and labour in Norfolk 1440-1580*, (Oxford, 2000).

century.⁸⁵ Allen's dating of the emergence of agrarian capitalism has been heavily criticized by Shaw-Taylor who argues that Allen's own data do not support his conclusions.⁸⁶

The size of farms is a useful indicator of the level of agrarian capitalism, since it is on larger farms that more waged labour is required, and the employment of wage labour is the key feature of agrarian capitalism. This is one of the great strengths of Allen's work, as rather than refer to large and small farms he refers to capitalist and family farms, that is farms that were worked primarily by waged labour and farms that were worked with virtually no waged labour. In this study I define capitalist farms as those of over 100 acres and family farms as those of less than 30 acres, farms of 30-60 acres should be considered as small-transitional farms, and those of 60-100 acres as large-transitional farms. These boundaries have been set based upon Allen's work, Shaw-Taylor's critique of Allen's work, and the 1851 census data on the labour requirements of different size farms in each of my case study settlements.⁸⁷ For the largely arable south Midlands and East Anglia this is a conservative definition of capitalist farms, which may well understate the significance of agrarian capitalism; whereas for the largely pastoral north-west this may be too low a figure for the capitalist farm threshold and so over-estimate the importance of capitalist farms. Any error as a result of this conservative figure is likely to be fairly small, and should go against the direction of my argument, so this possibility does not weaken my conclusions.⁸⁸

Given the importance of farm sizes to the debate over agrarian capitalism it is not surprising to find that many people have written about farm sizes. However, virtually all previous works on farm sizes, including Allen's, have used manorial surveys which are a problematic source for looking at farm sizes, since they recorded the manorial tenants who may not have actually farmed the land.⁸⁹ For this paper I have used two types of sources both of which should have recorded the actual occupiers of the land, namely parish rates and tithe accounts.⁹⁰ Sources that are suitable for calculating farm sizes are few and far between, but a laborious search of 18 archives has allowed me to assemble a dataset for 40 settlements.

The seriousness of the problem with manorial surveys is highlighted by table 1, which compares the size of farms in the village of Orwell from a 1677 poor rate, with the size of farms estimated by Spufford using a manorial quit-rent list for c.1675-82. Spufford acknowledged that there were problems with her estimates because of the nature of her sources, but this table shows just how serious those problems were, and emphasizes the need for new estimates of farm sizes based upon new sources.⁹¹

⁸⁵ R.C. Allen, *Enclosure and the yeoman: the agricultural development of the south Midlands 1450-1850*, (Oxford, 1992).

⁸⁶ L. Shaw-Taylor, 'Family farms and capitalist farms in mid-nineteenth-century England', *Agricultural History Review*, 53, 2005, pp.158-191; and L. Shaw-Taylor, 'The development of agrarian capitalism and the decline of family farming in England 1600-1851', forthcoming in the *Economic History Review*, although an earlier version is available at: <http://www.geog.cam.ac.uk/research/projects/occupations/abstracts/>

⁸⁷ Allen, *Enclosure*, p.57. Shaw-Taylor, 'Development' Shaw-Taylor, 'Family farms'.

⁸⁸ Limits of space prevent a longer discussion of this important point.

⁸⁹ These works include: M. Spufford, *Contrasting communities: English villages in the sixteenth and seventeenth centuries*, (Cambridge, 1974); W.G. Hoskins, *The Midland peasant: the economic and social history of a Leicestershire village*, (London, 1957); Allen, *Enclosure*. For an example of the problem with manorial surveys see, C.J. Harrison, 'Elizabethan village surveys: a comment', in *Agricultural History Review*, 27, 1979, pp.82-9.

⁹⁰ For a discussion of parish rates see: R. Burns, *Justice of the peace and parish officer*, 6 volumes, T. Chitty (ed.), (London, 1831), Vol.4. For a discussion of the tithe see E. Evans, *The contentious tithe: the tithe problem and English agriculture 1750-1850*, (London, 1976).

⁹¹ Spufford, *Contrasting*, p.100, and Cambridge Record Office Orwell poor rate, L.63.55.1.

Table 1: *A comparison of farm sizes in Orwell, from a manorial survey and a poor rate*

	Spufford c.1675-81 quit-rents	1677 poor rate
90 acres and over	4	7
Over 3 half-yardlands		2
3 half-yardlands (44-51 acres)		2
1 yardland (25-37 acres)	3	6
I half-yardland (13-22 acres)	5	5
Under a half-yardland (<13 acres)	21	8
Under 2 acres		3
Total number of farms	33	33

I have focused on three regions in my work: East Anglia, including the county of Norfolk which has long been recognized as the leading agricultural county in early modern England; the south Midlands, which was the focus of Allen's investigation of early modern English farming; and the north-west, which had a very different system of farming to East Anglia and the south Midlands – a fact which is clearly reflected in its farm sizes. Table 2 shows the percentage of land in each farm size category for each of my case studies.

Table 2: *The percentage of land in each farm size category in each settlement, by region*⁹²

Place	County	Year	Percentage of land in capitalist farms (100+ acres)	Percentage of land in large-transitional farms (60-100 acres)	Percentage of land in small-transitional farms (30-60 acres)	Percentage of land in family farms (<30 acres)
East Anglia						
Great Paxton	Huntingdon	1588	51.6	27.3	5	16.1
Bunwell	Norfolk	1598	14.5	18.4	28.2	38.8
Barnardiston	Suffolk	c:1600	13.9	36.6	35.1	14.4
Gamlingay	Cambridge	1613	63.6	15.6	11	9.9
Great Cressingham	Norfolk	1622	49.6	29.7	11.6	9.1
Great Staughton	Huntingdon	1648	45.9	16.8	20.8	16.3
Terrington	Norfolk	1656	54.4	20.9	7.8	16.9
Fletton	Huntingdon	1660	19.6	30	25.5	24.9
Orwell	Cambridge	1677	63.9	12.3	6.9	17
Alwalton	Huntingdon	1680	34.2	50	6	10.2
Bassingbourne	Cambridge	1691	65.6	14.5	10.3	9.6
Cottenham	Cambridge	1694	0	10.2	25.6	64.1
Hempstead near Stalham	Norfolk	1704	18.7	29.8	31.9	19.6
Ridlington	Norfolk	1724	0	20.5	53.5	26
Hempstead by Holt	Norfolk	1732	0	68.3	6.7	25
Langham	Norfolk	1759-61	91.3	0	4.2	4.5
Average of percentages			36.7	25.1	18.1	20.2
Average of total acreages			47.0	19.7	15.2	18.5

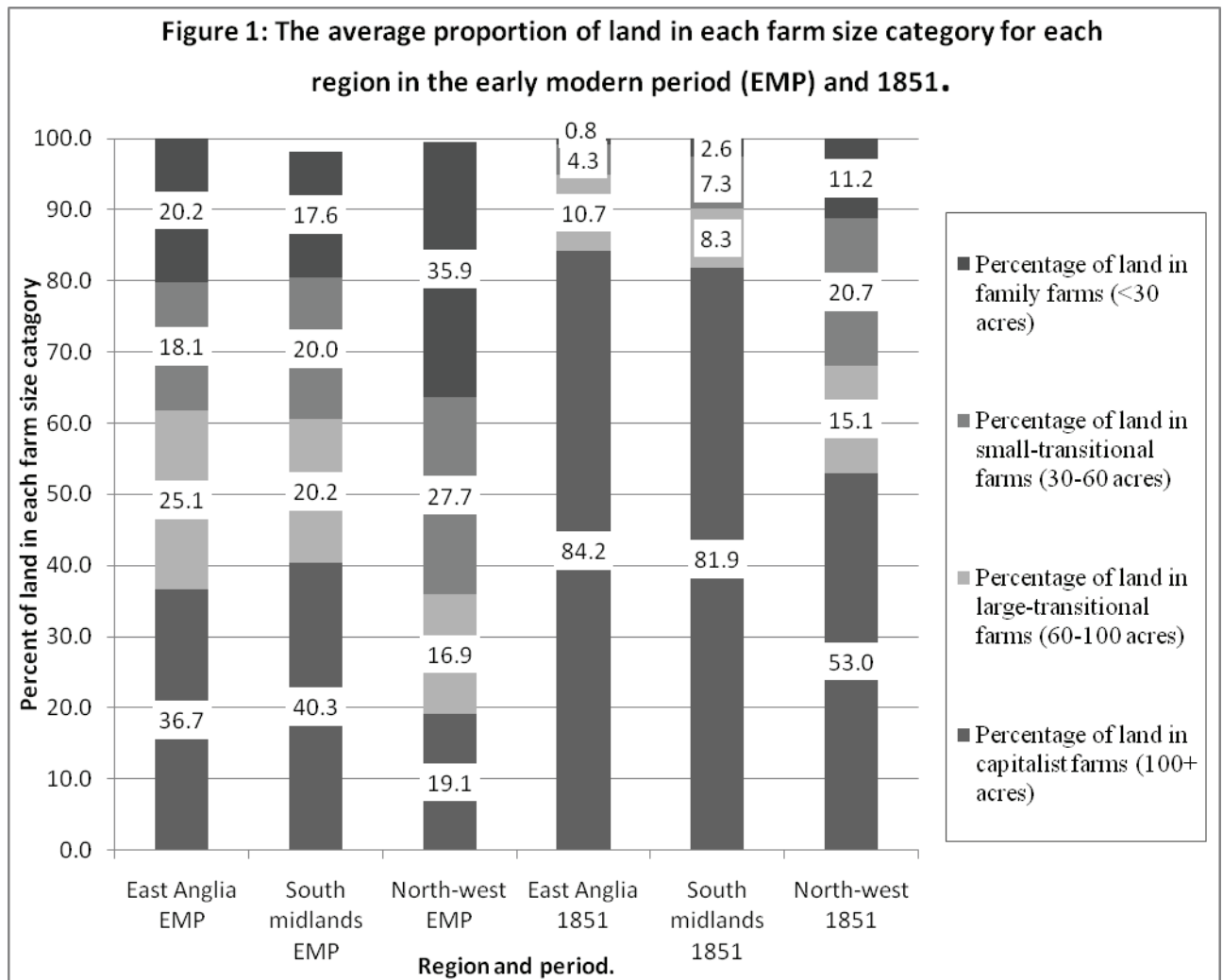
⁹² Various parish records from Cambridge, Bedford, Huntingdon, Norwich, Bury St Edmunds, Northampton, Oxford, Preston, Sheffield, Doncaster and Wakefield Record Offices. The exact references are available from the author. For several case studies the acreage has had to be calculated based upon an estimation of yard land sizes.

South Midlands						
Langford	Oxfordshire	1627	25.6	31.5	20.8	20
Pulloxhill	Bedfordshire	1636	52	6.4	15	26.6
Northil	Bedfordshire	1637	40.9	32.9	8.1	10.5
Marsh Baldin	Oxfordshire	1659	46.8	17.7	17.7	17.9
Stoke Newington	Oxfordshire	1659	0	38.5	44.4	17.1
Garsington	Oxfordshire	1680	63.4	13.3	7.1	16.2
Mapledurham	Oxfordshire	1695	41.1	21.5	20.4	17
Islip	Oxfordshire	1701	27.5	0	24.4	48.1
Bloxham	Oxfordshire	1711	20	15.2	23.2	24.2
Daventry	Northamptonshire	1720	72.2	23.5	4.4	0
Culham	Oxfordshire	1726	59.1	18.2	16	6.8
Iffley	Oxfordshire	1728	27	13.4	40.4	19.3
Cuddesden	Oxfordshire	1736	65.9	24.5	3.2	6.4
Hook Norton	Oxfordshire	1739	22.7	26.4	34.5	16.4
Average of percentages			40.3	20.2	20.0	17.6
Average of total acreages			40.6	21.8	18.7	15.6
North-west						
Brimington	YWR	1700	30.1	25.1	28.6	16.1
Barnburgh	YWR	1701	32	25	31.1	11.9
Fenwick	YWR	1712	39.6	21.3	23.4	15.7
Swinton	YWR	1718	0	42	43.4	14.5
Horbury and Thorn and Snapethorpe	YWR	1753	0	0	36.8	63.2
Bispham with Norbreck	Lancashire	1766	0	18.9	26.7	51.4
Layton with Warbeck	Lancashire	1766	28.5	16.3	17.6	36.3
Eckington and Killamarsh	Derbyshire	1784	0	4.2	26.8	68.9
Ecclesfield	YWR	1786	0	0	27.6	72.4
Badsworth	YWR	1791	60.8	16.2	14.9	8.1
Average of percentages			19.1	16.9	27.69	35.85
Average of total acreages			22.7	14.2	25.7	35.7

Table 2 shows that East Anglia and the south Midlands were quite similar regions, where many settlements had a substantial proportion of their land in large capitalist farms, and small family farms were generally of little importance. It is also clear that in some parishes agrarian capitalism was firmly established at a very early date, with capitalist farms already dominating land use in Gamlingay, Great Paxton and Great Cressingham by the early seventeenth century. By contrast in a broadly defined north-west region large capitalist farms were much less significant, and a substantial proportion of the land was in small family farms. However, there were exceptions to this broader pattern, in East Anglia and the south Midlands there were some parishes where small family farms dominated, for example Cottenham, and in the north-west there were settlements where large capitalist farms were established, such as Barnburgh.

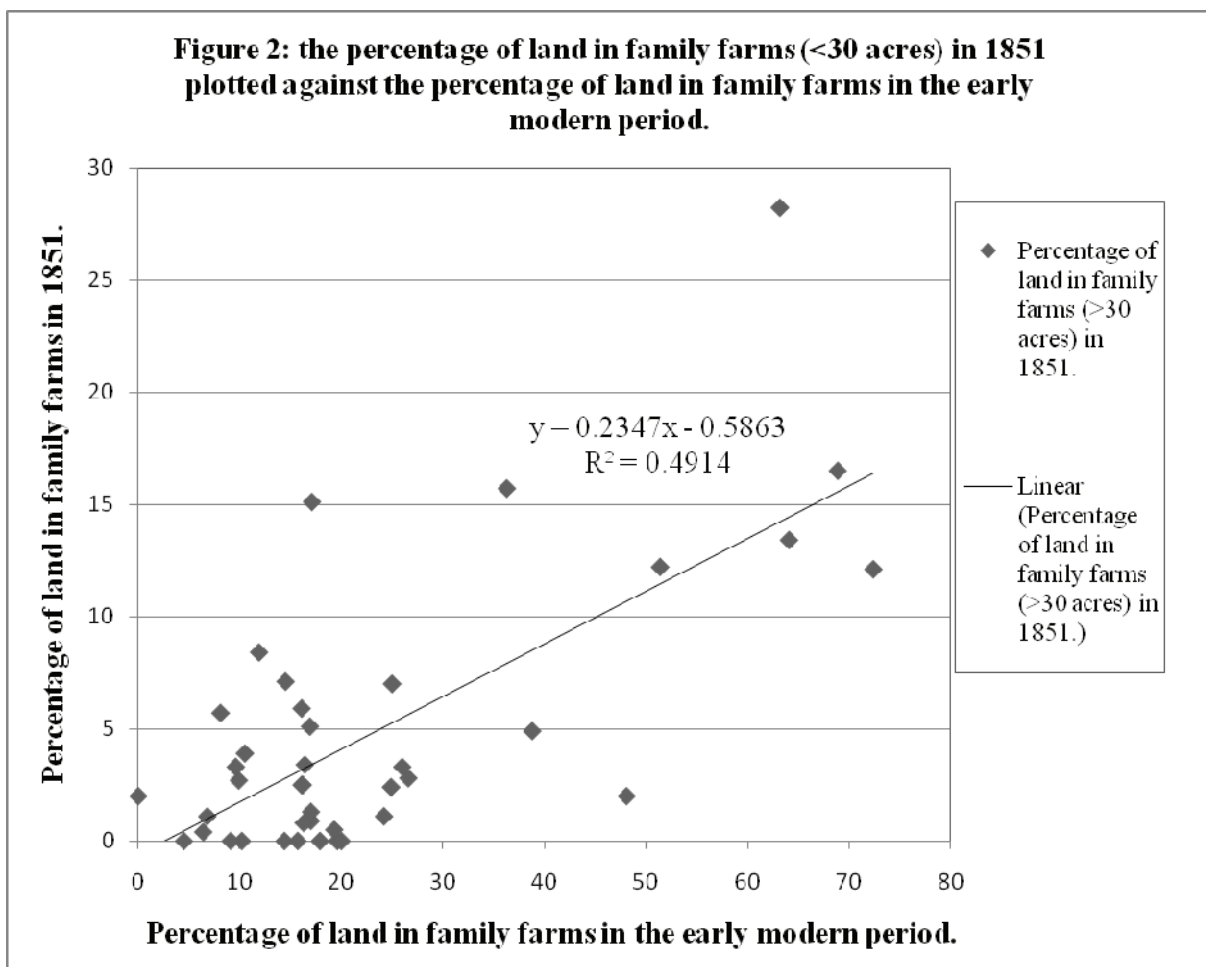
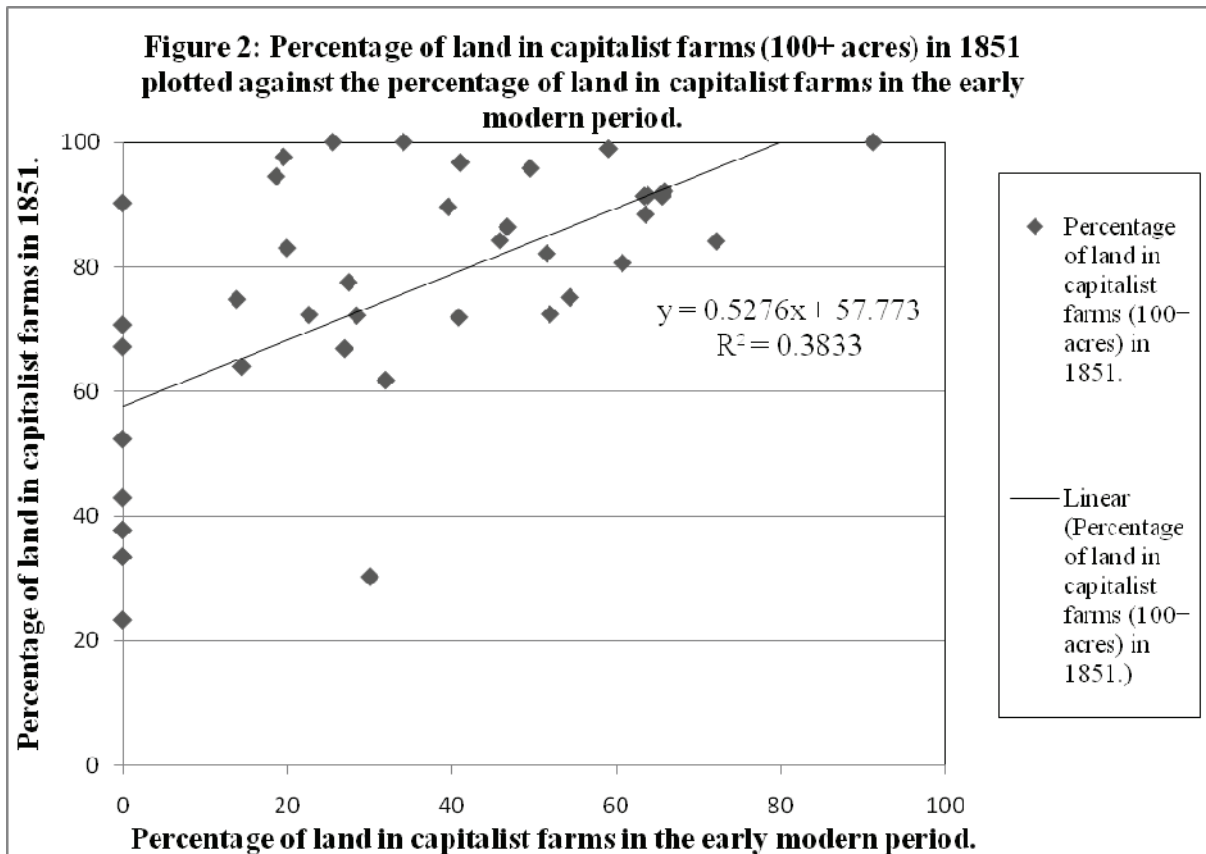
Figure 1 compares the importance of each farm size category in each region across the early modern period and in 1851. This shows that across all regions large capitalist farms

were much more important by 1851, but the regional divide from the early modern period remained, with family farms far more important in the north-west than in the other regions.⁹³

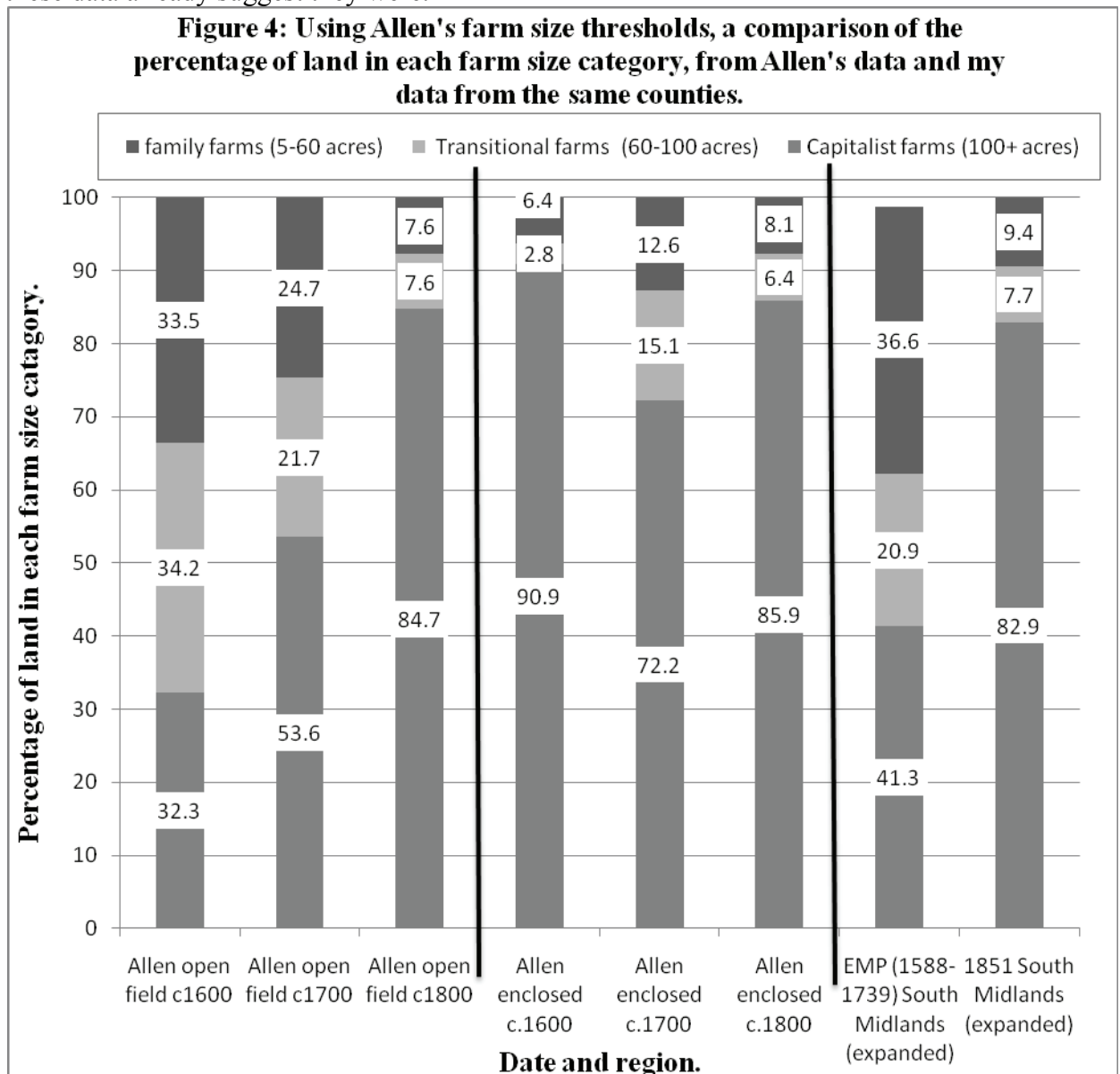


There was clearly some link between the geographic distribution of farm sizes in the early modern period and in 1851. Figure 2 plots the percentage of land in capitalist farms in the early modern period and 1851, and there is clearly a relationship between these two variables, albeit with an R squared value of only 0.3833, with settlements with more capitalist farms in the early modern period likely to have more capitalist farms in 1851; although there were also settlements which had few capitalist farms in the early modern period but a lot in 1851. Figure 2 plots the percentage of land in family farms in the two periods, there is a clear correlation, with an R squared value of 0.4914, as only settlements with a strong family farm sector in the early modern period also had many family farms in 1851; although not all settlements with a lot of family farms in the early modern period still had a large family farming sector in 1851.

⁹³ The 1851 census data is available on-line from ancestry.com at <http://www.ancestry.com/>



Allen's major work on agrarian capitalism was based upon data from the south Midlands region, which he used to argue that family farms were dominant until 1700, and that capitalist farms and agrarian capitalism only displaced family farms after 1700. Figure 4 presents Allen's own data and my data from the counties in Allen's south Midland region, using Allen's thresholds for farm sizes. Even using Allen's definitions of farm sizes it is clear that Allen's data do not support his conclusions, as capitalist farms already occupied one-third of the area in 1600, and over half the area by 1700, although he is right to say that there was then substantial growth by 1800. My south Midlands data show a similar pattern to Allen's data, with capitalist farms already occupying a significant proportion of the land by the end of the early modern period, and becoming even more important by 1851.⁹⁴ If Allen's thresholds of farm sizes were adjusted, then family farms would have been even less significant than these data already suggest they were.



This paper has presented new data on the size of farms in early modern England, and has argued, based upon farm sizes, that agrarian capitalism was well established in many parts of England by 1700, and in some areas far earlier than that: this is significantly earlier than much of the current historiography would suggest. There was a clear regional pattern to farm sizes, and thus to the spread of agrarian capitalism, with farms generally much larger in the south

⁹⁴ Allen, *Enclosure*, p.73.

Midlands and East Anglia than in the north-west, where small family farms remained significant throughout the early modern period and even up to 1851. There were strong intra-regional variations, with family farms important in some southern parishes, and large capitalist farms firmly established in some northern townships: this was not a simple north-south divide since local characteristics could over-ride the broad geographic pattern. There was also a clear link between the size of farms in the early modern period and the size of farms in 1851, in particular only, but not all, settlements where family farms were significant in the early modern period had a significant family farm sector in 1851. This paper has cast further doubt upon Allen's chronology of changing farm sizes, and has added further evidence to the case for an earlier dating of the emergence of agrarian capitalism in early modern England.

Ecology, trade and states in pre-colonial Africa

James Fenske, University of Oxford

(james.fenske@economics.ox.ac.uk)

Supervisor: Professor Timothy W Guinnane

The states that existed in Africa before colonial rule continue to shape its modern development. Pre-colonial state centralization is positively correlated with modern cross-country differences in school attainment, literacy, paved roads and immunizations (Gennaioli and Rainer, 2007). It better predicts night-time lights today than country-level institutional quality (Michalopoulos and Papaioannou, 2010). These recent empirical findings are in line with those of historians and political scientists, who have argued that alien rulers had to take African systems as given and build upon them during the colonial period. Explaining pre-colonial states, then, is necessary for understanding modern Africa.

I test a ‘Ricardian’ view of sub-Saharan states presented by Bates (1983). He builds on earlier arguments that long-distance trade required centralized authorities for administrative purposes, diffused concepts of centralized polities, and stimulated territorial expansion. His model is verbal:

One of the basic arguments linking political centralization with economic reward rests upon the desire of people to benefit from the gains in welfare which can be reaped from markets. In essence, the argument is Ricardian ... the contribution of the state is to provide order and peace and thereby to render production and exchange possible for members of society. The origins of the state, then, lie in the welfare gains that can be reaped through the promotion of markets.

He suggests that gains from trade are greatest where products from one ecological zone can be traded for products from another. To support his view, he takes 34 pre-colonial African societies, and shows that the proportion of societies with central monarchs is greater on an ecological divide.

I argue that Bates (1983) is ultimately correct. His argument has been overlooked because his sample size prevents him making a credible econometric argument that this correlation is causal. I use ethnographic and geographic data to overcome this limitation. I take data on state centralization for 440 societies in pre-colonial sub-Saharan Africa from Murdock’s (1967) Ethnographic Atlas. Merging the map of African ethnic groups from Murdock (1959) with information on African ecological zones from White (1983), I am able to compute for each society an index of its ‘ecological diversity,’ which I take as a proxy for the gains from trade that existed before colonial rule. I show that this index is strongly related to the presence of pre-colonial states. I use spatial variation in rainfall to control for possible reverse causation, and show that the OLS estimates of the impact of ecological diversity are not overstated. I also use exogenous geographic features to predict raster-level ecological regions, and find that the diversity measured by these predicted points is also related to pre-colonial African states. The relationship between trade and states is robust to several additional controls, removing influential observations, alternative measures of states and trade, and a variety of estimation strategies.

I show that the ‘Ricardian’ view better explains the relationship between states and diverse ecology than five alternative stories. First, while larger territories may require more levels of administration and may be more diverse, area does not explain away the relationship between ecological diversity and states. Second, because panel data are not available for these ethnic groups, I am not able to conclusively show that societies that independently developed state centralization did not migrate to capture the regions in which the gains from trade were high. In order to argue that this does not explain my results, I construct artificial societies and present narrative evidence on the histories of the most influential observations in the data. By

adding similar controls, I am able to show that two other stories – dense population in diverse regions and defence of ‘islands’ of land quality – do not explain away the relationship between trade and states. Fifth, while diverse areas are more ethnically fractionalized, ecology directly impacts states even when this is included in the sample of artificial countries. Finally, I test for several mechanisms by which trade may have facilitated state centralization, and find that class stratification is the channel best supported by the data. No one type of trade is shown to be more important than others.

Data

To measure African states, I take data from Murdock’s (1967) Ethnographic Atlas. I use variable 33, ‘Jurisdictional Hierarchy Beyond Local Community’ to measure state centralization. This gives a discrete categorization between ‘No Levels’ and ‘Four Levels.’ The sample used for the analysis consists of the 440 sub-Saharan societies, including Madagascar, for which this variable is not missing. I map this measure of state centralization on Murdock’s (1959) ethnic map of Africa in figure 1.

Figure 1: *State centralization*

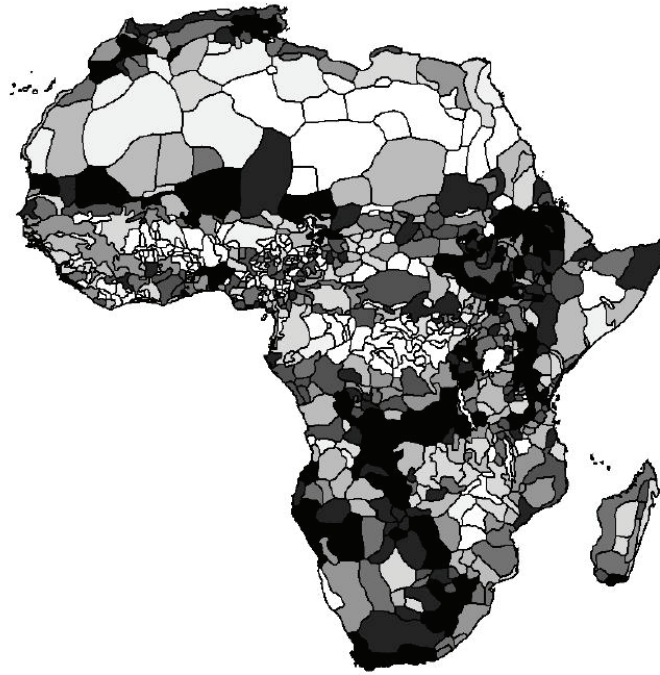


Source: (Murdock, 1967). Darker regions have more centralized states.

To measure the gains from trade, I follow Bates (1983) in assuming that the ability to trade across ecological zones will be particularly beneficial. I use White’s (1983) vegetation map of Africa. This classifies African vegetation into 17 major types. To construct a measure of gains from trade, I calculate the share s_i^t of each society i ’s area that is occupied by each ecological type t . Then, I use a Herfindahl index to construct a measure of each society’s ecological diversity:

$$\text{Ecological diversity}_i = 1 - \sum_{t=1}^{t=17} [(s_i^t)^2].$$

As more ecological zones intersect a society’s area, the natural ability to trade increases, and the index rises. I show a map of this variable in figure 2.

Figure 2::*Ecological diversity*

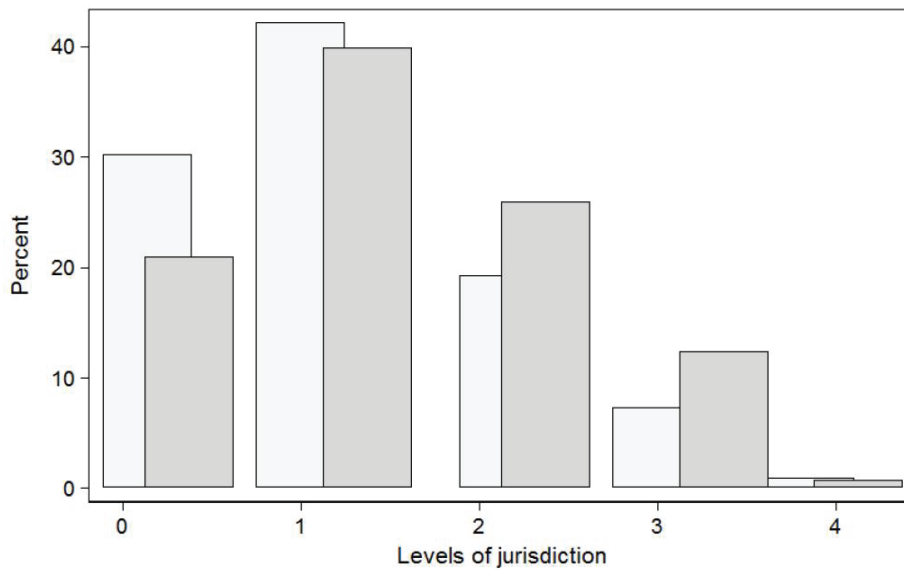
Source: White (1983). Darker regions are more ecologically diverse.

I am able to join several other geographic controls to the data on ecology and states using the Murdock (1959) map of Africa. In particular, I include: intersection with a major river, constraints on agriculture, distance from the coast, elevation, malaria suitability, precipitation, ruggedness, temperature, tsetse suitability, distance from Lake Victoria, date of observation, distances from demand ports in the Atlantic, Indian Ocean, Red Sea and Saharan slave trades, crop type, and absolute latitude.

Results

The correlation between trade and states is visible in the raw data. In figure 3, I cut the sample into two – societies above and below the median in terms of ecological diversity. For each, I show a histogram of the relative frequencies of states of each level of centralization. Below the median (the lighter bars), it is more common for societies to have no levels of jurisdiction above the local, or only one level. Above the median, there is a greater concentration of societies with two or three levels of jurisdiction. The general pattern is clear; as ecological variation rises, the distribution of state centralization skews to the right.

Figure 3: State centralization when ecological diversity is above and below the median



The dark bars are for ecological diversity above the median, the light bars for ecological diversity below it. Percentage is on the y axis and levels of jurisdiction on the x axis.

To test econometrically whether there the gains from trade due to ecological diversity predict the existence of centralized states in pre-colonial Africa, I estimate the following using an ordered probit:

$$\text{State centralization}_i = \alpha + \beta \text{Ecological diversity}_i + X_i' \gamma + \varepsilon_i$$

Here, state centralization is the number of levels of jurisdiction recorded by the Ethnographic Atlas. Ecological diversity is the index defined above. The matrix X_i includes the other controls reported listed in section 2, as well as (in some specifications) dummy variables for the thirteen ethnographic regions recorded in the sample. Standard errors are clustered by region.

Table 1 presents the resulting estimates of β . In column 1, only the measure of ecological diversity is included. Ecological diversity has a significant and positive correlation with state centralization. This is robust to the inclusion of additional controls in column 2, and the coefficient does not fall by much. While regional dummies do knock away some of the magnitude of the coefficient estimate, it remains significant at the 10 per cent level. In the full version of this paper, available on my website, I show that the marginal effects suggest that taking a society from an ecologically homogenous area to a diverse one increases the chance that it has a state between roughly 7 and 15 percentage points.

Table 1: Main results

	(1)	(2)	(3)
	<i>State centralization</i>		
Ecological diversity	0.794*** (0.266)	0.684*** (0.265)	0.494* (0.255)
Other controls	No	Yes	Yes
Region F.E.	No	No	Yes
Observations	440	440	440

Notes: ***Significant at 1%, **Significant at 5%, *Significant at 10%. Regressions estimated by ordered probit. Standard errors in parentheses clustered by region.

Robustness

In the full version of this paper, I show that these results are robust to five sets of concerns.

First, the measure of states may be problematic. I show that, when aggregated to the country level, it is correlated with the Chanda and Putterman (2007) measure of state antiquity. It is also strongly correlated with 29 alternative measures of states recorded for the 186 global societies recorded in the Standard Cross Cultural Sample (SCCS). That there are only 28 sub-Saharan societies in the SCCS prevents me from replicating my main results using these measures. Finally, I am able to obtain similar results by re-coding the state centralization variable to a dummy that equals one if there is any centralization, i.e. if the society has any levels of jurisdiction above the local.

Second, the measure of gains from trade may be problematic. I show that I can obtain similar results if I replace the index of ecological diversity with distance from an ecological divide as defined in the White (1983) map. Similarly, if I use an independent FAO source of raster data on ecosystem classes to compute an alternative index of diversity, I obtain even more robust point estimates.

Third, the validity of the estimation may be questioned. I show that I can obtain similar results even after excluding statistically influential observations and regions in which the preponderance of states are clustered. Similarly, generalized ordered probit estimation, which removes the parallel regression assumption of the ordered probit, yields similar results to the baseline. In the event that the clusters are too small to produce credible standard errors, I reclassify the ethnographic regions to match the United Nations' classification of African regions and show that the results remain intact.

Fourth, it is possible that states manipulate ecology. I use the standard deviation in temperature over space to instrument for ecological diversity and show that, while the point estimates become statistically insignificant once other controls are added, they are larger than those estimated by OLS. I find no evidence, then, that the OLS estimates are overstated. I am also able to predict the ecosystem classes recorded in the FAO data using several exogenous geographic variables, and the diversity index using these predicted points is a significant predictor of state centralization.

Fifth, unobservable heterogeneity may be driving my results. I show that they survive the direct inclusion of the ecological-type area shares, interaction of the diversity index with de-meaned observable controls, and nearest neighbour matching.

Alternative stories

The results presented so far are not, however, completely dispositive. They are consistent with at least five alternative stories of the relationship between ecology, trade and states in pre-colonial Africa. In the full version of this paper, I give evidence that the Ricardian view of African states better fits the data.

First, it is possible that, if administering a larger area requires more levels of administration, states that happen to cover greater territories for reasons unrelated to their strength will appear more centralized in the data. Further, larger areas may be mechanically more ecologically diverse. I divide Africa into artificial states, 1° by 1°, and show that the results are robust using these as units of observation. I also show that dropping the smallest and largest quintiles by area does not diminish the results. Finally, I show that controlling for area does not eliminate the main result.

Second, it may be that states emerge for reasons unrelated to trade and then migrate to capture ecologically diverse regions. The artificial states results and inclusion of area discussed above provide evidence against this. In addition, I discuss the histories of the six most influential societies in the data (the Yoruba, Songhai, Lozi, Suku, Luba and Toro) and show that they, as a whole, better support the Ricardian view than this alternative narrative.

Third, it may be that diversity is simply a proxy for ‘islands’ of good land that require a state to defend them. Including the range of constraints on agriculture does not make the main effect disappear when no regional fixed effects are added, and itself enters insignificantly.

Fourth, population density may be correlated with both diversity and states. Including it does not destroy the effect of diversity.

Fifth, if diverse ecology leads to ethnic fractionalization (see Michalopoulos [2008]), then competition between these ethnic groups may give rise to states. Including the number of ethnic groups in the artificial country analysis does not eliminate the correlation between states and ecological diversity.

Mechanisms

In the full version of this paper, I explore how trade may give rise to states and whether one type of trade matters most. I find no evidence that trade is related to slavery or to the weakness of local rulers. It does, however, predict stronger class stratification. States are not correlated with a society’s dependence on fishing, nor on the presence of iron or gold. Several types of trade are correlated with states in the SCCS, and the data do not suggest that either diversity (a proxy for intra-ethnic trade) or distance from an ecological divide (a proxy for long distance trade) uniquely predict states.

Conclusion

I have used this paper to provide empirical support for Bates’s (1983) Ricardian view of pre-colonial African states. The gains from trade stemming from ecological diversity predict the presence of state centralization across sub-Saharan societies recorded in the Ethnographic Atlas. Moving from a homogenous zone to one that is ecologically diverse predicts that the chance a society is centralized rises between 7 and 15 percentage points. Distance from an ecological divide serves as well in predicting states. There is no evidence this is overstated due to endogeneity or the influence of outliers or specific ethnographic regions. The histories of African societies are consistent with this interpretation of the data, rather than one in which states emerge and then migrate. Similarly, area, defence of fertile islands, correlation with dense population, and ethnic competition do not explain the results. Michalopoulos and Papaioannou (2010) show that the strength of pre-colonial African states does more to predict modern development, using night-time lights as a measure, than country-level institutions. These states are rooted in the intersection of ecology and trade.

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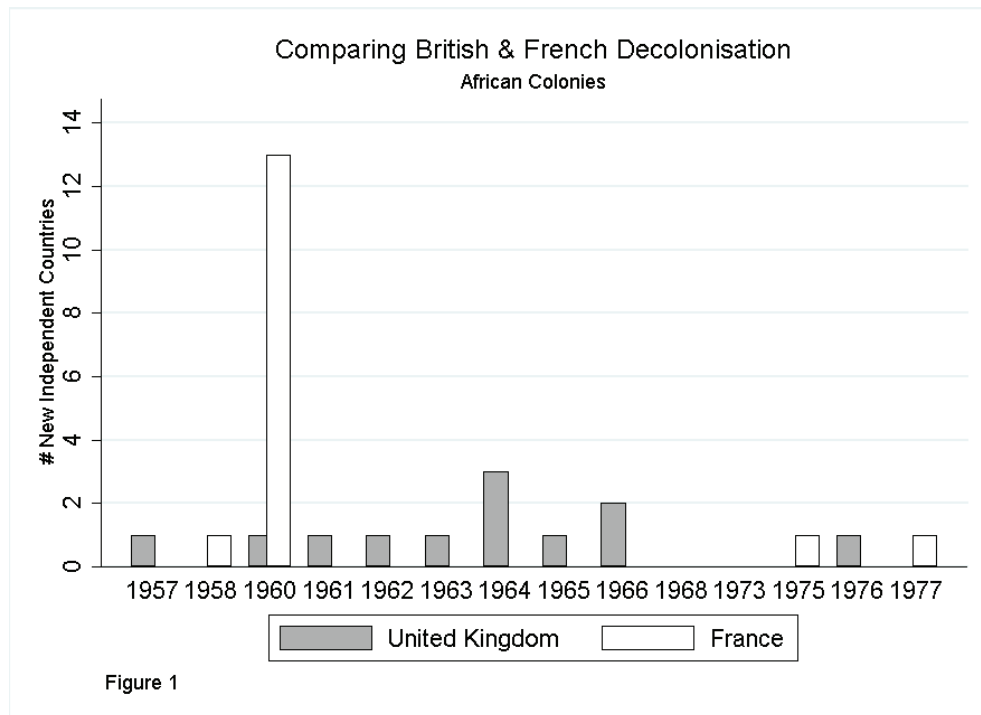
Making history or history effects? British decolonization in sub-Saharan Africa

Giulio Marchisio, University of Durham
(giulio.marchisio@dur.ac.uk)

&

Andrea Ruggeri, University of Amsterdam
(A.Ruggeri@uva.nl)

Decolonization was one of the defining historical events of the twentieth century. In few decades, territories and populations which had been subjected by European powers in the course of several centuries became independent. In no other continent has colonization been as complete as in Africa. At the peak of the European domination in the last years of the 1930s, the entire continent – with the exception of Liberia – was under direct or indirect foreign domination. Thirty years later the political map of Africa had changed dramatically. More than forty new states were created or re-established.



Great Britain and France were the powers which controlled the largest amount of African territory. Consequently, the studying of the decolonization process in Africa is predominantly the study of the decolonization of their colonies. A comparison of their experiences is, however, striking (figure 1). Whereas France decolonized the majority of its dependencies in a one-off moment, in 1960, British governments granted independence through a period of nearly a decade.

Why did Great Britain grant independence to some sub-Saharan African colonies before others? Why did this process last for 10 years? We are not aware of studies specifically devoted to the temporal dynamics of British decolonization: the aim of this paper is to evaluate competing hypotheses that can explain the timing of British decolonization in sub-Saharan Africa. Previous research has suggested exogenous causes for decolonization, world polity perspectives (Strang 1990) and world-economy changes (Wallerstein 1984). These theories, however, are not satisfactory explanations of how the process unfolded. The sequence of decolonization can be explained by three broad categories: political colonial demand, colonial economic efficiency and British institutional investments in the colony. In this paper we offer a preliminary quantitative analysis of the decolonization temporal

sequence. Using data collected from the British Colonial Office on colonial revenues and expenditures from 1939 to 1961, together with other variables, we can examine competing hypotheses. The main contribution of this paper is twofold: first, it develops theoretical arguments on sequences of decolonization and, second, it provides new empirical evidence.

The paper is structured as follow: the first part briefly presents competing explanations on decolonization timing; the second part presents preliminary findings based on descriptive statistics. Finally, a conclusion summarizes the initial results and points to further directions of investigation.

Decolonization timing: competing explanations

We are not aware of any studies specifically devoted to the temporal sequence of British decolonization. The literature, however, offers many, and contrasting, explanations of the decolonization process itself. We briefly review the main explanations proposed for decolonization *per se*. Then, even though the main research has not directly tackled our research question, we expand these explanations to temporal dynamics of decolonization.

Political colonial demand

An issue debated in the literature is whether the political decision and pressure came from Great Britain or colonies. According to one strand in the literature (Darwin 1988; Holland 1985), decolonization was chiefly the results of the decision taken by the metropolitan governments. A change in attitudes inside the political system of the colonial powers would explain the decision to grant freedom to colonies. According to this view, the process of decolonization should be intended essentially as a transfer of powers, and a mere decision of the British government. This view has been strongly criticized by scholars who stress, at the opposite, the role played by African agency to bring to an end the colonial domination (Birmingham 1995; Cooper 1996). According to this view, African political movements played a crucial role in shaping the process of emancipation putting pressure on the European dominance through political actions and, sometimes, open revolts. Another stream of literature places the decolonization process firmly in the context of international relations (Connelly 2002; Hager & Lake 2000). According to this view, decolonization was the result of the changed political and economic reality after 1945. The United States were unwilling to support the efforts of the European governments to maintain their colonies and the Communist block was actively embracing decolonization. Colonial policies were now unfeasible in this context.

We do not directly challenge the first and the third explanations, change in norms of the colonial power and preferences change of superpowers, but we explicitly argue that these theories can only explain decolonization *per se*, but not its timing. Put it differently, a political exogenous explanation – norms or preferences change – would not predict the temporal variance of independence, but only that all colonies would, at a certain point, be independent. On the other hand, the variation of domestic political demand for independence, often organized through African political parties, could explain not just the start of decolonization but the decolonization sequence. Colonies with well organized nationalist movements or party leaders with a long experience in political activism could have influenced the policy-making process of Great Britain. Therefore, colonies with important domestic political organization could have been granted independence before others with a relatively less developed local political mobilization.

Colonial economic efficiency

A second debate is about the relative economic importance of the colonies. Several authors (Marseille 1984) have pointed out that the colonial system was weakened by the economic growth in the Western World during the ‘golden age’ of the 1950s and 1960s. The growing importance of trade among developed countries would have diminished the economic

relevance of the colonies and, consequently, reduced the incentive for metropolitan governments to devote resources to maintain them under control. However, if we take just into consideration the structural adjustment of the international economy and its effects on British colonial policy, we could not gauge the timing of independence, but only the start of decolonization.

This explanation of decolonization can be translated for our theoretical purpose – timing of decolonization – into two possible economic explanations: relative trade salience and budgetary efficiency.

Hence, in order to explain the different waves of decolonization, we should take into account the relative trade salience of the colonies. If it is true that the structure of the international political economy had changed during the previous decades of decolonization, the decision to grant independence could be understood as a function on the relative trade salience of the colonies. Therefore, colonies more important in relative trade terms could have been more difficult cases to grant independence. Indeed, the explanation should focus not only on the dyadic trade between Great Britain and colonies, but also on the salience of the goods exported from the colony.

A second possible explanation is based on the cost of running a colony. Great Britain had to find the resources to pay for the administrative activities carried out in its colonies. Moreover, investments in roads, schools, housing, however limited, had to be financed. On the other side, revenues were raised as tax and duties. Each colonial government, therefore, could match its budget or run a surplus or a deficit. The decision to grant independence could have been affected by the inability of a territory to generate enough resources to cover the costs. The fact that a colony continuously posted deficits could have been an incentive to grant it independence. At the opposite, the British government could have been less keen on granting independence to a colony which generated surpluses year after year.

Colonial British institutional investments

The third competing explanation introduces the role of institutional investments in the colonies. Acemoglu, Johnson and Robinson (Acemoglu et al. 2001; Acemoglu et al. 2002) propose to divide colonies in two broad categories: settlement and extractive colonies. The first were territories where white people migrated and set up economic activities. Because of the needs of the settlers, who required legal protection of their possessions and better physical and social infrastructures, these colonies saw a higher level of institutional development than the second category. Extractive colonies were territories ruled primarily to expropriate as much wealth as possible. The absence of settlers made it unnecessary to invest resources to develop institutions. While Europeans immigrated only to few regions in Africa, the presence of settlers' communities could have had an impact on the dynamics of decolonization: the government could have been less keen to grant independence to a territory in which white settlers, who maintained links and bonds with Britain, were present. At the opposite, leaving a colony in which there were no settlers could have been less politically costly.

Preliminary analysis: descriptive statistics

In this section we offer a preliminary analysis of the competing explanations of decolonization temporal sequence; the reader should be aware that these are initial findings which will be developed more extensively in a longer paper version.⁹⁵

Political colonial demand

Since at the moment our data collection on independence movements and local leaders is still ongoing, we have opted for two proxies on collective mobilization. Following the idea of

⁹⁵ This paper will be delivered at the Economic History Society annual conference in Cambridge, UK, 1-3 April 2011. All graphs are based on bivariate correlation; therefore, even though these patterns can be quite interesting and useful for an initial analysis, we do not claim any bold inference.

collective action problem (Olson 1965) and the coordination costs between heterogeneous actors with different preferences (Alesina & Spolaore 1997), we can use ethnic and linguistic fractionalization as proxies of coordination costs and therefore likely presence of local political demand. Colonies where the collective action was more difficult for coordination problems (linguistic diversity) and preferences heterogeneity (ethnic fractionalization) could have a more relevant retard in granting their independence.

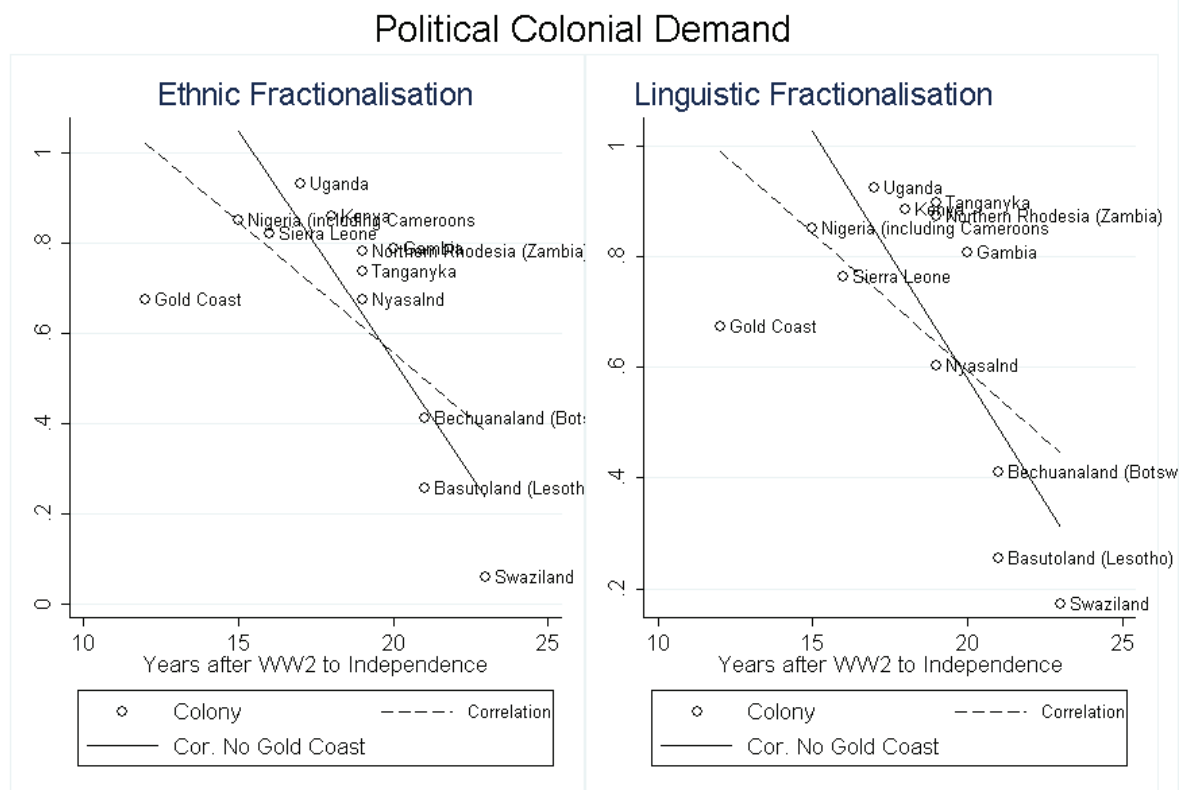


Figure 2

In figure 2 we have plotted the correlation between ethnic and linguistic fractionalization (Alesina et al. 2003) against the years to independence after the Second World War. Two patterns are worth noting: first, contrary to the coordination costs hypothesis, the more a country had both ethnic and linguistic fractionalization, the sooner was granted independence. Second, the first-mover, the Gold Coast, is clearly an outlier from this pattern (notice the slope with and without the Gold Coast). One explanation for this correlation, though not from the local political side, can come from a British point of view: first get rid of the difficult cases. Put it differently, countries where there was high ethnic fractionalization, the provision of public goods and their governance was more difficult (Habyarimana et al. 2009), and therefore Great Britain could have decided to start the decolonization from these thorny cases. Yet this explanation does not elucidate the different temporal position of the Gold Coast. However, we should acknowledge that both size of the territory and population can correlate with these measurements and, therefore, signal other possible effects. Indeed, a multivariate analysis will allow us to disentangle such mechanism.

Colonial economic efficiency

In figure 3 we present the colonial budget trend of the first nine colonies which gained independence. We focus on budgetary efficiency in this paper and we will evaluate the relative trade salience in the next future. Data on revenues and expenditures have been collected from 1945 to 1961, or, in the case of colonies which were granted independence before, to the last year of colonial rule. The year 1961-62 is the last one for which the British

Colonial Office produced a general survey of the taxations and revenues of the colonial dependencies⁹⁶.

Years are on the abscissa and the surplus/deficit on the ordinate⁹⁷ as percentage of GDP. Here, we highlight how the pattern of the first three colonies is similar: they post extremely high deficits before their independence. The temporal sequence of independence seems to correlate with the magnitude of the deficit. The Gold Coast, first-mover and outlier for the previous hypothesis, can be better explained with the budgetary efficiency hypothesis. Again, this pattern should be taken with a pinch of salt, once we will control for other features such as trade patterns and geographical location, our inference will be stronger. Moreover, we are aware that before the official independence to colonies there were different transition agreements. These institutional procedures and partial delegation of governance will be taken into account as well.

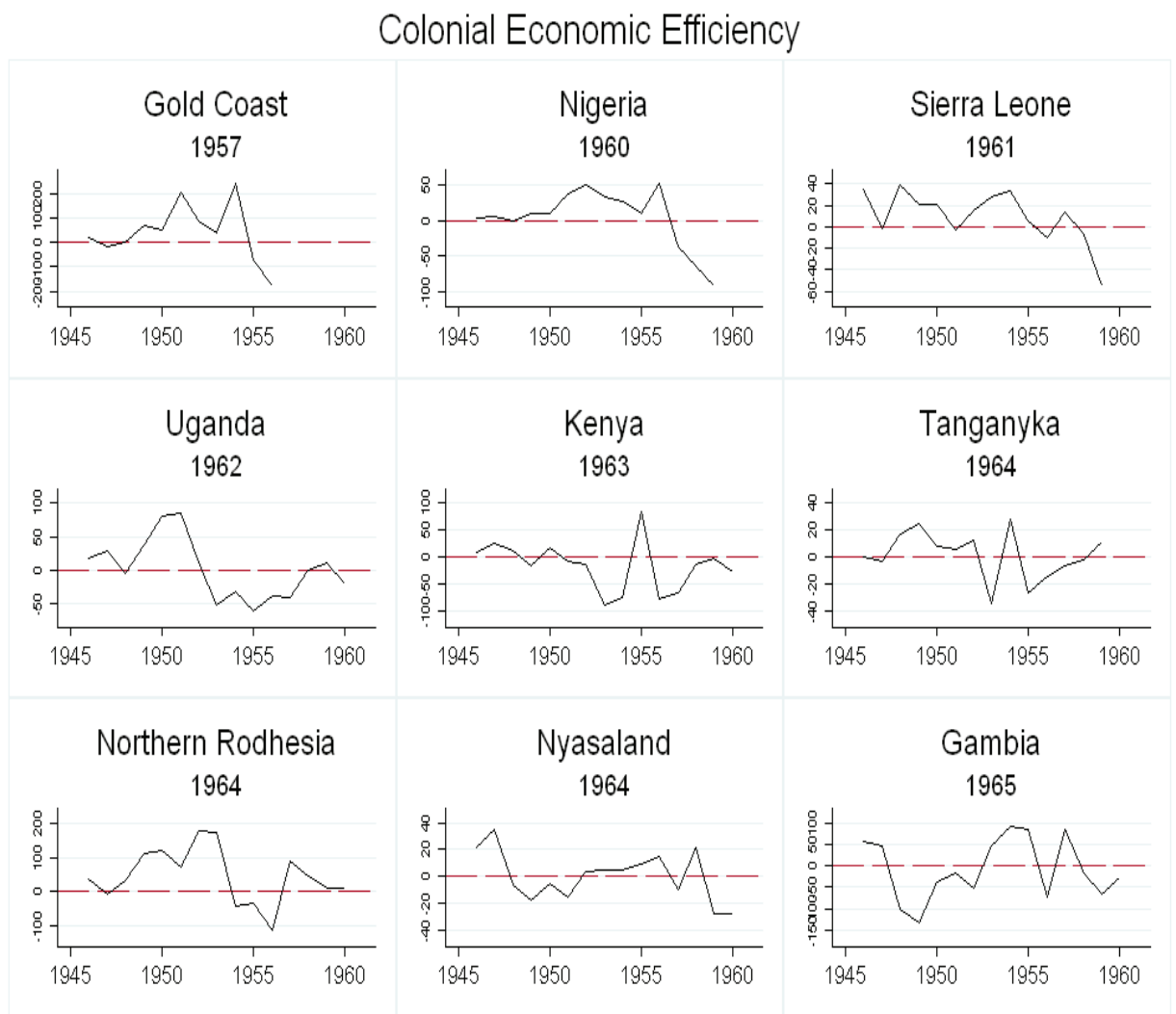


Figure 3

Colonial British institutional investments

Figure 4 shows two forms of British investments into the colonies: settler presence and number of pupils at school over the entire population (Bolt & Bezemer 2009).

⁹⁶ The source for these data is the House of Common Parliamentary Papers. We aim to extend the data collection.

⁹⁷ The figures are in real values (1950 pound). The GDP is based on Maddison's estimates and these are in International dollars. We are aware of this discrepancy, but although the absolute values of the deficit/GDP ratio could be imprecise, it is still possible to compare deficit values between countries and over time.

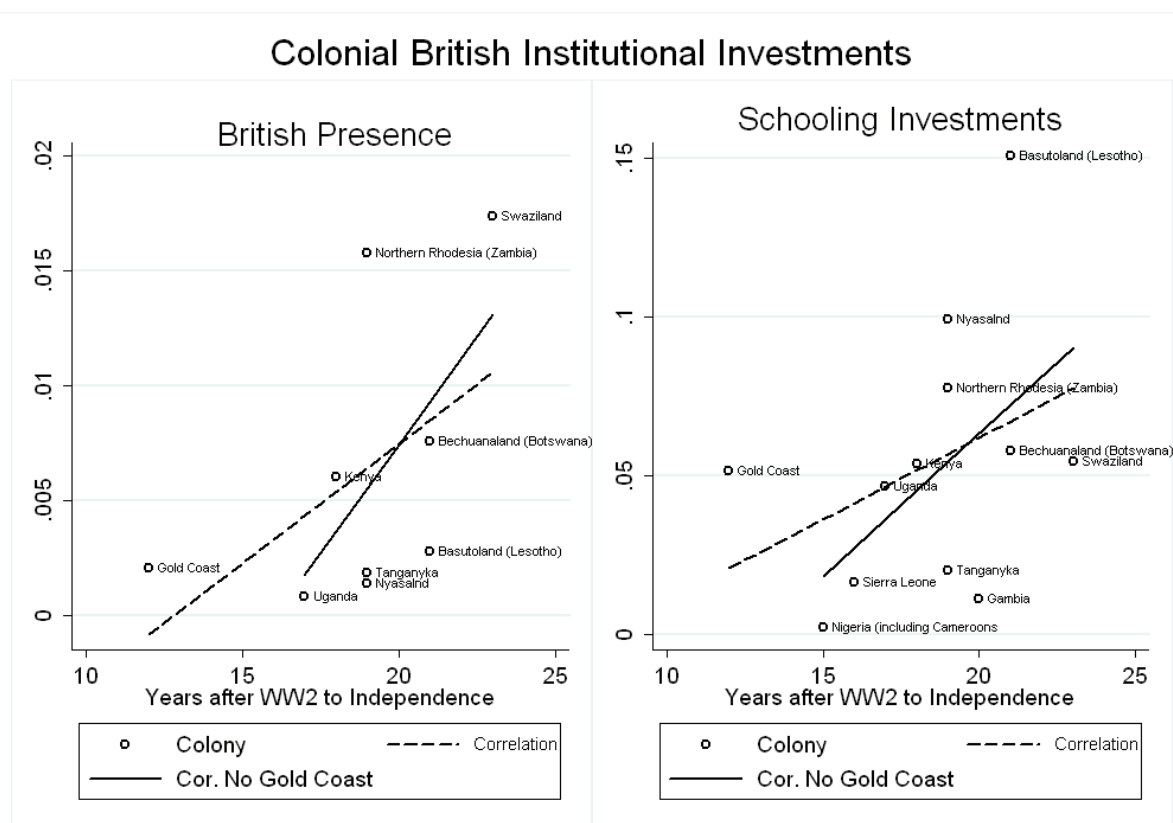


Figure 4

It seems that the higher the institutional investments in the colonies (Acemoglu et al. 2001; Bolt & Bezemer 2009), the longer the time to independence. However, this hypothesis seems to hold more when operationalized with the percentage of British settlers over local population than number of pupils in school. Furthermore, the Gold Coast is again an outlier for this explanation. Again, we are aware of how other features, such as GDP per capita and population, could be crucial factors that need to be taken in account.

Final remarks

Why did Great Britain grant independence to some sub-Saharan African colonies before others? Did Great Britain make history or suffer history? This paper evaluates competing hypotheses that can explain the decolonization sequences of British colonies in sub-Saharan Africa. Three broad categories can explain decolonization temporal variance: political colonial demand, colonial economic efficiency, and British institutional investments in the colony. We propose a preliminary quantitative assessment of these possible explanations.

Even though these findings should be read *cum grano salis*, they are stimulating patterns which can help to start answering this research question. First, we found that a domestic political demand, operationalized as coordination costs, differs from our expectations. Actually it seems that the domestic fractionalization of the colonial society was a factor driving to a quicker independence. This would imply a decision from the colonial power, Great Britain, and not from local/agency dynamics. Second, the colonial budgetary efficiency seems to support the independence sequence and, moreover, is the only explanation to clarify why the Gold Coast was the first-mover, or since this explanation stresses the role of the colonial power, was the first-sacked. Finally, the third hypothesis on institutional investments suggests that there was a positive correlation between time to independence and number of settler and schooling investments in the colony. However, the Gold Coast is clearly an outlier for this explanation.

At the moment, the working hypotheses and relative preliminary findings suggest a more relevant role of Great Britain than colonial countries on the decolonization sequence.

We expect that the new data we will employ, colonial trade and political movement history, together with the use of multivariate estimator and event history analysis, will allow us to disentangle these dynamics and provide stronger inferences.

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Military service and human capital accumulation: evidence from colonial Punjab

Oliver Vanden Eynde, London School of Economics
(O.W.Vanden-Eynde@lse.ac.uk)
Supervisor: Dr Gerard Padro-i-Miquel

1. Introduction

Military service is often claimed to promote social mobility and to offer rare educational opportunities to disadvantaged groups.⁹⁸ Due to the risk premium on military wages, the military typically hires low-skilled recruits and supports training on the job. In the context of the US armed forces, evidence suggests that disadvantaged groups benefit mildly from voluntary service (Angrist, 1998). However, very little evidence is available on how this finding translates to a developing country context. Nevertheless, if the returns to military service are decreasing in the average human capital of the population, one would expect these returns to be highest in developing economies. In spite of the central importance of military support and training to the relations between developing countries and the developed world, not much is known about the role that the military can play in economic development.

This paper offers one of the first attempts to investigate this important question. I will rely on the military recruitment surge in colonial Punjab during the First World War to estimate the impact of military recruitment on aggregate literacy over the period 1901-31. This paper answers two key questions. First, did military recruitment boost the literacy of recruited communities? Second, through which of three possible channels did military service affect literacy: direct skill acquisition by serving soldiers, increased demand for the education due to higher earnings, or preferential public spending on primary education?

This paper contributes to recent work on the effects of colonial institutions on economic development.⁹⁹ In this fast-growing literature, the role of the colonial armies has received little attention. Nevertheless, the colonial armies were one of the few colonial institutions that relied on large-scale, close collaboration between non-elite groups and the colonisers. A related contribution by Jha & Wilkinson (2010) argues that the fighting experience of Indian veterans facilitated the organization of violence during the Partition of India (1949). This paper illustrates a more benign human capital impact of military recruitment: the spread of literacy.

The paper is organized as follows. First, I introduce the dataset. Second, I present the empirical strategy. Third, I interpret the empirical results and I discuss theoretical mechanisms. Finally, I offer concluding remarks.

2. Dataset

The First World War brought a dramatic increase in the recruitment of native soldiers by the Indian Army. Raw figures illustrate the enormous scale of this war-time recruitment effort: the number of Punjabi troops increased from 69,458 to 362,027 over the period 1910-19.¹⁰⁰ The Indian Army served in France, Egypt and Mesopotamia and finished its First World War missions only in 1921.

Military recruitment patterns will be proxied by information on military casualties. This information is obtained from the 'Debt of Honour Register', a list of military casualties of the First World War.¹⁰¹ For 17,005 casualties in military roles, the place of origin could be

⁹⁸ Khalidi (2001).

⁹⁹ See for example Acemoglu et al. (2001), Chaudhary (2010) and Iyer (2006).

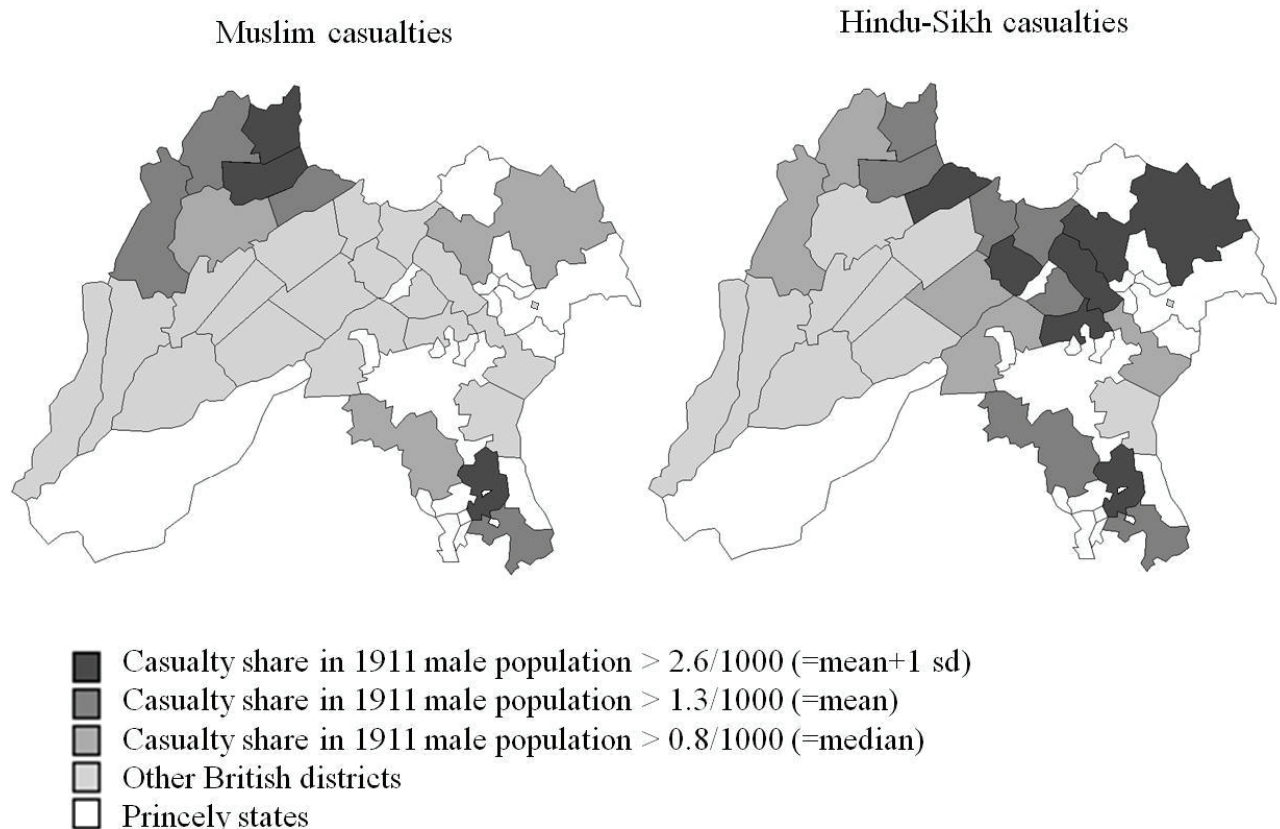
¹⁰⁰ The total population of Punjab was about 20 million in 1911. Figures from Mazumder (2003, p. 18).

¹⁰¹ Administered by the Commonwealth War Graves Commission (CWGC), it contains information on 74,260 Indian military personnel who died in the First World War. For virtually all soldiers, the name, the rank, the regiment and the date of death are provided. For 68 per cent of entries, the name of the father and the

matched to a district or princely state in Punjab. A name-based algorithm was then used to further split up casualties into two religious groups: Hindu-Sikhs or Muslims. Literacy and population details for the religious groups were collected at the district level from the Census of India for four years (1901, -11, -21, and -31). Nominal expenditures on education by the district boards were also collected for each of the four census years for the 28 British districts in Punjab.

Figure 1 maps the number of war deaths recorded in the CWGC register as a proportion of the male 1911 population in the 28 British districts. The death rates per district are shown separately for both religious communities (Muslim and Hindu-Sikh).¹⁰²

Figure 1



Source: CWGC, own coding.

Table 1 provides summary statistics for the key variables of interest. As my analysis relies on the comparison of communities that were recruited with varying intensity, I provide separate summary statistics for 'heavily' and 'lightly recruited' districts. The raw numbers show that the increase in the literacy rate (1911-31) is significantly higher for heavily recruited communities. This finding will be further corroborated in the empirical analysis.

district of birth have been recorded.

¹⁰² The princely states are not included in my analysis for reasons of comparability and data availability. See Iyer (2006) for an in depth discussion.

Table 1: *Summary statistics*

	Sample	Lightly recruited	Heavily recruited	P-value
District-religion level				
Male literacy rate 1911	0.11 (0.13)	0.10 (0.13)	0.12 (0.11)	0.57
Difference in literacy rate (1931-1911)	0.019 (0.054)	0.012 (0.038)	0.031 (0.031)	0.05
Casualty share	0.0013 (0.0015)	0.0004 (0.00041)	0.0030 (0.0014)	0.00
Observations	56	36	20	
District level				
Male literacy rate 1911	0.07 (0.04)	0.07 (0.04)	0.07 (0.02)	0.76
Casualty share	0.0015 (0.0014)	0.0006 (0.0005)	0.0030 (0.0011)	0.00
Primary education spending 1911 (Rs per male)	0.07 (0.04)	0.07 (0.04)	0.07 (0.02)	0.90
Observations	28	18	10	

Notes: District-religion level observations for two religious groups (Muslim or Hindu-Sikh) in 28 districts. District level observations are the totals for both religious groups in 28 districts. Heavily recruited groups/districts have recruitment above the relevant sample average. The table records sample averages and standard deviations (in parentheses). P-values are based on a t test on the equality of means for lightly and heavily recruited groups/districts.

3. Empirical strategy

To estimate the effect of military recruitment on literacy I will rely on a continuous difference-in-difference approach. I compare male literacy rates in years before and after the First World War, between communities with different ratios of military war casualties. The corresponding econometric specification is:

$$\text{Log(literacy)}_{r,d,t} = \sum_{\tau=1921,1931} \beta_{\tau} * (\text{Casualties}_{r,d,1911}) * I(\tau = t) + \theta_{r,d} + \vartheta_{r,t} + \varepsilon_{t,t} \quad (1)$$

$\text{Log(Literacy)}_{r,d,t}$ is the logarithm of the male literacy rate of religion r in district d in year t (1911, 1921, 1931).¹⁰³ In certain specifications, the analysis will be conducted at the district level. $\text{Casualties}_{r,d,1911}$ measures the fraction of war deaths in proportion to the 1911 male population. β_{1921} and β_{1931} are the key parameters of interest. They measure the impact of the intensity of military recruitment, as proxied by the casualty share, on subsequent literacy rates. $\theta_{r,d}$ and $\vartheta_{r,t}$ are respectively district(-religion) and (religion-)year fixed effects. This specification accounts for any omitted variables at the district-religion level that do not change over time and time-varying determinants of literacy that are specific to one of the religious groups.¹⁰⁴

¹⁰³ The logarithmic specification has the advantage of making the point estimates less dependent on observations with high average literacy rates.

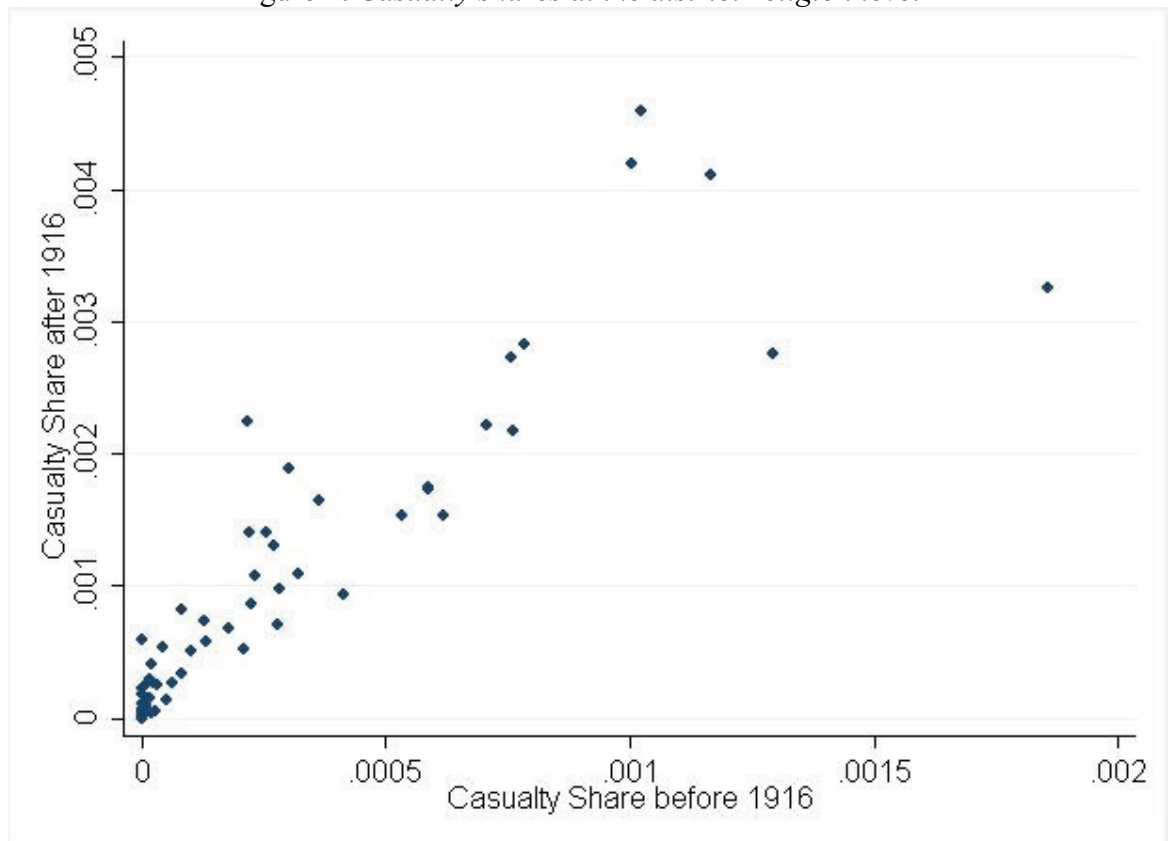
¹⁰⁴ Further robustness checks were carried out, such as the inclusion of time effects of baseline controls, time-varying control variables, district-year fixed effects, and the restriction to a subsample with stable borders. The main results do not change in these alternative specifications (Vanden Eynde, 2010).

For the above specification to yield causal estimates of the treatment effects β_τ , three assumptions need to be fulfilled:

1. The recruitment patterns of the Indian army did not change substantially over the course of the First World War and reflected the demand side constraints imposed by the British recruiters.
2. The selection of recruitment grounds was unrelated to the potential for literacy improvements between 1921 and 1931.
3. The measurement error induced by using war casualties as a proxy for recruitment is non-systematic and small.

Regarding the first assumption, the historical context provides evidence of the persistence of recruitment patterns. The recruitment policies in place during the First World War were established in the second half of the nineteenth century, when recruitment shifted towards the so-called ‘martial races’. The supposedly superior fighting skills of these people were deemed to be crucial for the Indian Army to withstand a Russian invasion of India. Recruitment handbooks provided religion-specific assessments of the ‘martialness’ of the population at the district or even village level.¹⁰⁵ Subsequent recruitment policies helped to entrench the existing composition of the army. Recruitment officers mainly relied on serving soldiers to help them to identify good recruits in their home villages. The result of this policy was that recruitment patterns did not change substantially during the First World War.¹⁰⁶

Figure 2: *Casualty shares at the district-religion level*



Source: CWGC, own coding

In support of this hypothesis of entrenched recruitment patterns, I plot the war deaths before and after 1916 for each district-religion. I expect casualty numbers at the beginning of the war

¹⁰⁵ Bingley, (1897a, 1897b, 1899).

¹⁰⁶ Cohen (1971, p. 69-73) notes that the recruiters ‘experimented’ to some extent with previously unrecruited classes, but that these were closely related to existing serving groups who continued to provide the bulk of the army.

to reflect the pre-existing recruitment patterns. In contrast, the casualty numbers in a later stage of the war could reveal shifts in the recruitment pattern during the war. The linear pattern in figure 2 strongly supports the hypothesis that recruitment patterns at the district-religion level remained stable over the course of the war.

The second assumption paraphrases the common trend assumption. There is no historical evidence that the British targeted communities that had a higher potential for literacy improvements over the period 1911-31. More direct evidence will be provided by the estimation of a ‘pre-treatment’ effect that relies on observations between 1901 and 1911.

The third identifying assumption is that the error resulting from my proxy approach is orthogonal to the regressors. Comparisons of the death rates at the district level with recruitment data from independent historical sources yields very similar rankings of districts in terms of their importance as a recruitment ground. Also, the Indian Army deliberately sent representative units on its foreign missions. Finally, Indian soldiers could not rise to the rank of officer during their time at war, so that literate soldiers should not have faced different hazards in battle than illiterate soldiers.¹⁰⁷

4. Results and mechanisms

The results from the first column of table 2 suggest that an increase in the casualty share by one per thousand of the male population is associated with an increase in the literacy rate by 4.6 per cent (proportional). This implies that for 10 additional recruits per thousand of the male population, the literacy rate increases by 2.2 per cent in 1931.¹⁰⁸ Evaluated at the sample mean, this corresponds to an increase of three additional literate males per thousand of the male population. Columns (2) and (3) show that this effect is entirely attributable to the group of over 20-year-olds. In column (4), the sample is restricted to allow for the estimation of a ‘pre-treatment effect’. The pre-treatment effect is estimated to be insignificant and close to zero, which addresses the concern that the casualty share could be picking up an ongoing trend. Column (5) confirms that the positive effect on the literacy rate is not driven by a decline in the size of the male population.

Table 2: *Main results (district-religion level)*

	Log(Male literacy rate)			Log(Male population)	
	All ages (1)	Over 20 (2)	Under20 (3)	All ages (4)	All ages (5)
Casualties ₁₉₁₁ *(year=1911)				2.47 (11.0)	
Casualties ₁₉₁₁ *(year=1921)	33.1** (16.1)	40.4** (15.3)	-7.52 (20.3)	32.3* (17.1)	12.9 (16.9)
Casualties ₁₉₁₁ *(year=1931)	46.5* (23.9)	49.6** (20.4)	21.5 (30.7)	40.6 (26.3)	10.1 (19.2)
Observations	168	168	168	208	168

Notes: observations are at the district-religion level for three census years (1911-31). In column (4), 26 districts are included for four census years (1901-31). All regressions include district-religion fixed effects and religion-year effects. Standard errors are clustered at the district-religion level. *** p<0.01, ** p<0.05, * p<0.1.

¹⁰⁷ The validity of this approach was further examined using the classifications of the recruitment handbooks as an IV for the casualty share (Vanden Eynde, 2010). Jha and Wilkinson (2010) also discuss the validity of the CWGC data at length.

¹⁰⁸ This calculation assumes equal probabilities of being recorded in the dataset and relies on aggregate recruitment figures.

Table 3 employs the information on the expenditures on public education by the Punjabi district boards. Columns (1)-(3) confirm that the findings at the religious community level carry through to the district level. Column (4) shows that recruited districts did not attract more public investments in primary education.

Table 3: *Main results (district level)*

	Log (Male literacy rate)			Log (Primary education spending)
	All age groups (1)	Over 20 (2)	Under 20 (3)	(5)
Casualties ₁₉₁₁ *(year=1921)	50.1** (18.1)	59.6*** (18.5)	-4.30 (21.7)	-49.3* (26.2)
Casualties ₁₉₁₁ *(year=1931)	53.9* (27.1)	56.7* (28.0)	16.4 (31.1)	-40.4 (50.4)
Observations	84	84	84	84

Notes: observations are at the district level for three census years (1911,-21,-31). All regressions include district fixed effects and year effects. Standard errors are clustered at the district level.

These results also shed light on the mechanism that underlies the observed association between casualty rates and improvements in the literacy rate. It is striking that the impact is immediate (starting in 1921) and only affects the population over 20. As one expects demobilized soldiers to be included only in the group of over 20-year-olds, these results are consistent with direct skill acquisition by soldiers. Even though formal literacy training was limited during the First World War, several historical sources confirm that recruits would often pick up literacy skills whilst on service. The demand for literacy skills was boosted by the provision of a postal service on foreign missions, the strong interest in religious literature, the usefulness of literacy skills for military tasks and the opportunities for close contact with literate servicemen.¹⁰⁹ In contrast, my findings are not consistent with an income-driven demand shock for education. One would expect to see intergenerational spill-overs under this hypothesis, whereas the under 20-year-olds seem unaffected by recruitment.¹¹⁰ Finally, the results on education expenditures rule out a political economy channel, whereby the district boards invested preferentially in recruited communities. This finding may not be surprising given the reliance of the Indian army on specific communities for its recruitment needs: the British authorities had an interest in keeping the reservation wage in these districts sufficiently low.

5. Conclusion

This paper exploited the exogenous increase in military recruitment during the First World War to estimate the impact of recruitment on human capital accumulation. My results suggest that 10 additional recruits per thousand of the 1911 male population were on average associated with three more literate males per thousand in 1931. Further analysis suggests that this improvement in the human capital stock was mainly driven by direct skill acquisition by soldiers. Military recruitment does not seem to have raised the literacy rate of children. Moreover, no evidence could be found of preferential investment by the district authorities in heavily recruited districts. These results on intergenerational spill-overs and on public investments put bounds on the long-run distributional impact of military recruitment in this context. Nevertheless, direct skill acquisition and social mobility do not appear to have lost

¹⁰⁹ See Khan (1932, p. 216), Censor of Indian Mails (1915) and Mazumder (2003, p. 38).

¹¹⁰ See Vanden Eynde (2010) for qualifications of this finding.

their relevance for individual military recruits, as may be suggested by the popularity of present-day recruitment rallies among India's disadvantaged communities.¹¹¹

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¹¹¹ See Khalidi (2001).

Women and property reconsidered: new evidence on the ownership and leasing of land by women during the nineteenth century

Janet Casson, University of Oxford
(janet.casson@kellogg.ox.ac.uk)
Supervisor: Professor Jane Humphries

Land ownership by women in nineteenth-century England has not been comprehensively investigated but it is an important topic for historians studying land, wealth, gender, and the impact of law. This paper seeks to redress the situation. It presents a comparative analysis of land ownership and leasing by women in nineteenth-century England based on information from over 19,000 plots of land taken from three representative geographical regions. Oxfordshire represents an agricultural region, West Yorkshire a developing industrial area and London the commercial metropolis.

The paper discusses the proportions of land that were owned and leased by women. It samples a minimum of 400 plots from each region in each decade and investigates whether the pattern of ownership changed over time and, in particular, after the Married Women's Property Acts of 1870 (MWPA1) and 1882 (MWPA2). Ownership across the three regions is compared and sub-regional patterns analysed according to parish characteristics. Plots' usages are classified into 24 categories, including multiple categories of residential, agricultural and business use. 2,384 plots involved women owners and 691 women lessees. At least 836 different women were involved.

There was no register of land ownership in nineteenth-century England. A parliamentary survey, the 'Return of Owners of Land: 1873' identified 269,547 men, women and institutions who owned more than one acre but did not identify the 700,000 owners of less than an acre.¹¹² The 'Return' was corrected by Bateman but restricted to estates in excess of 2,000 acres.¹¹³ Using these publications, Rubinstein found only 11 wealthy women and Collins and Havinden found only two women owning over 2,000 acres in Oxfordshire.¹¹⁴ Other researchers have shown that women landowners were usually spinsters or widows.¹¹⁵ Research about small-scale land ownership showed 4 per cent of land in Suffolk and 20 per cent in Hampshire being owned by women.¹¹⁶ Studies of women's land ownership also relied on an analysis of the complex legal situation in relation to married women.¹¹⁷ This possibly encouraged the view that only a few widows and spinsters owned land. By contrast this empirical study shows that women's ownership was significant and involved married women.

¹¹² Peter H. Lindert, 'Who Owned Victorian England?: The Debate over Landed Wealth and Inequality', *Agricultural History*, Vol.61, 1987, pp.25-51.

¹¹³ John Bateman, *The Great Landowners of Great Britain and Ireland*. (Leicester, 1971).

¹¹⁴ W.D. Rubinstein, *Men of Property: The Very Wealthy in Britain since the Industrial Revolution*, (London, 1981), pp. 251; Ted Collins and Michael Havinden, 'Long Term Trends in Land ownership, 1500-1914: Berkshire and Oxfordshire', *Oxonensia*, (2005), pp.27-49.

¹¹⁵ Leonore Davidoff and Catherine Hall, *Family Fortunes: men and women of the English middle class 1780-1850*, (Abingdon, 2007), p.276.

¹¹⁶ Leonore Davidoff and Catherine Hall, "'The hidden investment': women and the enterprise" in Pamela Sharpe (ed.), *Women's Work: The English Experience 1650-1914*, (London, 1998), p.243. Sylvia Seeliger, 'Hampshire Women as Landowners: Common Law Mediated by Manorial Custom', *Rural History*, (1996), pp.1-14.

¹¹⁷ For a fuller account see Lee Holcomb, *Wives and Property, Reform of the Married Women's Property Law in Nineteenth-Century England* (Toronto, 1983); Davidoff and Hall (1998), p. 243; Courtney Stanhope Kenny, *The History of the Law of England as to the effects of marriage on property and on the wife's legal capacity*, (London, 1870), p.15; Susan Staves, *Married Women's Separate Property in England 1660-1833*, (Cambridge, Massachusetts, 1990), pp.60 & 133; Ben Griffin, 'Class, Gender and Liberalism in Parliament, 1868-1882: The Case of the Married Women's Property Acts', *The Historical Journal*, (2003), pp.59-87.

The sources are the books of reference and associated plans deposited by the railway companies with Parliament and county Clerks of the Peace. They list the owners, lessees, occupiers and usages of the plots of land adjacent to a proposed railway and include information about trusts and trustees.¹¹⁸ Their accuracy is high since they were subject to scrutiny by Parliament, the public and competing companies. They have been used in a limited manner by Ward, Shea and Trew but not for the purposes of this paper.¹¹⁹ Railway routes were dictated mainly by commercial and geographical factors. The sampled schemes include built and unbuilt lines selected to provide representative geographical coverage.

The qualitative information from the books was converted into a quantitative form to construct an SPSS database containing 19,000 rows representing individual plots and 66 columns. The columns reported plot usages, parish characteristics, date of scheme and other variables derived from this information. The data revealed women owning property independently, with others, and with trusts. It showed that institutions were important landowners and co-owned land with women and men. For the purposes of this paper ownership and leasing have been classified into two types; firstly, women involved (on their own or with men and institutions) and secondly, no women involved (only men and institutions).

Table 1: *Cross tabulation of women's involvement and plot use*

Plot uses	Oxfordshire			Yorkshire			London		
	% of plots	% of plots with women owners	% of plots with women lessees	% of plots	% of plots with women owners	% of plots with women lessees	% of plots	% of plots with women owners	% of plots with women lessees
all	100.0	14.7	2.1	100.0	12.4	1.4	100.0	8.9	10.2
house	7.5	19.0	5.1	17.6	11.7	3.9	38.8	8.8	19.4
cottage	3.9	22.7	0.7	4.7	13.5	0.8	3.0	19.2	7.7
retail	0.8	29.3	5.2	1.5	15.2	0.0	5.1	11.5	17.9
agricultural land	58.2	12.4	1.4	50.2	13.3	0.7	28.3	8.5	1.1
domestic land	19.1	23.8	5.2	11.4	11.7	1.3	25.1	7.0	16.1
industrial	1.6	19.5	0.0	2.3	11.6	1.7	3.7	6.4	9.6

Table 1 shows that the proportion of all plots owned by women was highest in Oxfordshire (14.7 per cent) and lowest in London (8.9 per cent), although in London the proportion of plots leased was highest (10.2 per cent). The high ratio of leasing to ownership in London may be explained by the attraction of residing in London and the high proportion of land owned by male-controlled estates.

The propensity of women to specialize in owning land in a particular use can be measured by the ratio of the percentage of plots with that use that are owned by women to the percentage of all plots owned by women. Women specialized in owning houses (Oxfordshire), cottages (Oxfordshire and London) and domestic land (Oxfordshire), and in owning retail plots in every region. They only specialized in industrial uses in Oxfordshire.

¹¹⁸ If railway data were unavailable for any decade canal data were substituted. Data from 19,105 plots adjacent to 38 railways and six canals were analysed. Data were collected from Oxfordshire, West Yorkshire, Buckinghamshire, Essex, Suffolk, and Surrey record offices and the London Metropolitan Archive.

¹¹⁹ J.R. Ward, *The Finance of Canal-Building in Eighteenth Century England*, (Oxford, 1974), pp. 21-3; Gary Shea and Alex Trew, *Dynamic financial conditions and economic growth in the UK*, (The Economic History Society Conference, Exeter, 2007), pp. 239-40.

Women lessees favoured housing in each region, and retailing and domestic land in Oxfordshire and London.

These findings suggest that women have a preference for certain types of land and seek their ownership. They compete in a land market against non-women and those who value a plot most will outbid the others.

Studies indicate that women have a preference for housing as investments which generate a steady income.¹²⁰ Research about early business women suggests that they specialized in retailing or running lodging houses.¹²¹ In literary sources women indicate a preference to reside in genteel city suburbs or small market towns.¹²² Writers on gender studies have suggested that women are more risk adverse than men and would avoid speculative investments in favour of steady income rather than capital gain.¹²³ Same-sex altruism has also been identified as a potential trait; thus women owners may prefer leasing to other women rather than non-women. The legal position of women may also affect their preferences and this changed as a result of the MWPA's. The MWPA1 was not concerned with land but gave married women more security over their financial assets.¹²⁴ A study by Combs using data about the assets of 62 married, middle-class urban shopkeepers has suggested that this prompted a substitution of financial assets for land.¹²⁵ By contrast the MWPA2 gave married women the same rights over land as everyone else and this may have encouraged women to re-invest in land. Finally economic historians have shown an increased awareness by women of the widening range of investment opportunities, including land, available through the century and their willingness to embrace such opportunities.¹²⁶

These hypotheses can be examined simultaneously using a single logit regression equation. The dependent variable is whether a plot involves a woman or not. The independent variables comprise a set of dummy variables for land use, a set of parish characteristics and four time dependent variables. Parish characteristics include urban centrality, urban peripherality, and urban differentiation. An urban central plot is within one mile of the centre of a town of 15,000 inhabitants. An urban peripheral plot is over one mile but less than five miles from such a town and urban differentiation refers to a plot with general housing use in such specified areas. All parish characteristics refer to a single date, 1841, in order to keep geographical spatial and temporal factors distinct.

Regressions for each region are estimated separately as regional heterogeneity means that pooling data could give misleading results. Backward regression was used to eliminate variables that were not significant at a 10 per cent level. Only the final results are presented in table 2.

¹²⁰ Roderick Floud, *The People and the British Economy 1830-1914*, (Oxford, 1997), pp.65-66.

¹²¹ Nicola Phillips, *Women in Business 1700-1850*, (Woodbridge, 2006), pp.160-63,258; Alison K. Kay, 'A Little Enterprise of her Own: Lodging-House Keeping and the Accommodation Business in Nineteenth-century London', *The London Journal*, (2003), pp.41-53.

¹²² Elizabeth Gaskell, *Cranford*, (London, 2006)

¹²³ Josephine Maltby and Janette Rutterford, "'She Possessed Her Own Fortune': Women Investors from the Late Nineteenth Century", *Business History*, (2006), pp.220-53; David R. Green and Alastair Owens, 'Gentlewomanly capitalism? Spinster, widows, and wealth holding in England and Wales, c. 1800- 1860', *Economic History Review*, (2003), pp.510-536.

¹²⁴ Holcombe, (1983), pp. 177, 244.

¹²⁵ Mary Beth Combs, 'Wives and household wealth: the impact of the 1870 British Married Women's Property Act on wealth-holding and share of household resources', *Continuity and Change*, (2004), pp.141-163; Mary Beth Combs, 'Cui Bono? The 1870 British Married Women's Property Act, Bargaining Power, and the Distribution of Resource within Marriage', *Feminist Economics*, 12, (2006), pp.51-83.

¹²⁶ Mark Freeman, Robin Pearson and James Taylor, "'A Doe in the City": Women Shareholders in Eighteenth- and early Nineteenth-Century Britain', *Accounting, Business and Financial History*, Vol.16, (2006), pp.265-291.

Table 2: *Binary logistic backward likelihood ratio regression; reduced regression results*

variables	Oxfordshire		Yorkshire		London	
	Women owners	Women lessees	Women owners	Women lessees	Women owners	Women lessees
women owners		-1.401 (.000)		.631 (.017)		.469 (.012)
general housing	-.178 (.097)	-.482 (.004)	.241 (.023)	1.022 (.000)	1.294 (.000)	
retail	.542 (.068)			-17.921 (.996)	.533 (.025)	
agricultural buildings			.495 (.001)	.899 (.010)	.566 (.005)	.475 (.018)
agricultural land			.514 (.000)			-.671 (.051)
wood		-17.197 (.995)		1.327 (.039)		
domestic land	.605 (.000)	1.143 (.000)				.319 (.022)
waste	.700 (.017)				-19.068 (.998)	-18.226 (.998)
water	-.323 (.006)				-.428 (.082)	-1.324 (.029)
road	-.357 (.000)	-.689 (.006)			-.636 (.004)	-.854 (.000)
utilities						
rail	-2.125 (.037)					-18.367 (.998)
industrial		-17.729 (.996)			-.561 (.100)	
population per acre		.125 (.001)		-.100 (.000)	.010 (.000)	-.004 (.007)
av. no. people per house	-.200 (.012)		-.397 (.000)		-.283 (.000)	.574 (.000)
population below 20 years age	.029 (.019)	-.117 (.001)		.176 (.001)		.104 (.007)
percentage immigration	.039 (.000)	-.021 (.091)	.043 (.000)	.161 (.001)		
urban central			-.179 (.093)			
urban peripheral					-.397 (.022)	
urban differentiation					-1.583 (.000)	.774 (.000)
date	.012 (.000)	.035 (.000)	.014 (.000)	.125 (.000)	.014 (.002)	.027 (.000)
1843-46			.339 (.000)		.338 (.080)	1.199 (.000)
1 st Married Women's Act	-.263 (.037)	-1.980 (.000)	-1.921 (.000)	-5.001 (.000)	.591 (.004)	

2 nd Married Women's Act	-.645 (.000)		.817 (.007)		-2.063 (.000)	.524 (.011)
constant	-24.356 (.000)	-62.617 (.000)	-26.561 (.000)	-246.233 (.000)	-25.731 (.001)	-60.883 (.000)
No. of plots	7299	7299	7539	7539	4267	4267
χ^2	253.987	173.221	167.503	279.065	187.965	636.189
Degrees of freedom	7286	7288	7529	7529	4252	4252
significance	.000	.000	.000	.000	.000	.000
Cox & Snell R ²	.034	.023	.022	.036	.043	.139
Nagelkerke R ²	.060	.126	.042	.272	.095	.287

So far as ownership is concerned, the involvement of women was highest for general housing, in Yorkshire and London, although low for Oxfordshire, where ownership of domestic land was high. Women were involved in the ownership of agricultural buildings in Yorkshire and London. Their involvement in plots used for water, roads and railways was low since these were normally owned by public authorities or railway companies. Women's ownership was concentrated in parishes with a high population density but a low average number of people per house, with a high population under 20 years of age and a high percentage of immigrants from outside the county. This is consistent with the view that women's ownership is concentrated in middle class areas employing large numbers of young servants and young workers in service trades. The results suggest that these areas were not normally in large urban centres but in small market towns. Women's ownership of land increased steadily over time in all regions with a peak during the 'Railway Mania' in Yorkshire and London. This peak suggests that women may have been speculating in land which potentially could increase in value if it were purchased by railway companies and that they were therefore less risk adverse than has been suggested. This also links with evidence of women taking risks in buying shares in the first joint-stock companies.¹²⁷ MWPA1 discouraged ownership in Oxfordshire and Yorkshire but encouraged it in London whilst the second MWPA2 discouraged ownership in Oxfordshire and London (where the effect was particularly large) but encouraged it in Yorkshire. Both acts were therefore important but had different effects, thus suggesting nuances to the work of Combs who focused exclusively on the impact of MWPA1.¹²⁸

So far as leasing is concerned a woman was more likely to lease a plot if it was owned by a woman in Yorkshire and London but less likely in Oxfordshire. The pattern of leasing by use broadly follows the pattern for ownership except that retailing is not favoured to the same extent. Lessees do not avoid urban centres to the same extent as owners. MWPA1 discouraged leasing in both Oxfordshire and Yorkshire but had no effect in London whilst MWPA2 had no effect in Oxfordshire or Yorkshire but a positive effect in London.

Despite modest R² values all the regressions are highly statistically significant overall because of the large number of degrees of freedom. The negative value of the constant reflects the use of actual dates to measure a positive time trend. The results include a few insignificant variables that have large coefficients that have been retained by SPSS; these are accounted for by occasional multi-plot blocks of land that have the same type of owner and the same somewhat unusual use.

¹²⁷ B.L. Anderson and P.L. Cottrell, 'Another Victorian Capital Market: A Study of Banking and Bank Investors on Merseyside', *The Economic History Review*, Vol. 28, (1975), pp.598-615.

¹²⁸ Combs (2006), pp. 51-83.

This is the first large-scale study of the ownership of land to use railway books of reference as a source, and the first study of women's ownership of land to use evidence on individual plots of land. It has shown that in the nineteenth century women were increasingly involved in both the ownership and leasing of land, although the upward trends were partially reversed by the MWPA's. On average women were involved in the ownership of 12 per cent of plots and in the leasing of 4.6 per cent of plots. Not all the remaining land was owned by men; much was owned by institutions, albeit that they were normally male dominated.¹²⁹ There are significant regional differences, which could be explained by women being attracted to semi-rural areas near small towns. This could be regarded as a 'Cranford effect' after Gaskell's novel about women property owners in a small Cheshire town.¹³⁰

¹²⁹ Avner Offer, *Property and Politics 1870-1914: Land ownership, Law, Ideology and Urban Development in England*, (Cambridge, 1981), PP.93-5.

¹³⁰ See also Anthony Trollope, *The Vicar of Bullhampton*, (Oxford, 1978), pp.58-64.

The role of the firm in occupational feminization: the case of the Swedish commercial bank sector 1865-1938

Kajsa Holmberg, Lund University
(kajsa.holmberg@ekh.lu.se)
Supervisor: Associate Professor Maria Stanfors

Introduction

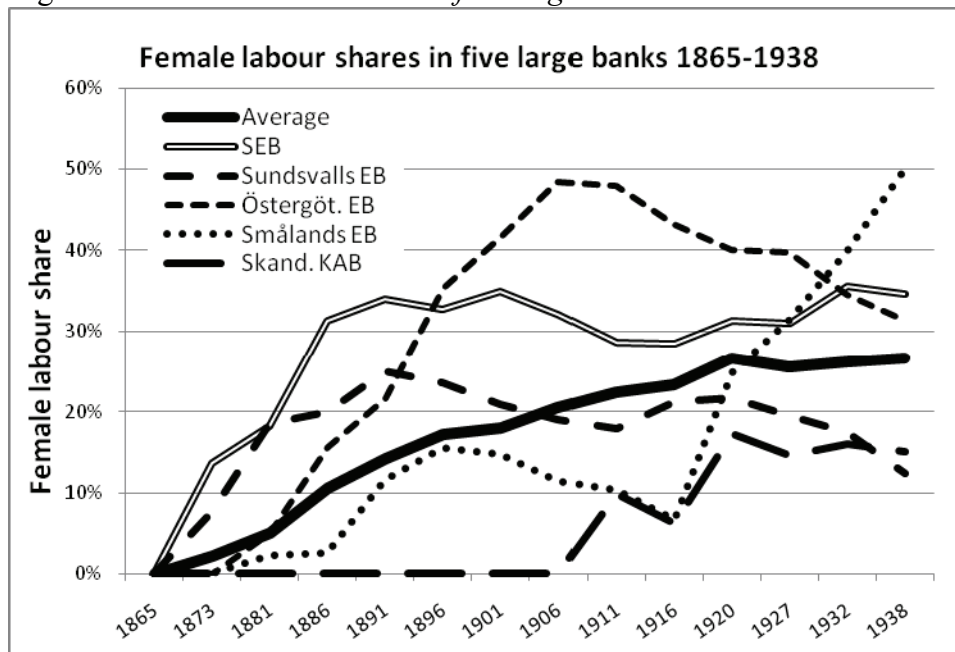
In the last centuries countless occupations, including secretary, elementary school teacher, and pharmacist, have gone from being male to female dominated. Of the feminized¹³¹ occupations, bank teller has experienced one of the most radical transformations, in Sweden as well as the rest of the western world. Prior to the late nineteenth century, the profession was exclusively male worldwide. That changed in 1864, when the Swedish commercial bank *Stockholms Enskilda Bank* became the first in the world to hire a woman; Ms Alida Rossander, presumably the world's first female bank teller.¹³²

Meanwhile, researchers have been trying to explain why the sex composition of occupations changes. Most of this work has been carried out either in the form of case studies of single firms, or on an aggregated sector level. This has brought a view of feminization as a uniform process with systemic causes.¹³³ With the Swedish commercial bank sector as the case in point, I argue that this view does not hold up to empirical scrutiny. Between 1865 and 1938 the sector increased its female labour share from zero to approximately 30 per cent. Meanwhile, very large inter-company differences in the female labour share – ranging from 0 to 80 per cent in a given year – persisted throughout the entire 50-year period. The aim of my paper is to explain these differences. More specifically, to test whether some of the causes of feminization traditionally emphasized in case and sector level studies can explain large heterogeneity on the intermediate level of the firm. The degree of heterogeneity is illustrated in figure 1 below, which shows the development of the aggregate female labour share compared to that in five large banks active throughout the 70-year period.

¹³¹ The term feminization has two main aspects. Quantitatively, it denotes a shift in the sex composition of an occupation towards an increasing female labour share; qualitatively, a shift in the gender coding of occupational tasks from male to female. In this paper, feminization is used in the quantitative sense.

¹³² Board protocol from *Stockholms Enskilda Bank* of 2 July 1864.

¹³³ Barbara Reskin and Patricia Roos, *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations* (Philadelphia, 1990), 15.

Figure 1: *Female labour shares in five large commercial banks 1865-1938*

Sources: Sveriges Bankmatrikel (1886-1938); Sveriges Handelskalender (1865-86), own calculations

Previous research

There is a vast international literature on occupational sex segregation and, to a lesser extent, female inroads into a number of professions in several Western countries.¹³⁴ This research has largely taken the form of case studies, and includes some studies on banking.¹³⁵ Regarding comparative work on the firm level, there are a number of such studies on the extent and determinants of sex segregation and discrimination, and¹³⁶ a few such studies can also be found on banking.¹³⁷ However, to my knowledge, virtually no studies of this type examine the process of feminization, or the period prior to the Second World War. In consequence, the results from my study are relevant to a wider Western context.

Regarding the feminization of the Swedish commercial banks, there are no previous historical studies of this sector in a labour market perspective of any kind. The research on the Swedish bank sector as such is extensive, but both the aspects of labour and differences between firms are yet to be investigated in a systematic manner.¹³⁸ A crucial step in that direction is the usage of data covering the whole sector and not just particular firms.

¹³⁴ See works by Barbara Reskin & Claudia Goldin; e.g. Reskin & Roos, *Job Queues, Gender Queues*; Claudia Goldin, *Understanding the Gender Gap: An Economic History of American Women* (New York, 1990).

¹³⁵ Chloe E. Bird, 'High Finance, Small Change: Women's Increased Representation in Bank Management,' in *Job Queues, Gender Queues: Explaining Women's Inroads Into Male Occupations*, ed. Barbara Reskin and Patricia Roos (Philadelphia, Pa., 1990), 145-66; Brian L. Rich, 'Explaining Feminisation in the US Banking Industry, 1940-1980: Human Capital, Dual Labour Markets or Gender Queuing?,' *Sociological Perspectives* 38 (No 3, 1995): 357-80; Myra H. Strober and Carolyn Arnold, 'The Dynamics of Occupational Segregation Among Bank Tellers,' in *Gender in the Workplace*, ed. Clair Brown and Joseph Pechman (Washington D.C., 1987), 107-48.

¹³⁶ See works by James Baron and William Bielby, e.g. James Baron and William Bielby, 'Bringing the firms back in: stratification, segmentation, and the organization of work,' *American Sociological Review* 45 (1980): 737-65.

¹³⁷ Orley Ashenfelter and Timothy Hannan, 'Sex Discrimination and Product Market Competition: The Case of the Banking Industry,' *Quarterly Journal of Economics* 101 (No 1 1986): 149-174; Timothy Hannan and Ferdinand Mavinga, 'Expense Preference and Managerial Control: The Case of the Banking Firm,' *The Bell Journal of Economics* 11 (No 2 1980): 671-682; Robert Szafran, 'Female and Minority Employment Patterns in Banks: A Research Note,' *Work and Occupations* 11 (No 55 1984): 55-76.

¹³⁸ For an overview, see Tom Petersson, 'Det svenska banksystemet 1820-2005' in *Sverige-en ekonomisk och*

Theoretical considerations

I argue that the major explanations for the large inter-firm differences in the female labour share are found on the demand side, and not on the supply side in human capital related qualitative differences between the sexes. Throughout the entire period of study, the banks had low demands on formal education, and bank telling did not pay substantially better than industrial or even domestic work. Employment conditions were insecure and the sector was one of the last to give up its marriage bar, in 1939. Still, bank telling was considered far more attractive than almost any other attainable job for a woman of that time, as demonstrated by the fact that hundreds of female bank tellers postponed or abstained from marriage in order to retain their jobs, when they could have combined work and marriage by choosing another clerical occupation.¹³⁹

On the demand side, perhaps the most commonly emphasized factor behind feminization is technological change, which is associated with standardization, automation, and all around de-skilling of jobs. This in turn connected to feminization via the concept of sex-typing. Sex-typing refers to the continuous social labelling of activities and occupations as suitable for people of a certain sex. Central to the allocation of labour through sex-typing is the ascription of different qualities and characteristics to people of different sexes. For example, women are commonly stereotyped as patient, caring and docile, suitable for light, safe, repetitive jobs requiring dexterity rather than actual skill. The opposite is held for men, who presumably have a natural disposition to lead and perform intellectual work with a high degree of craftsmanship. In this way, sex-typing forms the expectations of both labour and employers on who is appropriate or even conceivable in a certain job position, and a gender segregated labour market is created.¹⁴⁰

During the period in question, women were considered suited for subordinate, dead-end positions where they could perform standardized routine work awaiting marriage. An increased congruence between perceived female characteristics and bank work would thus not only project women as a more logical labour choice for employers, but also make recruitment of women less provocative to the banks' male staff and customers – which in turn would lower the risk that a new labour demographic would cause strikes, boycotts or an overall poor working climate with a negative impact on productivity.¹⁴¹

From the 1890s onwards, the Swedish commercial bank sector expanded at an increasingly rapid pace, which manifested itself both in total sector turnover, geographical coverage, and staff. During the 1910s, this process translated into a massive growth in the size of the bank firms, through mergers and takeovers in the wake of increased competition.¹⁴² According to numerous contemporary sources, this concentration of the sector enabled a shift to large-scale production. Work routines were mechanized and standardized, labour was re-organized along Tayloristic lines, and a large tier of staff was created at the bottom of the occupational hierarchy, performing the exact type of routine work that was considered suitable for women.¹⁴³ The hypothesis is thus that the degree of large scale production had a

social historia, ed. Susanna Hedenborg (Lund, 2006), 371-96.

¹³⁹ Bankernas Förhandlingsorganisation, *Banklönerna 1937* (Stockholm, 1938), 59, 184; SOU, *Betänkande angående gift kvinnas förvärvsarbete*, 113; 27–31; SOS, *Sociala Meddelanden* (Stockholm, 1919-1929); SOS, *Lönestatistisk Årsbok* (1929-1976).

¹⁴⁰ Bradley, *Men's Work, Women's Work*; Padavic and Reskin, *Women and Men at Work*; Barbara Reskin and Heidi Hartmann, ed., *Women's Work, Men's Work: Sex Segregation on the job* (Washington D.C., 1986).

¹⁴¹ Padavic and Reskin, *Women and Men at Work*; Reskin and Hartmann, *Women's Work, Men's Work*.

¹⁴² Lindgren, *Bank, investmentbolag, bankirfirma*; Gunnar Palmquist, *Segrande samverkan: historik till Svenska Bankmannaförbundets 75-årsjubileum* (Falköping, 1962); Söderlund, *Skandinaviska banken i det svenska bankväsendets historia 1914-1939*.

¹⁴³ *Bankvärlden* 11 (1918): 171; *ibid.* 10 (1922): 143; 12 (1923): 205; 4 (1926): 53; 9 (1929): 205-207; 10 (1930): 251; Åke Bergqvist, 'Organisatoriska och tekniska förändringar inom bankerna under de senaste sjuttiofem åren', *Ekonomisk Revy* 7 (1955): 430-42.

positive correlation to the female labour share. Such a link has not previously been studied or established at the firm level.¹⁴⁴

Data and measurements

The main empirical material of the study is a previously unexplored full matriculation register of all firms and staff in the Swedish bank sector (*Sveriges Bankmatrikel*). The registers were issued approximately every fifth year from 1886, and have been used to construct a database on all white collar workers and firms in commercial banking between 1886 and 1938. In total, the database comprises approximately 48,000 employee-year and 550 firm-year observations, or 15,000 unique employees and 125 firms. The database contains detailed micro-level information on a wide range of labour characteristics on an individual level, such as education, birth place, and employment history. From this I use the information on sex, firm, and office of employment. For firms, location, office size, and staff demographics are known and made use of. For firms, supplementary information on business activities, primarily the volume and distribution of funds and customers, is drawn from official data from Statistics Sweden.

The female labour share in each bank and year is the study's dependent variable. The main hypothesis is that firms with large scale production of bank services would have a higher demand for employees engaged in routine office work, thereby demanding and hiring a larger share of women. Given the lack of a direct measure of the banks' mode of production, mean office size, as measured by number of employees, will be used as a proxy.

I argue that office rather than total firm staff size ought to be the key determinant of the firm mode of production. In the early twentieth century bank branches functioned largely as independent providers of the same services. An office with three employees would thus have had very limited opportunities of large scale production even if it belonged to a firm with two thousand employees in total. Naturally, large firms are relatively more likely to have large offices, but this relationship is quite weak.¹⁴⁵ Moreover, as pointed out by Arrow, using the bank total number of employees as a measure bears the risk of creating an endogeneity problem in the model.¹⁴⁶ Since a firm with an enacted preference for male labour pays higher average wages, this would theoretically reduce the number of employees said firm has the ability to pay. Consequently, there could be an inverse relationship between, in this case, female labour share and total staff size. In sum, the expectation is a positive relationship between mean office size and the female labour share.

Given the lack of previous research on feminization on the firm level, I also want to explore the potential impact of other firm characteristics, namely business orientation, location, and corporate form on the female labour share. To test whether differences in business orientation impact the female labour share in firms, I include variables for the ratio of funds and customers in savings to capital accounts, and the ratio of funds and customers in lending against shares, and name as security. To investigate whether there is an effect of location, I also include dummies for whether the firm's headquarters are located in one of the metropolitan cities or counties of Malmö, Gothenburg or Stockholm. Additional dummies are included for the three corporate forms present in the Swedish commercial bank sector during the period in question; Private Responsibility, Limited Liability and People's Banks.

The heterogeneity of the different kinds of banks and firms could potentially hide differences in characteristics with an effect on the female labour share. To control for this, I employ a fixed effects (FE) regression model alongside pooled OLS and Tobit to analyse the

¹⁴⁴ Jacobsen, *The Economics of Gender*, 192-193; Reskin, McBrier and Kmec, 'The determinants and consequences of workplace sex and race composition', 342.

¹⁴⁵ The correlation coefficient between total staff and mean office size is approximately 0.6.

¹⁴⁶ Kenneth Arrow, 'The Theory of Discrimination' in *Discrimination in the Labour Markets*, ed. Orley Ashenfelter and Albert Rees (Princeton, NJ., 1974), 3-33.

determinants of the female labour share in firms.¹⁴⁷ Whereas the OLS examines differences in the female labour share between firms, the FE model explores the determinants of changes in the female labour share within firms over time. In doing so, the model controls for unobserved, time-invariant heterogeneity between firms, such as differing recruitment practices or management cultures. To control for unobserved heterogeneity also between years, I include time dummies for each year of observation, which makes the final model a two-way FE. Restricting the sample on the basis of firm size, corporate form, year or location does not significantly alter the results.

Preliminary results and conclusions

The preliminary results indicate that mean office size has a significant effect on the female labour share. However, interestingly, this does not appear to be through determining the organization of labour or mode of production – mean office size is generally found to be a relatively poor predictor of the share of lower level staff. This is especially true for large firms, where the positive effect of office size on the female labour share is not only reduced with further office growth, but eventually reversed. The result holds when the analysis is disaggregated to office level, looking at absolute individual office sizes versus their female and lower level labour shares. This in turn has implications for the hypothesized connection between feminization and large scale production, and suggests that this factor was actually not as important a determinant of feminization as traditionally believed. It also poses new questions – if office size did not determine the job-type composition and organization of labour, what did?

With regard to location, the most striking finding is a strong and statistically significant negative effect on the female labour share of having headquarters in or around Gothenburg on the Swedish west coast. This is in line with previous findings that the Gothenburg area was traditionalist and patriarchal, and as such distinctly different from the other metropolitan areas. For example, the degree of unionization was both lower and differently dispersed in Gothenburg compared to the other major cities.

I also find pronounced differences in both the level and development of the female labour share by corporate form. Private responsibility firms have a substantially lower mean female labour share than the other types of firms, and spend most of the period in question catching up. Meanwhile in the People's Banks, the female labour share appears to follow a pronounced counter-cyclical pattern, not seen in other firms. Thus, limited liability firms are the only ones without a distinct or statistically significant pattern in this respect. While these differences by corporate form could be tentatively explained by inherently different degrees of risk aversion and management structure, this an area that warrants further studies.

In sum, the findings from this paper are a strong testament to the relevance and potential of comparative studies in general, and on the firm level in particular. The findings suggest that traditionally emphasized factors behind feminization, such as the size of the workplace, have questionable validity when put to a comparative test. Further comparative research on the firm level thus appears crucial for learning more about changes in the labour composition of occupations, whether by sex, ethnicity, age or any other factor.

¹⁴⁷ The Tobit is run to provide a comparison with and robustness check of the OLS, given the substantial amount of zeros in the variables.

Monopoly and private trade: ‘rival empires of trade in the Orient’ revisited, 1600-1800

Chris Nierstrasz, University of Warwick
(j.c.nierstrasz@warwick.ac.uk)
Supervisor: Professor Maxine Berg

In his classic study of the struggle between ‘rival empires of trade in the Orient’, Holden Furber was alerted to some fundamental differences in the way in which the East India companies organized their trade in Asia. He noted that these differences formed part of the explanation of the success and failure in the rivalries between these empires. Throughout the period under investigation, profit from trade in Asia, at least in the case of the Dutch East India Company (VOC, hereafter) and of the English East India Company (EIC, hereafter), served as a means of financing trade to Europe. To make a profit in Europe at the lowest possible cost, both the VOC and the EIC were determined to send the absolute minimum amount of silver possible to Asia. Furber argues that the two companies each made a different choice in their intra-Asian trading policies: the VOC pursued a monopoly and the EIC opted for freedom of trade. Part of the success of the VOC in the seventeenth century can be attributed to its monopoly.¹⁴⁸ Part of the reason for the reversal of roles in the dominance between the EIC and the VOC in the eighteenth century was the former’s advocacy of the policy of freedom of trade.¹⁴⁹ The main aim of this paper is to question this static view of the organization of intra-Asian trade. It will attempt to argue that neither company was dogmatic in its policy on intra-Asian trade nor was there a clash of systems. Companies made careful assessments of the financial possibilities and priorities, while weighing its servants’ interests in the process.

Limiting the export of silver

All companies saw the profits gained from intra-Asian trade as a way to limit their export of silver to Asia. Using various publications, it is possible to reconstruct the amount of silver sent from Europe to Asia in both the seventeenth and the eighteenth century and these two amounts will be related to changes in policy. Om Prakash has already given a good overview of the Dutch and English exports of silver, which can be supplemented by Bowen’s figures of the East India Company exports of silver, 1760-1833.

¹⁴⁸ Jonathan Israel, *The Dutch Republic, its Rise, Greatness, and Fall 1477-1800* (Oxford 1998), 941-943 and Els Jacobs, *Koopman in Azië* (Zutphen 2000), 1-4.

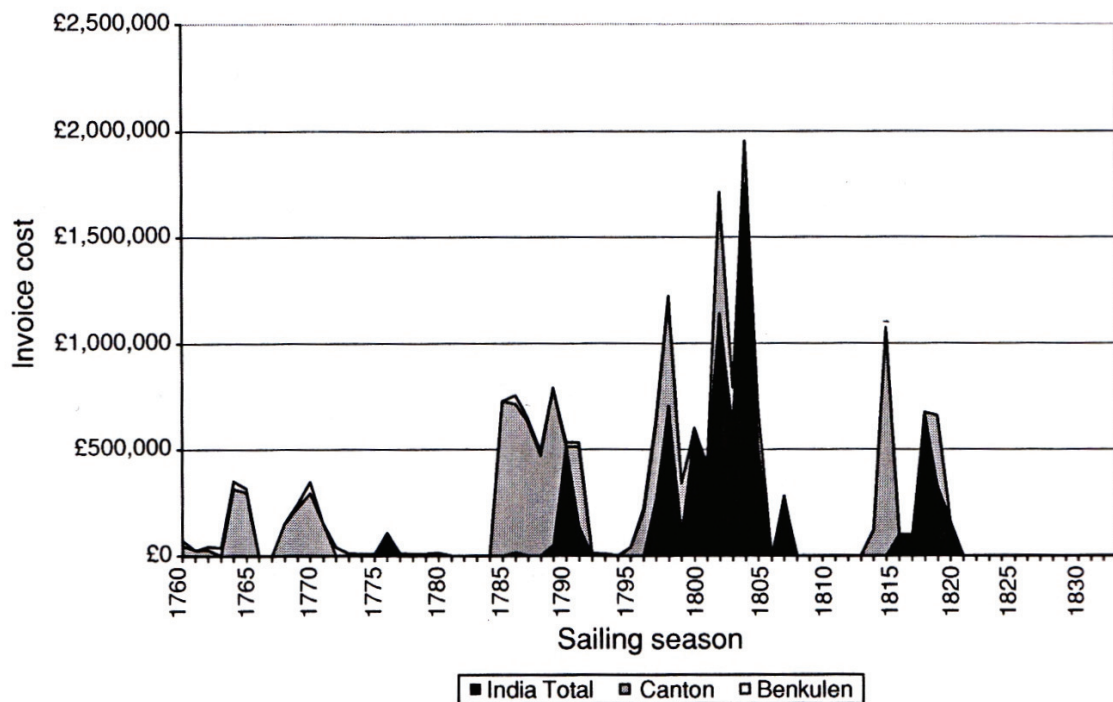
¹⁴⁹ Holden Furber, *Rival empires of trade in the orient, 1600-1800* (London 1976), 275, (...) *The Dutch company’s restrictions on the ‘private trade’ of its servants prevented the growth of a Dutch private country fleet at all comparable to the British.* (...).

Table 1: *Average annual value of treasure exported by the English and the Dutch East India companies to Asia, 1601-1794*
(in million florins rounded off to the nearest thousand; £1=f.12-Rs 8)

Years	English East India Company	Dutch East India Company
1601-10	0.143	0.651
1611-20	0.588	1.019
1621-30	0.484	1.236
1631-40	0.452	0.850
1641-50	n/a	0.920
1651-60	n/a	0.840
1661-70	1.073	1.210
1671-80	3.053	1.129
1681-90	4.058	1.972
1691-1700	2.561	2.860
1701-1710	4.276	3.927
1711-20	4.970	3.883
1721-30	6.513	6.603
1731-40	5.914	4.012
1741-50	7.236	3.827
1751-60	7.782	5.896
1761-70	n/a	5.354
1771-80	n/a	4.832
1781-90	n/a	4.790
1790-94	n/a	4.243

Source: Om Prakash, 'Precious-metal flows in India, Early Modern Period', in: Dennis Flynn, Arturo Giraldez and Richard von Glahn, *Global Connections and Monetary History, 1470-1800* (Aldershot 2003), 152, table 6.1.

Figure 1: *East India Company exports of silver, 1760-1833*



Source: H.V. Bowen, *The Business of Empire: The East India Company and Imperial Britain, 1756-1833* (Cambridge 2006), 225, figure 8.1.

Scrutiny of the table and figure reveals that initially the VOC did run into some costs in its efforts to establish itself, but after 1630 it succeeded in limiting its exports of silver by resorting to using the profits from its intra-Asian trade. After 1680, there was a sharp increase in exports of silver which only ended after 1730, when exports fell again. Subsequently, it never again achieved the former level of success, but the VOC succeeded more or less in stabilizing its exports of silver after 1750. In the seventeenth century, the EIC was not very successful and it faced an almost constant rise in the amount of silver exported between 1601 and 1765. At that point, if we accept Bowen's figures, suddenly the EIC hardly needed to export any silver at all until 1785. Only shortly after 1765 was some money sent to China, but as country traders began sailing to Canton¹⁵⁰ and demanded bills of exchange on Europe, they quickly obviated the need to send silver to China. After 1785, the EIC began exporting silver again almost until the end of the period under investigation here. It has to be borne in mind that both companies augmented their exports to Europe substantially as they moved from a concentration on spices to include cotton textiles, tea and coffee in their eighteenth-century portfolios.¹⁵¹ In other words, less silver was exported from Europe, but more goods were exported from Asia: what made this possible?

Intra-Asian trade

Direct or indirect profits from intra-Asian trade are completely or partially responsible for the cuts in the exports of silver. In the business of the VOC, the silver export between 1630 and 1680 was simply replaced by profit from trade. It is difficult to make the substitution completely visible, as there was no substantial period of trade before this development. In the EIC, a large part of the silver export was replaced by income from taxation, but part of it was also replaced by income from private trade, the fruits of the country trade between India and China after 1768. In private trade the influence was indirect, derived from the taxation of private trade or from the remittance of fortunes through bills of exchange. In the debate, both methods of organizing intra-Asian trade are viewed as offering some advantages and disadvantages. The monopoly focused all possible profit on the European trade and Asian products were obtained at a better price,¹⁵² but this required constant attention and capital was not very flexible towards changing trade patterns. Private trade was less focused on the profits of the company, but required less attention, less capital and was considered flexible.¹⁵³

However, a glance at the regulations on intra-Asian trade of both companies reveals that neither was dogmatic in insisting on one system of trade.¹⁵⁴ In fact, the shifts in their policies are crucial to grasping how companies worked and what developments influenced a change of course. In the first period of research, 1600-80, initially both the Dutch and the English strove to achieve a monopoly which even led to a treaty being made in which they agreed to respect each other's monopolies over their respective subjects. As the VOC captured most of the advantages of the spice trade, it was very successful in breaking open markets in Asia and

¹⁵⁰ Chris Bayly, 'The British Military-Fiscal State and Indigenous Resistance India 1750-1820', in Stone, *Imperial State at war*, 340 and Peter Marshall, *East Indian Fortunes, The British in Bengal in the Eighteenth Century* (Oxford 1976), 198-9.

¹⁵¹ Femme Gaastra, 'De Verenigde Oost-Indische Compagnie in de zeventiende en achttiende eeuw.' *Bijdragen en mededelingen betreffende de geschiedenis der Nederlanden* 91 (1976) 249-272.

¹⁵² Femme Gaastra, *De geschiedenis van de VOC* (Zutphen 2002), 20, 119 and 127; Jacobs, *Koopman in Azië*, 11-19.

¹⁵³ Bruce Watson, *Foundation for Empire, English Private Trade in India 1659-1760* (New Delhi: Vikas, 1980), 17, (...) we can see (...) with those of the Englishmen (...).

¹⁵⁴ J.K.J. de Jonge, *De opkomst van het Nederlandsch gezag in Oost-Indië* ('s-Gravenhage 1862-1909), Volume 10, xix.; J. de Hullu, 'Een advies van Mr. Pieter van Dam, advocaat der Oost-Indische Compagnie, over een gedeeltelijke openstelling van Compagnie's handel voor particulieren, 1662' *Bijdrage tot de taal-, land-, en volkenkunde van Nederlands-Indië* ('s-Gravenhage, 1918) volume 74, 267-298. P. van Dam, *Beschryvinge van de Oostindische Compagnie*, edited by F.W. Stapel and C.W.Th. van Boetzelaaer, book I, part I ('s-Gravenhage 1927), xvii.

building a profitable monopoly in Asian trade. As the EIC was unsuccessful in its attempt to institute a similarly profitable monopoly, in 1667 it decided to abolish the monopoly and free up intra-Asian trade to its servants and subjects.¹⁵⁵

In the second period, 1680-1740, the English slowly made private trade work, and mostly from the 1720s, it is said to have gained momentum. The VOC was being confronted with new problems. Its monopoly still remained profitable, albeit less profitable than before because of rising costs. This prompted more silver exports from Europe, required among other purposes to pay for the increasing stream of different new products. Debts in the Republic of Seven Provinces rose until in 1736 the Gentlemen XVII, the Directors of the VOC, decided to step in and limit the loans. The EIC did not fare much better and its subjects were not successful enough in private trade for it to be able to reduce the export of silver.

In the third period, 1740-80, both the VOC and the EIC embarked on a radical change of course. As not enough money was coming in from Europe and the monopoly was not able to raise enough money, the VOC took the radical step of commencing to allow private trade, although still keeping its most profitable commodities under monopoly.¹⁵⁶ The less profitable of its former monopoly were opened to its subjects, as the company shrewdly assessed what it wanted and what it did not, until 1796.¹⁵⁷ In essence, this decision meant directing investment away from intra-Asian trade towards European trade, as the turn-over in the VOC's intra-Asian monopoly was halved in the period 1750-95. The loss of income from the monopoly was partly compensated for by allowing more bills of exchange on Europe from 210 million guilders in the eighteenth century against 30 million in the seventeenth.¹⁵⁸ The EIC experienced a different development. As it acquired territory in Bengal it obtained enough revenue from taxation to pay for exports and could limit its silver exports to India. When a successful private trade was instigated between Bengal and China, less silver was also sent to China. The EIC also decided that its servants, who quickly became rich 'nabobs', could no longer participate in the intra-Asian trade, leading to the ascent of British Agency houses in intra-Asian trade.

In short, neither company was dogmatic in its choice of either monopoly or freedom of trade. Apparently, there were disadvantages in allowing or not allowing servants the right to private trade. What was the disadvantage of allowing private trade to servants?

Private trade as remuneration

If the choice either to pursue a monopoly or to allow servants to participate in private trade was not dogmatic and decided according to the exigencies of the companies, what did private trade or monopoly mean from the perspective of the servants? The most definitive source about Dutch private trade is the correspondence of Lubbert Jan van Eck (letters for the period 1754-65).¹⁵⁹ Using this key source, even Furber's conclusions on private trade can be reinterpreted.

The first conclusion is that servants displayed a more ambiguous attitude towards private trade than might have been expected. Under the earlier system of VOC monopoly, servants did profit to a lesser extent than they might have done under private trade, but they did not have to take any risks as they simply profited from the work and risk taking of the company. Van Eck's correspondence reveals some of the stresses conducting private trade

¹⁵⁵ Marshall, *Fortunes*, 19.

¹⁵⁶ Chris Nierstrasz, 'Reguleren of Corrumperen? De VOC en hervormingen in de Privé-handel (1743-1799)', *Tijdschrift voor Zeegeschiedenis*, October 2006.

¹⁵⁷ Schooneveld-Oosterling, *Generale Missiven*, Volume 11; Collectie Alting, Consideration, vrije vaart in Souratta, f38. NA, Hoge Regering, Extract Generale Resolutien, 307, 259-261. NA, High Government, 20 November 1745, Extract of a circular missive, 307, f351-352. ANRI, 4516, July 1783; ANRI, 2211, regulations from 1771 until 1780.

¹⁵⁸ Femme Gaastra, 'Particuliere geldstromen binnen het VOC-bedrijf 1640-1795'. Van Gelderlezing 2002.

¹⁵⁹ Nationaal Archief, Den Haag, Archive of L.J. Baron van Eck.

caused servants. Servants would have had to invest their own capital in trade which meant running a risk and wait for the resultant profit or loss. They were obliged to put their trust in partners over whom they had no control. As such private trade was a last resort for the Company in remunerating its servants.¹⁶⁰ In order to balance the loss in security, the VOC servants demanded a higher stake in the profit and simply declined to pay tax to the VOC. In this climate, a strong hierarchical and regional control was imposed on private trade. The higher-ranking VOC servants made sure that they, and not their lower-ranking underlings, would reap the most profit from private trade. As seniors, they had waited a long time for opportunities to enrich themselves and they did not want to share any good fortune with junior servants. Other outsiders, like free burghers, the Dutch version of free merchants, were also forced to take second place or were simply kept under control by imposing a tax on them.

Ways of acquiring income other than private trade found greater favour with the VOC servants. In the hierarchy of most preferred places to work, the areas where private trade was allowed, were less popular than areas where the VOC maintained colonies. Income from government was easily obtainable. In Asia a strong gift-giving culture to grease the palms of authority was rife. Whatever the morality of the custom, it was indubitably much less risky than private trade. Van Eck's income from his period as Governor of Ceylon, where private trade was not allowed, is striking. He made 300,000 of his 600,000 guilder fortune in three years in Ceylon without resorting to private trade and not in his earlier 20-year long career in private trade.

In the English literature, there are ways of finding out the view points of servants on private trade. Different stories about how they excluded others, mainly through wielding the weapon of taxation, are known. Before the conquest, servants had already tried to exclude free merchants from the trade from Bengal by imposing a higher tax on their trade.¹⁶¹ They also saw trade of certain area as their possession.¹⁶² The best known example of such proceedings is the monopolization of the salt, betel-nut and tobacco in Bengal by several highly placed servants there.¹⁶³ The resulting radical increase of income after Plassey, partly fuelled through military expansion in combination with new private trade possibilities, is the main reasons the Directors in England decided to ban EIC servants from participating in private trade. As the servants also had other ways of finding remuneration of similar proportions to and probably exceeding that of VOC servants in the regions they controlled, it was no longer thought necessary to let them pursue private trade.¹⁶⁴ This decision probably marked the beginning of a major trading innovation, the Agency House, in which servants invested while other English subjects outside the EIC were left to conduct intra-Asian trade. The fact that the Dutch were much less able to the conquest of colonies might be part of the reason an innovation in the direction of Agency Houses did not take place in their case and Dutch private trade and the VOC quickly lost to this new form of competition in Asia.¹⁶⁵

Conclusion

In this paper a comparison has been made between Dutch and English intra-Asian trade in the period 1600 to 1800. Furber's assumption of a clash of differently organized empires of intra-Asian trade proves too simple as both the EIC and the VOC structurally changed their policies on intra-Asian trade to adapt to new challenges. Charting these changes helps us to understand

¹⁶⁰ Nicholas Dirks, *The Scandal of Empire, India and the Creation of Imperial Britain* (London 2006), 38, 'If the Company allowed no private trade, their servants must starve'.

¹⁶¹ Marshall, *Fortunes*, 54 and 74; Watson, *Foundation*, 119 and 135.

¹⁶² Watson, *Foundation*, 126.

¹⁶³ William Bolts, *Considerations on India affairs; particularly respecting the present state of Bengal and its dependencies* (London 1772), Volume I, 164-166.

¹⁶⁴ Dirks, *Scandal*, 53 H.V. Bowen, *Elites, Enterprise and the Making of the British Overseas Empire 1688-1775* (New York 1996), 184.

¹⁶⁵ Marshall, *Fortunes*, 46.

changes sweeping through Asia in the eighteenth century. The views of servants of both companies on private trade simply underline and reinforce this new analysis, while a more subtle and complex explanation for the change in dominance between the EIC and the VOC emerges.

Trust and trade in the middle Atlantic: the Liverpool-New York merchant community, 1763-1833

Emily Buchnea, University of Nottingham
(ahxeb@nottingham.ac.uk)
Supervisor: Dr Sheryllynne Haggerty

Introduction

This paper will introduce the wider research project and present a range of trends identified from the primary quantitative research completed to date. The larger research project examines the Liverpool-New York merchant community within the context of an Atlantic community and economy. The Atlantic is a 'shared space', an arena for exchange in all forms. If one could define an Atlantic identity it would be a complex infusion of cultures and the 'Atlantic community', a diverse body of people, materials, and cultures from four different continents constantly moving and adapting to the environment in turn.¹⁶⁶ Thus the Atlantic cannot be defined purely within the limits of European history. What can be said, however, is that the early modern era saw the beginnings of European influence in the Atlantic through 'empires of expansion'.¹⁶⁷ From the fifteenth century these empires began to link their coasts with the Americas, creating cross-oceanic avenues of trade and communication permanently altering the composition of European, American, and African societies.

Beginning in the sixteenth century, several British chartered merchant companies began sending ships to the Americas in search of profit.¹⁶⁸ Merchant companies, mostly comprised of London merchants, controlled much of Britain's international trade. The London companies were eventually replaced by individuals who possessed varied skill-sets and backgrounds. The small merchant houses that formed in lieu of the merchant chartered companies had taken over trade in the Thirteen Colonies almost entirely by 1680. As competition increased, the British focused their trade increasingly outwards in several directions; east and south to North Africa, the gulf of Guinea, India, and the Far East and westward across the Atlantic. This period in British history marked the beginning of what is sometimes called a 'mercantilist' era, one that saw the growth of European competition, especially for gold and silver, capitalist commerce, increased national wealth, and the means to grasp power through the control of popular trade routes. Thus it is suitable to undertake a study of two ports that were central to the growth of Atlantic commerce during the period 1763-1833, Liverpool and New York.

Liverpool and New York

The British western ports had locational advantages in the North Atlantic and therefore trade for these ports, notably Liverpool, became increasingly 'Americanized' during this period. The growth of the Anglo-American market during the American colonial period created a long-lasting commercial bond that would continue even after 1783.¹⁶⁹ For North Atlantic Anglo-American trade, the most significant British port was Liverpool in the late eighteenth

¹⁶⁶ Term coined by Walter Lippmann during his term as assistant to the secretary of war, Newton D. Barker. Quoted in Ronald Steel, *Walter Lippmann and The American Century* (Piscataway, NJ: Transaction Publishers, 1999), p. 111.

¹⁶⁷ Anthony Padgen, *Lords of All the World: Ideologies of Empire in Spain, Britain and France c.1500-1800* (New Haven: Yale University Press, 1995), p. 2.

¹⁶⁸ The British Crown offered charters to groups of merchants in order to ensure a British presence in the Americas; the Virginia Company, founded in 1606, is an example of this initiative. J. H. Elliot, *Empires of the Atlantic World: Britain and Spain in America, 1492-1830* (New Haven: Yale University Press, 2006), p. 42.

¹⁶⁹ Sheryllynne Haggerty, 'The Structure of the Philadelphia trading community on the Transition from Colony to State,' *Business History* 48 (April 2006), 171-92.

century. A hub of diverse trades and in a prime position to avoid inter-continental skirmishes, Liverpool was a noticeable presence in the Atlantic economy from the eighteenth century onwards. Much of this was due to a dominant West Indian – West African element in Liverpool, which drew the port into the slave, sugar, tobacco, and coffee trades.¹⁷⁰ Liverpool's involvement in Atlantic markets and resulting unequalled success can be attributed largely to the versatility of the merchants and the vast range of trades coming in and out of the port.

Members of Liverpool's trading community would eventually find their trading pursuits on the shores of an immense urban landscape perceived as 'a stunning, to some even horrifyingly mixed society.'¹⁷¹ New York, like Baltimore, Boston and Philadelphia became a major entry point for vessels coming from ports in Europe and the West Indies, including Liverpool. The economic status of the port steadily grew and by 1700 New York matched Boston in commercial power.¹⁷² By the close of the Seven Years' War, the population of New York stood at 18,000 with a merchant population of 300, almost equal to that of Liverpool.¹⁷³ Being at the forefront of trade in their respective areas, these two port cities therefore make good case studies.

In an effort to form a more complete understanding of the dynamics of the British Atlantic economy, a sizable proportion of scholarly attention has focused on trading communities on the Atlantic littoral. Although there has been much research conducted regarding these communities, there is not one study that compares or investigates Liverpool and New York during the period 1750-1833. The only focused examinations of the Liverpool – New York trade concentrate on the successful cotton trade of the post- 1820s and 30s.¹⁷⁴ This study will therefore fill this gap in the historiography. Examining the Liverpool – New York trading community after the close of the Seven Years' War until the beginning of the large-scale cotton trade provides an excellent perspective on aspects such as the transition from colonial to post-colonial Anglo-American commercial activity and how mercantile communities across the Atlantic coped with the many wars and credit crises of this period. The current historiography for this trading community has also failed to explore some of the themes that would flesh out the true character of this network of trade. Using qualitative material drawn from for example, letter books, account books, memorials, parliamentary papers and other personal documents of the merchants within this network will facilitate an understanding of specific merchant-to-merchant relationships and will identify the degree to which factors of trust, reputation, risk and knowledge were not only present within this trading community, but helped it to function.

Identifying the major players

Research conducted for this project thus far has pinpointed both the major players operating in the Liverpool-New York trade and the primary commodities being imported into Liverpool from New York. Table 1 presents some of the major players based in Liverpool and investing in the trade from New York. These have been identified using the Import Lists featured in

¹⁷⁰ Kenneth Morgan, 'Liverpool's Dominance in the British Slave Trade, 1740-1807', in David Richardson, Suzanne Schwarz and Anthony Tibbles (eds.), *Liverpool and Transatlantic Slavery* (Liverpool: Liverpool University Press, 2007), pp. 14-42.

¹⁷¹ Claudia Schnurmann, 'Anglo-Dutch Relations in and around Seventeenth Century New Amsterdam/New York', in *Amsterdam – New York* (eds.), George Harinck and Hans Krabbendam (Amsterdam: VU Uitgeverij, 2005), p. 55.

¹⁷² Cathy Matson, *Merchant and Empire: Trading in Colonial New York* (Baltimore: John Hopkins University Press, 1998), p. 3.

¹⁷³ In 1766, Liverpool's trader population was 393. Haggerty, 'The Structure of the Philadelphia Trading community', 173. Thomas Doerflinger, *A Vigorous Spirit of Enterprise: Merchants and Economic Development in Revolutionary Philadelphia* (Williamsburg, VA: University of North Carolina Press, 1986), p. 341.

¹⁷⁴ Graeme Milne, *Trade and Traders in Mid-Victorian Liverpool* (Liverpool: Liverpool University Press, 2000); Paul Butel, *The Atlantic* (New York: Routledge, 1999), pp. 223-41.

Williamson's Advertiser and Mercantile Chronicle, a weekly Liverpool commercial publication. For the purpose of this paper, a 'major player' is defined as a merchant who received frequent and large import orders, relative to the frequency of trade from New York for that year. For the years, 1818, 1827 and 1833 not all of the Major Players can be shown due to the increasing size of the trading community. The broad sampling of years used here demonstrates trade in both peace and wartime, through economic crises and economic boom.

Table 1: *Major Players importing goods into Liverpool from New York*

1765	1773	1775	1787	1795	1798	1811	1818	1827	1833
Benson and Postlethwaite	David Kenyon	Thomas Earle	Iver McIver and Lowther	John Jackson	Angus and Copland	Cropper, Benson and co.	Bolton and Ogden	Bolton, Ogden and co.	T. B. Blackburne
David Kenyon	Rawlinson and Chorley	Halday and Bamber	Rathbone and Benson	Iver McIver	Ewart and Rutson	Ewart, Rutson and co.	Cropper, Benson and co.	W. and J. Brown	Bolton, Ogden and co.
	William Wallace	Rawlinson and Chorley	W. Wallace and co.	John Montgomery	J. and J.R. Freme	Hobsons and Bolton	J. Gordon	Cearns, Fish and Cray	W. and J. Brown and co.
		William Wallace	Charles Wood and co.	Nelson and Pearson	C. Greetham	Alex MacGregor and co.	Hughes, Duncan and co.	E. Cearns Jun.	Cearns, Cray and co.
				Rathbone and Benson	John Jackson	W. Maitland and co.	Humberston, Graham and co.	Cropper, Benson and co.	Collman, Lambert and co.
				Thompson and Nelson	Iver and Peter McIver	J. McAdam	Lawrence, Willis and Lawrence	H. and R. Gore	Cropper, Benson and co.
				Wainwright Howard and Co.	Nelson and Pearson	Martin, Hope and Thomley.	Alex MacGregor and co.	J. Jackson and co.	Dennistoun Mackie and co.
					Rathbone, Hughes and Duncan	Ogden, Richards and co.	Rathbone, Hodgson and co.	J. Marshall	Ewart, Myer and co.
					C. Tayleur	W. and R. Rathbone	A. and S. Richards	Peck and Phelps	Fitzhugh and C. Grimshaw
					Wainwright Howard, and Cross		C. Tayleur and co.	Rathbone Brothers and co.	J. and J. Jackson
					Whitehouse and Gallon		T. and J.D. Thomley	Sands, Hodgson and co.	Melly, Prevost and co.
							D. and J. A. Willink	Wainwright and Shells	Roskell, Ogden and co.
							M. Wotherspoon	Wright, Taylor and co.	Wainwright Shells and co.
							Cont....	Cont...	Cont...

As table 1 shows, many of the major players participated in the New York trade for long periods of time, such as William Wallace and Cropper, Benson and Co. However, as was normal practice, they appear to have occasionally reinvented their firms by either gaining or losing business partners. It should be noted that certain firms mentioned in one year may have reappeared in subsequent years. However if their volume of trade for that year decreased and they could no longer be deemed a major player, they were omitted from this table. Examples of such occurrences are C. Greetham in 1818, John Montgomery in 1798 and C. Humberston and Co. in 1827; all three continued in trade minimally after the years in which they were deemed major players. Explanations for these changes or inconsistencies in the quantitative material will be discussed in detail in the larger project. However, work conducted so far suggests that crises, market changes and movement of individuals into different professions, for example from trade into manufacturing, often affected the composition of the trading community.

The import trade

The import trade from New York to Liverpool gained momentum in the mid-eighteenth century.¹⁷⁵ Commodity specialization in this trade was not common, therefore merchants often

¹⁷⁵ Records for quantities of trade in the period 1750-1765 are somewhat incomplete but rough estimates can be made.

dealt in a large range of goods. Many of the merchants listed in table 1 imported at least five or six different commodities, the vast range of which is listed in table 2. The commodities listed range from frequently traded to rarely trade. Commodities not listed in this table are ones that may have only appeared once or twice in the import lists and therefore did not warrant inclusion here.

Table 2: *Imports from New York to Liverpool, 1765-1833*

	1765 - 1775	1787	1795	1798	1811	1818	1827	1833
Frequently Traded ↑	Staves Timber Ashes (Pot and Pearl) Naval- Stores Rum Flour Wheat Iron Dyes	Staves Timber Ashes Naval- Stores Flour Wheat Iron Rice Dyes	Staves Timber Ashes Naval- Stores Cotton Rice Callavances Flour Indian Corn Iron Dyes	Cotton Ashes Tobacco Naval- Stores Timber Staves Rice Hides and Horns Coffee Sugar Rum	Cotton Naval- Stores Staves Ashes Timber Flaxseed Horn and Hides Dyes Nuts	Cotton Wool Flour Wheat Naval- Stores Staves Ashes Apples Cranberries Rice Hops Hides Beeswax	Cotton Naval- Stores Wheat Flour Indian Corn Wool Hides Flaxseed Apples Staves Ashes Timber Dyes Gum Senegal	Cotton Flour Flaxseed Naval Stores Timber (sp. Fustic and Logwood) Hides Apples Cloverseed Horn Tips Dyes Tobacco Elephant Teeth
↓ Rarely Traded								

As can be seen in table 2, continuity of trade and market preference was not predictable. The frequency in which certain goods were traded fluctuated from year to year. It should be noted that although cotton became a major export for New York in the nineteenth century, other goods continued to be traded in mass quantities. Trade from New York in the larger research project will not be examined by focusing on the growth of cotton or another major commodity, as so many previous studies have done. Rather it will focus on the diversity of goods within the New York – Liverpool trade. This will serve to highlight a number of different market trends and trade fluctuations in order to elucidate the versatility of this trading community.

One of the trends that can be identified in table 2 is the decline in trade frequency of iron, timber and staves.¹⁷⁶ Early in the eighteenth century Liverpool began fulfilling the demand for timber and iron with imports from the thirteen colonies, and thus moving away from – though not abandoning – traditional Baltic markets for the same commodities. In the early nineteenth century, as the demand for such commodities increased, the United States and specifically New York's hinterland was unable to match this demand. This was on account of not only depleted resources but lagging technological advancements that would speed production.¹⁷⁷ This led to a shift back to Baltic and Russian markets where resources were seemingly endless and technology improved. Although North America, especially Canada, would remain a supplier of both timber and iron, quantities imported had noticeably decreased.

A trend that is also clear in table 2 is a marked decline in the import of ashes. Ashes came in two types that were often not separated in the records, pot and pearl. These were used for textile bleaching, making glass, soap and occasionally for the leavening of bread. In 1791, Nicholas Leblanc, a French chemist, produced a chemical compound known as sodium carbonate, which had the contemporary name of soda ash. Decades later this compound was

¹⁷⁶ Staves are the slats of wood used in making barrels. They came in a variety of lengths depending on the type of container they were being used for.

¹⁷⁷ Herbert Kaplan, *Russian Overseas Commerce with Great Britain During the Reign of Catherine II* (American Philosophical Society, Philadelphia, 1995) pp. 67-77.

altered into bicarbonate soda, more commonly known as baking soda. It was not until the 1820s and 30s that this soda detergent was available widely in England. Baking soda fulfilled much of the demand that ashes had, more efficiently and at a cheaper cost.¹⁷⁸ Although baking soda had no place within glass or soap making, ashes primary position as a textile bleach and leavening agent had been appropriated by bicarbonate soda.¹⁷⁹

Fluctuations in trade occurred not only as a result of availability and the introduction of cheaper alternatives but also market saturation, changes in source preference, experimentation in new trades and the rerouting of trades from the Southern states and West Indies through New York. The rerouting of southern commodities such as rice, tobacco, and cotton was common and explains New York's reputation as a major *entrepôt* port. Explanations for why fluctuations occurred regarding these commodities are more complicated and not necessarily linked to the nature of the trading community in New York per se, although their ability to deal with those changes was.

Conclusion

A host of factors and events occurring on a global scale could have potentially been responsible for these trends. To manage changes and fluctuations in Atlantic markets, merchants operating within the New York – Liverpool trading community required extensive commercial knowledge that could be applied to the vast range of trades in which they participated. This was usually gained from trusted business associates from both the local and international trading community; though information acquired from international networks was often delayed due to slow communication methods.¹⁸⁰ The major players listed in table 1, and especially those who maintained long-standing connections with New York had developed long-term knowledge for dealing with crises and market instability. Though not all managed to sustain trade successfully, those with a reputation for good business and solid financial backing found the means to carry on their trade.

The larger research project will address many of these trends which have by and large been ignored by the historiography for this transatlantic trading community. It will also examine some of the methods employed by merchants for managing these fluctuations including both successes and failings. Tentative conclusions for the wider research project suggest that the economic climate of the early modern Atlantic was ideal for producing relatively independent trading networks of which the New York – Liverpool trading community is a prime example. Further to this, work conducted suggests that the trade between Liverpool and New York continued to grow through the eighteenth to nineteenth century as a result of reliable networks of trust and transmission of knowledge between the ports, despite problematic trading conditions.

¹⁷⁸ In 1815, the cost of Ash was almost twice what it had been in 1785. L. Gittins, 'Innovations in Textile Bleaching in Britain in the Eighteenth Century,' *The Business History Review* 53 (Summer 1979), 194-204.

¹⁷⁹ Klaus H. Wolff, 'Textile Bleaching and the Birth of the Chemical Industry,' *Business History Review* 48 (1974), 143-63.

¹⁸⁰ Sheryllynne Haggerty, *The British Atlantic Trading Community: Men, Women and The Distribution of Goods 1760-1810* (Leiden: Brill, 2006), pp. 109-41.

Commercialization as exogenous shocks: the effect of the soybean trade and migration in Manchurian villages, 1895-1934

Nan Li, Hong Kong University of Science & Technology
(liiyuan@ust.hk)

Supervisor: Professor James Kung

The effects of globalization and migration in traditional agrarian economies such as China's during the nineteenth and twentieth centuries have been a subject of ferocious debate. Using data from Manchuria on soybean cultivation and exports, a difference-in-differences approach was applied to demonstrate a significantly positive relationship between growing soybeans for export and the returns to migration. Those who migrated to Manchuria in periods when high market prices prevailed, and to villages more suitable for cultivating soy prospered most – they owned approximately two-thirds more of the arable land and one-third more of houses than those who failed to do so.

Middling sort credit networks in Edinburgh, 1730-70

Tawny Paul, University of Edinburgh

(k.w.paul@sms.ed.ac.uk)

Supervisors: Dr Adam Fox & Dr Stana Nenadic

Credit in England has been a topic of much historical interest in recent years. It is widely accepted that credit was not only central to market relations, but that it was socially mediated and constructed and continued to be so well into the modern period.¹⁸¹ While several good case studies address the nature of credit in England, these issues have received scant attention north of the border, where the legal structures that governed the credit nexus took different forms.¹⁸² Studies of credit have largely failed to engage in a British discourse. Furthermore, the character of credit relations and the nature of economic culture during the eighteenth century remain issues of debate.¹⁸³ Muldrew described credit in early modern England as an ethical system that supported an ethos of community. Individuals were involved in webs of economic and social dependency which ‘linked their households to others within communities and beyond, through the numerous reciprocal bonds of trust’.¹⁸⁴ This system broke down during the eighteenth century, giving way to a relationship governed by ‘rational calculations of future profitability’.¹⁸⁵ Margot Finn, in contrast, argued that credit remained persistently social into the modern period, but described credit relations as having a different tenor. Rather than creating communal bonds, credit entrenched disparities of power and hierarchical social relations.¹⁸⁶

This paper aims to address questions about credit in Scotland and credit in the eighteenth century through a case study of middling networks in Edinburgh. A case study of Edinburgh highlights behaviour in the urban context, where the social and economic relationships associated with credit might be expected to have changed most profoundly. Edinburgh was in many ways a typical British provincial city, and the years 1730 to 1770 were a time of rapid social and economic change. It was an economic and cultural capital with growing professional and service sectors.¹⁸⁷ An already large and concentrated population was growing rapidly due to an influx of rural migrants. The urban environment with all its uncertainties complicated tradesmen’s abilities to judge individual credibility.

This paper draws on three sample years of debt litigation brought before the Edinburgh bailie court, 1730, 1750 and 1770, yielding a total of 1,002 cases. Court business in these years was fairly typical, and fits within a larger pattern of litigation decline (figure 1). The court’s jurisdiction was akin to the borough courts in England, but it was not supplanted with summary small debt courts until 1797. It therefore remained the principle place for local tradesmen to pursue their obligations. This paper will first analyse the structure of credit networks. Second, it will consider the character of these networks and the bonds that held them together in terms of trust. The paper will argue that while the structure of credit networks appear to resemble those described by Muldrew for an earlier period, a culture of mistrust and rational evaluation must also be taken into account.

¹⁸¹ Margot C. Finn, *The Character of Credit: Personal Debt in English Culture, 1740-1914* (Cambridge; New York, 2003); Craig Muldrew, *The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England* (Basingstoke, 1998).

¹⁸² In addition to Muldrew and Finn, see for example Stephen Matthews, ‘Money Supply and Credit in Rural Cheshire, C. 1600-1680’, *Continuity and Change*, 24 (2009); John Smail, ‘Credit, Risk and Honor in Eighteenth-Century Commerce’, *Journal of British Studies*, 44 (2005).

¹⁸³ Daniel Vickers, ‘Errors Expected: The Culture of Credit in Rural New England, 1750-1800’, *Economic History Review*, 63 (2010).

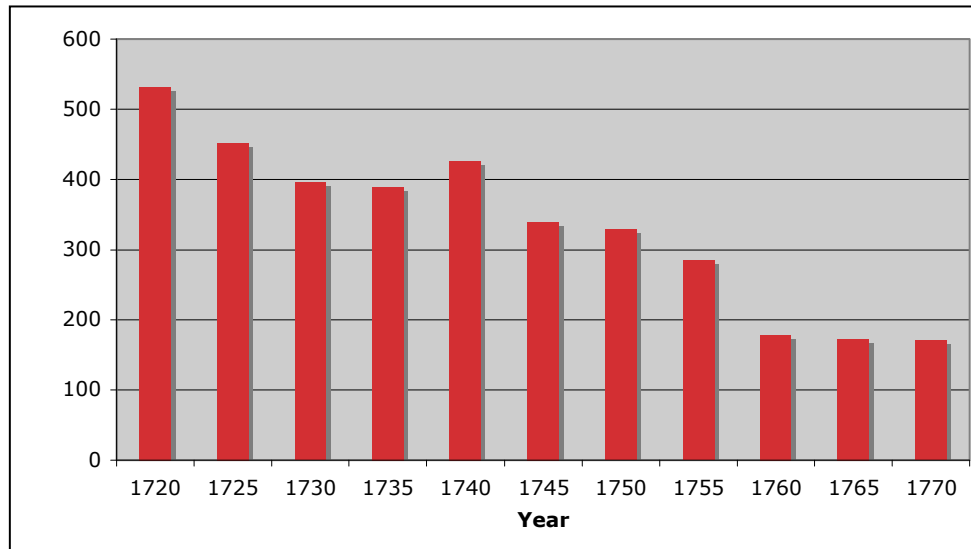
¹⁸⁴ Muldrew, *The Economy of Obligation*, p. 97.

¹⁸⁵ *Ibid.*, p. 329.

¹⁸⁶ Finn, *The Character of Credit*, p. 10.

¹⁸⁷ T.C. Smout, *A History of the Scottish People, 1560-1830* (London, 1972), p. 357.

Figure 1: Total number of debt cases appearing before the Edinburgh Bailie Court, 1720-70



The credit or exchange relationships described in the cases connected people of roughly similar status (figure 2). Most were of the lower middling sort and worked as part of a skilled craft or trade. They possessed some degree of independence and engaged in buying and selling on the market for their livelihoods. Patterns of litigation suggest that they did business primarily with people like themselves, with whom they could compete as equals before the law.¹⁸⁸ Credit may have instilled social debt, but it would not have solidified the types of power relations that one might witness, for example, between masters and servants.¹⁸⁹

Litigants engaged in credit relations that were long term and reciprocal. Credit time was something constantly negotiated between two parties, based on a creditor's needs and a debtor's ability to pay. The amount of time that elapsed between when a credit was granted and the date a case was brought to court reveals the length of credit tolerated. The average person waited 24 months before bringing a debt case to court, but there was wide variation in lengths of credit time. Some clustering around certain repayment periods occurred, with evidence of change over time (figure 3). Though credit time shortened slightly, relationships were generally long term and comparable to those of an earlier period.¹⁹⁰ The debts pursued also varied widely and accumulated over time. Most debts were for under £3, but over the period of study the debts pursued became larger (figure 4). However, because individuals engaged in reciprocal transactions, cases only revealed the net balance of trade. Of cases where the full and original debt was specified, over three-quarters had been partially paid.

Trading in a variety of goods helped to sustain reciprocal credit relationships in a cashless economy. Individuals did not confine themselves to selling goods directly related to their occupations. In about 40 per cent of cases, plaintiffs sued for causes unrelated to their trade. Individuals from a variety of occupations exchanged goods in this way, and it appears to have been both a necessity and a business strategy. Some tradesmen acted almost like pawnbrokers, accepting goods in exchange for their wares and selling them on at a profit. Others appear to have held their wealth in material objects, trading them when they needed credit. The most common goods exchanged distinctive of plaintiff occupation were shoes, clothing, silver, china, tea and coffee – small consumer goods easily valued and disposed of.

¹⁸⁸ Vickers, 'Errors Expected': p. 1055.

¹⁸⁹ Finn, *The Character of Credit*, pp. 82-84.

¹⁹⁰ Muldrew, *The Economy of Obligation*, p. 201.

Figure 2: *Occupations of litigants*

Trade	Number of Plaintiffs	Number of Defendants
alcohol production/sale	104	45
barber/wigmaker	19	24
building trades	66	92
chemical trades	10	8
clothing/foot-ware trades	67	82
farming	11	2
food production/sales	79	75
gentleman	11	7
labourer	0	9
keeps lodgers	22	3
medical trade	26	17
merchant/shopkeeper	221	142
metal trades	11	24
military	5	8
printing/publishing	7	20
professional	102	104
servant/apprentice	14	13
student	0	3
taxman	5	0
transport	24	51
widow/pensioner	96	61
wood trades	5	18
Total	905	808

Figure 3: *Time elapsed between date of credit transaction and initiation of a suit*

Time	% 1730	% 1750	% 1770
< 6 months	9.91	18.42	26.86
6-1 years	34.05	17.98	18.86
1-2 years	25	29.38	32
2-3 years	12.93	10.96	4.57
> 3 years	18.1	23.25	17.71

Figure 4: *Size of debts pursued*

Debt	% 1730	% 1750	% 1770
<£1	34.7	11.7	18.4
£1-2	25.2	22.0	22.8
£2-3	14.9	16.3	16.8
£3-5	8.9	22.0	17.2
£5-10	9.9	16.4	14.0
>£10	6.4	11.6	10.8

Reciprocal obligations formed through the exchange of goods and services formed chains of mutual dependency that, as in early modern England, tied communities of individuals together. The records reveal these chains in two ways. First, in linked cases of default, litigants initiated suits when their own credit was pressed, causing court processes to occur in sequences. Litigation over one debt could implicate an entire network of individuals, setting in motion a series of knock-on cases as those taken to court were forced to call in their own obligations. Second, chains of credit are evident in suits over secondary debts. Many causes

were brought either for bills which had passed through several hands, or against parties who owned debts they had not originally contracted. Secondary debts do not appear to have been purchased with the intent of reselling at a profit, and they never accrued interest. Rather, they made credit more flexible, allowing debts to become liquid. Over time, the debts appearing in court became further removed from their original contracting parties. Between 1730 and 1770, the number of debts at least two degrees removed increased by 20 per cent (figure 5).

Figure 5: *Distance of debts from original contracting parties*

Degrees of removal from original contracting parties	% cases 1730	% cases 1750	% cases 1770
Direct	81.3	72.6	65.0
2 degrees	16.9	25.1	32.9
3 degrees	1.2	2.0	1.6
4 degrees	0.5	0.3	0.4
more than 4 degrees	0.2	0.0	0.0

The structure of credit reveals that people in eighteenth-century Edinburgh were bound by necessity into networks of indebtedness and mutual dependency. Debts were long-term and they were reciprocal. In these characteristics, they closely resembled the credit networks of an earlier period described by Muldrew. They also resembled these earlier networks in that they were based on trust. Litigants used the terms trust and credit interchangeably. Creditors described providing credit as ‘intrusting’ their customers with goods, and failure to pay as a ‘breach of trust’ or an ‘act of unfaithfulness’.¹⁹¹ However, a closer look at the foundations of trust suggests a divergence. Muldrew emphasized the construction of trust in social terms. Credit was synonymous with a reputation for ‘fair and honest dealing’, which became ‘the currency for lending and borrowing’.¹⁹² Bailie court case papers provide anecdotal evidence of the process of establishing trust, and show that it was based on notions of both social and physical worth.

For many, trust was embedded in personal acquaintance. The most reliable way to judge credit was direct, interpersonal contact with the person who was to be trusted. For some, this acquaintance was framed in geographic terms, such as being a resident of the same neighbourhood. The smith James Hill trusted James Cook because ‘he had a fixed residence here’.¹⁹³ For others, it was based on association with family networks. The merchant John Walker gave credit to Mrs Orrock because she was his ‘near relation’. Walker engaged Orrock occasionally to sell his wares, trusting her with parcels of goods. He also gave her money ‘as she had occasion for it, either to pay the part of the debt of the company or to assist her in carrying on her business in a separate shop’.¹⁹⁴ Other tradesmen testified that they trusted individuals with familial links to known customers. Margaret Johnston was able to obtain credit with the flesher Alexander Greig because the trusted vintner John Miller, whose daughter was married to Johnston’s son, attested that ‘she should faithfully pay what was due by her for furnishing made by the pursuer of this nature’.¹⁹⁵

Personal acquaintance remained important even when credit was made over longer distances. Tradesmen used permanent and intensive ties to anchor those that were temporary and extensive. For those trading with other cities, face-to-face contact with local intermediaries remained an important component of trust. James Rattray and his spouse used the credit of Charles Innes, a local linen draper, to have cloth printed in London ‘on his

¹⁹¹ *Johnston v Pitcairn*, 1750, box 122, bundle 312; *Hill v Cook*, 1750, box 120, bundle 304.

¹⁹² Muldrew, *The Economy of Obligation*, pp. 148-149.

¹⁹³ *Hill v Cook*, 1750, box 120, bundle 304.

¹⁹⁴ *Walker v Orrock*, 1770, box 145, bundle 374.

¹⁹⁵ *Greig v Johnston*, 1770, box 144, bundle 372.

account and risque ... to a reputable house'.¹⁹⁶ Debts that remained geographically local but were socially removed from their creditors were mediated in much the same way. Tradesmen secured lines of credit to unknown or untrustworthy individuals through known customers, who provided 'proxy' access to consumer goods. In 1730, Louise Aitchison sued John Scott for ale furnished to another on his account.¹⁹⁷ In 1750 the advocate Robert Blackwood sued James Haly for rent and use of his credit, amounting to nearly £13.¹⁹⁸

The use of family networks, intermediaries, and proxies was not just about establishing an individual's reputation for fair and honest dealing, but about liability. In cases of default, family members and proxies might be either legally or socially obliged to answer for debts. This was especially the case for credit extended to married or dependent women. John Sheills, a merchant, gave one woman a kettle and cloth on credit because she was George Zeigler's 'wife's mother who stays in family with them'. When the woman defaulted, Sheills was able to hold Zeigler, a wealthy lawyer, accountable.¹⁹⁹ Others established personal security in more formalized ways, obliging those who were known to be credible to act as cautioners or guarantors for those who were not.

Individual credibility was based on evaluations of worth that did not rely on social factors alone, but also on physical wealth. Notions of honesty, fairness and good business seem to have played only a partial role in creditors' thinking. Plaintiffs demonstrated repeatedly that they knew what their debtors owned, the obligations they were owed, the income they earned through their occupations and even the amount of specie they possessed. The merchant John Aitken told the court that his debtor, Marjorie Heriot, had 'many valuable objects such as a gold watch and other things of great value' that would allow her to pay off the debt.²⁰⁰ William Stevenson's creditor knew that he was in possession not only of 'a well furnished house in town and money resting to him, but further that his wife acknowledged to severall persons that she had twelve guineas lying by her'.²⁰¹ Trust was based on a culture of valuation that emphasized a debtor's physical ability to pay. As Daniel Defoe wrote, 'It is a great mistake to say, personal credit is given upon the honour and faith of the debtor'. In deciding whether to deal with an individual, a tradesman needed to ask 'not whether he be *honest*, but whether he is *able* ... If he is able, I'll venture; for I know how to make him willing'.²⁰² According to Defoe, trade depended on a legal system that allowed creditors to easily enforce their obligations. It was precisely the lack of such a system that influenced Scotland's culture of credit.

By the mid-eighteenth century, Scottish tradesmen relied on a system that was slow and increasingly expensive. They took steps to secure their obligations in other ways, for example by participating in the widespread practice of pledging. Sometimes conceived as a ritual intended to seal social trust, pledging here served as a means of security by taking goods that could be sold in case a debtor defaulted. For example, in obtaining a cash loan of £1 10s., Mary Stewart pledged a black coat, a little old feather bed and an old table, three old chairs, and a pair of old coarse sheets as security.²⁰³ Such strategies were employed not only by those dealing with poor consumers, but with a variety of middling sort people.

In emphasizing a culture of valuation, I do not mean to suggest that it was the only defining feature of credit relations in eighteenth-century Edinburgh. Neighbourliness, charity and social evaluations continued to play a part. But rational evaluation and competition must

¹⁹⁶ Rattray v Innes, 1770, box 145, bundle 374.

¹⁹⁷ Aitchison v Scott, 1730, box 85, bundle 211.

¹⁹⁸ Blackwood v Haly, 1750, box 119, bundle 302.

¹⁹⁹ Sheills v Zeigler, 1770, box 144, bundle 371.

²⁰⁰ Heriot v Aitken, 1770, box 285, bundle 41.

²⁰¹ Stevenson v Montgomery, box 285, bundle 40.

²⁰² Daniel Defoe, *Some objections humbly offered to the consideration of the Hon. House of Commons, relating to the present intended relief of prisoners* (London, 1729), p. 23.

²⁰³ Haliburton v Stewart, 1730, box 86, bundle 214.

be taken into account alongside the more positive images of community and cooperation that have often defined our understandings of credit. Individuals approached the market with a variety of strategies that could be at once competitive, cooperative, neighbourly, and individualistic. By considering cases from urban Scotland, conceived in a unique legal context, we can begin to understand the possibilities of a more varied culture of credit.

The 'steel unions' and occupational health and safety: a developing collectivist ethos

David Bradley, Glasgow Caledonian University
(David.Bradley@gcu.ac.uk)

Supervisors: Professors Ronnie Johnston, Elaine McFarland & John Stewart

Using three examples – convalescent care, Safety Committees and research into respiratory ailments – this paper will demonstrate the forms of collective action taken by the iron and steel trade unions in the twentieth century. A 'shared health consciousness' can be found at different levels of the workplace and steel unions played an important role in attempting to forge this.

Assisted convalescence emerged as a concern for the Iron and Steel Trades Confederation (ISTC) in the 1950s. This surrounded the care of workers recovering from injuries in the workplace, as well as those suffering from physical and mental exhaustion. Convalescent homes had been established by charitable bodies as well as trade unions. For example, the Transport and General Workers' Union ran a convalescent home able to support 90 workers at a time by voluntary subscriptions, with an annual average of 1,700 coming through its doors.²⁰⁴ These homes were located in rural and coastal areas, with, for instance, The North-Eastern Counties Friendly Societies' Convalescent Home being situated in Grange-over-Sands, Lancashire.²⁰⁵ Gorsky, Mohan and Willis have suggested that, for many, the 'seaside element' was of greater appeal than the 'medicinal aspects' of convalescence.²⁰⁶ Miners also had access to an extensive network of 19 convalescent homes and several regional rehabilitation centres.²⁰⁷ These were not established to fulfil the role of a hospital. For example, the Lady Forester Convalescent Home did not allow persons suffering from infectious or contagious diseases, or anything requiring medical or surgical treatment.²⁰⁸

The ISTC began the process of acquiring a convalescent home for its members during the Second World War, aided by £18,000 offered by American steelworkers as part of American War Relief.²⁰⁹ Lark Hill Convalescent Home – near Conway, in Wales – was confirmed as purchased at the end of 1944, with a projected intake of 800 patients a year, each staying for an average of two weeks.²¹⁰ At this point, the ISTC also considered a second home, almost resulting in the purchase of Carr Hall in Whitby.²¹¹ However, the cost of purchasing both homes as well as furnishing the facilities to an appropriate standard meant that only Lark Hill was bought.²¹²

While it is apparent that the failure to purchase Carr Hall would have had an impact on the ability of steelworkers in Scotland to make use of convalescent facilities, this did not mean that all Scottish steelworkers' options were restricted to a trip to North Wales. A company convalescent home was established by the Colvilles Group. The Craig War Memorial Home in Skelmorlie, Ayrshire, admitted its first patients on 16 July 1946.²¹³ This was for the use of employees 'in the different works of the Colville Group of Companies' and had been renovated and furnished by joint contributions of the Company and its employees.²¹⁴

²⁰⁴ MSS.36/C106 – Convalescence: Leaflet of TGWU convalescent home, February 1937.

²⁰⁵ Ibid: brochures.

²⁰⁶ Gorsky, Mohan & Willis, 2006.

²⁰⁷ McIvor & Johnston, 2007.

²⁰⁸ MSS.36/C106: brochure.

²⁰⁹ Ibid: letter, 27 December 1944.

²¹⁰ Ibid.

²¹¹ Ibid: various correspondence, 1944.

²¹² Ibid.

²¹³ Ibid: *The Craig War Memorial Home, Skelmorlie, Ayrshire* booklet.

²¹⁴ Ibid.

Each employee contributed two pence per week, with 25 per cent of that total also coming from the company.²¹⁵ The Home had particular entrance criteria. As well as being exclusively for the use of Colvilles' employees, it was also stipulated that the facilities were 'for those convalescing from sickness or accident or fatigue providing that no person suffering from infections or incurable diseases shall be admitted to the Home'.²¹⁶ Again, the Home was distinct from a general hospital.

In the case of these homes, we have an example of benevolent paternalism which simultaneously encouraged workers to adopt a collectivist approach to healthcare via the employee contributions. In essence, unions, workers and management took a joint approach to the provision of assisted convalescence.

These were two examples of convalescent homes available to ironworkers and steelworkers. Another example was St. Leonard's, located in Hastings, available to members of the Amalgamated Union of Engineering Workers (AUEW) and this form of care was still in use in the late 1970s.²¹⁷ Care was obtained by the completion of an application form, taking two or three weeks to clear Head Office.²¹⁸ This highlights a weakness in the system: two to three weeks is a substantial amount of time to a worker suffering from physical injury or exhaustion. Indeed, evidence suggests that St. Leonard's was not widely known, as an enquiry into care came from a member who was already on sick leave and under the care of his General Practitioner and workplace nurse.²¹⁹ Underlining this was the fact that the ill member was a qualified first aider.²²⁰ This suggests that convalescent homes became of less importance to the care of the workforce towards the end of the twentieth century. Knowledge of the AUEW facilities was not widespread and much of the ISTC records date from the 1940s through to the 1960s. It has suggested that such phenomena came to be seen as 'old-fashioned' in light of private health insurance in the 1980s.²²¹ Similarly, membership of such schemes suffered in times of economic recession.

The fact that such homes existed for steel workers recognized, however, that work in heavy industry was physically and mentally arduous. The work of unions and employers is evidence of the search for balance between welfare in the workplace and productive industry. Respite care by the time of the purchase of Lark Hill was not a new concept and the upkeep of facilities by union contributions and employee wages is indicative of the continuation of both individual and collective aid, in a time at which healthcare was emerging as being free at the point of consumption.

The work of Safety Committees and Safety Representatives can be viewed as an alternative collectivist approach to welfare in the workplace. The Health and Safety at Work Act came into force in 1974. Subsequent to this were the Safety Representatives and Safety Committees Regulations 1978. However, there is evidence prior to this of safety committees involving representatives of management and the workforce. Negotiations held in 1951 between unions and management regarding protective clothing had also advised the establishment of such committees, to which it was remarked that many establishments already had these in operation.²²² Given the hazardous environment of the iron and steel industry, these were a sensible measure in protecting the workforce. The fact that they were in existence – although not in every establishment – prior to the Acts of the 1970s is further proof of a less adversarial relationship between employers and unions. By 1978, this system was codified in legislation and research carried out by the National Officer for Health and

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ TD1383/2 – BSC Mossend, Bellshill: folder 51, letter, 22 December 1977.

²¹⁸ Ibid.

²¹⁹ Ibid, letter, 19 December 1977.

²²⁰ Ibid.

²²¹ Gorsky, Mohan & Willis, 2006.

²²² TD1383/1 – Mid Lanark District Minutes, c.1941-c.1949 & c.1970-1990: letter, 21 March 1951.

Safety of the ISTC in 1977, prior to the 1978 regulations, further demonstrated the commitment of Scottish branches to safe working practices. Responses described the structure of various safety committees, which were multi-union and featured representatives from management and foremen level. In some instances there were weekly departmental meetings and a general works meeting held less frequently, usually once a month.²²³ However, there was no ‘across the board’ approach to health and safety; the crane safety crew at Hattonrigg Colliery, part of the Mossend steelworks at Bellshill, contacted the National Officer in March 1976 asking for instructions about forming their own Safety Committee, and from this point correspondence regarding their structure and activities increased, beginning with a circular requesting information.²²⁴ Clydebridge Tube 1 branch had established a committee just prior to this request.²²⁵ This consisted of nine members of the ISTC, four from the AUEW, two members of staff, two foremen and the works manager acted as chair, with a vice-chairman elected from Committee members.²²⁶ These demonstrate the lack of a long-term, coordinated approach to health and safety across the Scottish iron and steel industry and it is also apparent that there was no uniform structure to the size and operation of the Committees. Clyde Alloy No.1, operating at BSC Special Steel Cragneuk Works, reported that all departments there had a Safety Committee, with the unions involved at all levels, although safety was ultimately organized by management.²²⁷ Clydebridge No.2 and Clydebridge Staff also operated differently to the aforementioned Clydebridge No.1: the former held works safety meetings every two months, while all departments held their own safety meetings. It was also remarked that any matters raised at the departmental meetings and not acted upon were subsequently raised at the works meeting; in essence, the two operated as part of a system of checks and balances. Should one department neglect its responsibilities towards health and safety issues, it would then become a matter for discussion among the whole works.²²⁸ Additionally, Clydebridge Staff held weekly departmental meetings and a general meeting each month.²²⁹ Hence variations were not just found between iron and steel establishments, but within them as well. More evidence can be found of the lack of coordination throughout Scotland. By July 1977 Glengarnock No.1 held a monthly departmental meeting, with a delegate from each branch and representatives from management making up a Works Committee.²³⁰ However, a letter from the Glengarnock No.2 branch in June 1977 had stated that they had no Safety Committee in operation as they wanted more information about their duties and legal rights.²³¹ Hence there was no unified approach and the 1978 Regulations with regard to the Scottish iron and steel industry – while solidifying a unified approach through legislation – can also be viewed as ‘tying up loose ends’ given the initiative of individual works and union branches. The example of Safety Representatives and Safety Committees Regulations is proof of the existence of the efficacy and independence of local branches within the Scottish steel industry and of multi-union cooperation in different workplaces. In essence, such Acts and Regulations did not so much empower iron and steelworkers with new rights and responsibilities, but rather affirmed what was already there.

Conversely, the case of respiratory ailments and medical research of the late 1970s and 1980s can be held up as an instance in which Executive Council took the initiative ahead of government and local branch level, seeking to influence policy and working practices rather

²²³ See, for example, MSS.36/2000/252 – Health and Safety at Work, 1970-1993: letters, 18 April, 13 June, 9-12, 19 July & 10 August 1977

²²⁴ Ibid, letter, 13 March 1976

²²⁵ Ibid, letter, 18 April 1977

²²⁶ Ibid

²²⁷ Ibid, letter, 11 July 1977

²²⁸ Ibid, letter, 10 August 1977

²²⁹ Ibid, letter, 9 July 1977

²³⁰ Ibid, letter, 12 July 1977

²³¹ Ibid, letter, 13 June 1977

than responding to them. Steelworkers' chest diseases consisted of eight recognized ailments: chronic bronchitis, emphysema, Welder's lung, siderosis, silicosis, pneumoconiosis, asbestosis and occupational asthma.²³² It was noted that the ailments from Welder's lung to occupational asthma could easily be attributed to exposure to specific materials. For example, siderosis was caused by exposure to iron. The National Officer of the ISTC also stated that it was 'common knowledge' that these were already recognized as prescribed diseases.²³³ The interest in steelworkers' chest diseases was not, however, the result of union activity concerning workers' health. Rather, discussion was sparked by a letter from a partner in Russell Jones & Walker Solicitors, who represented the ISTC. The solicitor referred to steel manufacturers undertaking an 'expensive and extensive programme of fume extraction equipment installation', raising the issue of 'Steelworker's Lung' – a newly-identified dust-related illness, which had been pertinent to a case being pursued by him.²³⁴ It transpired that the investigations into the new ailment had been focused on a steel-coating plant and the solicitor felt that, since this was not related to the production of steel but rather the use of it, then it would not be of relevance to the ISTC.²³⁵ However, the ISTC responded that some members were working in plants dealing with steel-coating.²³⁶ This later resulted in the solicitor being provided with the aforementioned list of chest diseases, as well as the knowledge that exposure to isocyanate used in steel-coating (most commonly in vehicle paint spraying) was a cause of occupational asthma.²³⁷

Thus far the image created is that of a solicitor and the Assistant General Secretary pursuing an interest in occupational illness with limited input from the National Officer for Health and Safety. Indeed, the National Officer did not become involved in correspondence surrounding this particular issue until 16 January 1986.²³⁸ Yet this discussion served to bring the matter of chest illnesses and the health of steelworkers back into the forefront of union affairs. Minutes of the Joint Accident Prevention Advisory Committee (JAPAC), which consisted of representatives of trade unions, management and medical professionals, state that an interim study into the mortality levels of coke oven workers in BSC had been published by the Institute of Occupational Medicine in 1978, and a final summary was ready for circulation among committee members by September 1980.²³⁹ In 1982 the study was published by the IoM, with a similar article prepared for the *American Journal of Industrial Medicine* the following year.²⁴⁰ This study concluded that the proportion of lung cancer deaths among these workers was 20 per cent higher than in manual workers generally. The National Officer, having followed this research, enquired about the feasibility of a more widespread study into chest diseases among steelworkers, to be conducted by the IoM. This study was to cost £1,000, of which the British Steel Corporation was prepared to pay half, provided that the ISTC paid the other half.²⁴¹ This apparently was beyond the ability of the ISTC, and unsuccessful applications were made to organizations such as the Manpower Services Commission, the European Coal and Steel Community, and the European Economic Community. All branches were asked for details of members, both active and retired, who had

²³² MSS.36/2000/95 – Chest Diseases in Steelworkers, 1982-1997: letter, 13 January 1986.

²³³ Ibid: letter, 16 January 1986.

²³⁴ Ibid: letter, 16 October 1985.

²³⁵ Ibid: letter, 11 November 1985.

²³⁶ Ibid: letter, 14 November 1985.

²³⁷ Ibid: letter, 13 January 1986; Isocyanate is a compound of oxygen, nitrogen and carbon and is one of the biggest causes of occupational asthma.

²³⁸ MSS.36/2000/95: letter, 16 January 1986.

²³⁹ TD1383/2 – JAPAC: folder 71, minutes of meeting, 9 September 1980.

²⁴⁰ Ibid: Jacobsen, Collings, Fanning, Hurley, & Steele, February 1982. See also Hurley, Archibald, Collings, Fanning, Jacobsen, & Steele, 1983.

²⁴¹ MSS.36/2000/95: correspondence dated August 1985.

been diagnosed with possible work-related chest ailments.²⁴² Interestingly, while a number of responses were received from England and Wales, a reminder had to be issued to the Scottish Division.²⁴³ A day after this reminder was sent, a response (dated a few weeks earlier) was received.²⁴⁴ The remark at the top of the letter of ‘lo and behold – a reply’ suggested that this delay was either a fault of the divisional office or the postal service.²⁴⁵ Three responses were received from the Scottish Division. One merely detailed the place of work, while the other two also provided time served and the diseases from which they now suffered. One individual had worked for 13 years in the coke ovens and 20 years in the coal plant. He had now been diagnosed with chronic bronchitis and emphysema. The second individual had spent 17 years in the ‘mills area’ and had been diagnosed with chronic bronchitis in February 1972.²⁴⁶ What can ultimately be seen here is that – with regard to the ISTC archival material at least – the Scottish division was significantly under-represented. Whereas areas such as South Wales and Sheffield had responded to the request of the National Officer in large numbers, the Scottish response amounted to single figures. From this it could be argued that Scottish trade unionists were less active than their English and Welsh counterparts. However, given the volume of material available in the AUEW archive – which covered a smaller proportion of the steel workforce – this argument does not hold. It may be the case that Scottish iron and steel trade unionists were more inclined to deal with issues and concerns at a local level.

The example of convalescent care – especially through the means by which facilities were maintained – demonstrated both unions and management attempting to instil a collectivist ethos in the workforce. Not only did this represent an acknowledgement of the inherent hazards of life in the iron and steel industry, but it can also be viewed as a unified, collective approach by management, unions and the workforce in promoting the importance of healthcare. It has also been shown that legislation and the Head Offices of unions had a part to play in unifying the workforce, although such cases also exposed differences both at local and national level.

²⁴² MSS.36/2000/95: letter, 30 March 1983.

²⁴³ Ibid: letter, 2 June 1983.

²⁴⁴ Ibid: letter, 17 May 1983, received 3 June 1983.

²⁴⁵ Ibid.

²⁴⁶ Ibid; note that ‘mills’ is a vague term and can cover a range of activities.

The role of foreign investment in the development of the Calcutta jute industry: a case study of Thomas Duff & Co., 1874-1900

Alexis Wearmouth, University of Dundee

(a.wearmouth@dundee.ac.uk)

Supervisors: Professor Jim Tomlinson & Dr Carlo Morelli

Jute manufactures of sacking and hessian cloth provided the packaging material in which a growing world trade in commodities was carried during the second half of the nineteenth century. North and east Bengal supplied virtually the entire world demand for raw jute. The dominance of Dundee's manufacturers in the world market for sacking and hessians had been eclipsed in 1900 by the rapid growth of jute mills in Calcutta in western Bengal from the 1870s.

During this period, Thomas Duff & Co. established itself as one of four leading firms owning and managing mills in Calcutta. Thomas Duff & Co. was one of a minority of foreign owned jute manufacturers with mills in Calcutta and conforms closely to Mira Wilkins' definition of a 'free-standing company' as a vehicle for nineteenth-century foreign direct investment.²⁴⁷ It was unique in being the only Calcutta jute manufacturer of any longevity with a headquarters in Dundee, the birthplace of the industry.

Whereas their Dundee competitors were private partnerships until the 1890s, the Calcutta mills were floated as public companies on the Calcutta stock exchange from the formation of the first mill in 1855.²⁴⁸ This permitted greater scrutiny of the Calcutta mills' financial performance in local publications read by their resident British – and some Indian – shareholders. However, very few archive records survive detailing the internal functioning of the Calcutta mill firms. The Thomas Duff & Co. archive is exceptional in this respect.²⁴⁹

This case study utilizes the internal records of the firm in order to analyse its specificity as a 'free standing' form of foreign direct investment in manufacturing. The analysis considers how the managerial competences and different types of location-specific knowledge internalized within the firm permitted strategic direction of the Calcutta business from Dundee. Firm structures of ownership and managerial control favoured the development of functional principal-agent relationships within the firm, permitting it to respond to the different challenges posed by the growth of the industry and changes in the external environment.

While atypical, the case of Thomas Duff & Co. also permits some general inferences to be drawn about the development of the industry in Calcutta and the nature of competition for export markets with Dundee. Comparisons of firm performance in Calcutta demonstrate considerable heterogeneity in terms of marketing expertise, access to finance, and productive efficiency. However, inter-firm competition was mitigated by factors driving the industry towards some degree of collaboration through the formation of the Indian Jute Manufacturers Association.

Evolution of Thomas Duff & Co. firm structure

The firm of Thomas Duff & Co. originated with the formation of a single mill firm, the Samnuggur Jute Factory Co. Ltd., in 1874, registered in Edinburgh. The construction of the Samnuggur mill to the north of Calcutta was financed by calls on the share capital raised in

²⁴⁷ Mira Wilkins, 'The free-standing company, 1870-1914: an important type of British foreign direct investment', *EcHR*, 41.2 (1988), pp.259-282.

²⁴⁸ D.R. Wallace, *The Romance of Jute* (First edition, Calcutta, 1909), pp.17-18.

²⁴⁹ University of Dundee Archive (UDA), MS 86. See also the Champdany Mill Co. records in the James Finlay & Co. archive, Glasgow University, MS UGD091.

Dundee. The firm's headquarters was in Dundee, where meetings of the directors and shareholders took place. A lean management structure was adopted in Dundee, with the employment of a secretary to handle correspondence with the Calcutta agents and mill managers. Schoene Kilburn & Co. was employed as the agent in Calcutta to handle the firm's commercial transactions there. As the firm grew, its structure evolved. The original principals in the Samnuggur Co. formed Thomas Duff & Co. in Dundee in 1883, taking over the Calcutta agency to direct the commercial operations of the Samnuggur and two new mill companies formed in Dundee in the 1880s, the Titaghur Co. and the Victoria Co. The directors of – and active shareholders in – the four companies were virtually identical. The mills paid the 'managing agency' Thomas Duff & Co. a 3 per cent commission on sales. The firm showed little appetite for diversification up to 1900.

The preceding description of the Thomas Duff & Co. firm structure conforms closely to the concept of the free-standing company elaborated by Wilkins – a firm 'organized for the specific purpose of undertaking business abroad, typically in a particular country or region'.²⁵⁰ Wilkins' conceptual framework is helpful to consider the ways in which strategic control from the UK was important to Thomas Duff & Co., and therefore differs from the portrait of portfolio investment by passive shareholders emphasized by traditional typologies of British foreign investment. It also considers how this type of firm contrasted with modern notions of the multinational corporation, which established foreign operations based on the transfer of technology and knowledge deriving from operations in the home market. Furthermore, it poses the question of what competitive advantage the free-standing firm embodied vis-à-vis competitors in the foreign market in which it invested. Advantages deriving from the home headquarters had to be sufficient to justify the additional cost of maintaining strategic control across national borders.²⁵¹ This question is particularly apt to Thomas Duff & Co. Their main competitors were resident British firms in India – Andrew Yule, Bird & Co., and Jardine-Skinner – with diversified interests in coal, shipping, labour contacting, jute dealing, finance and piecegoods trade. Geoffrey Jones has described the economies of scope these firms derived from their diversified structure, with 'clusters' of networked firms directed by a managing agency.²⁵²

The board of directors of the Samnuggur Co., formed in 1874, combined a set of complementary managerial competences which permitted the firm to enjoy a competitive advantage in its initial operations. The company chairman, Thomas Duff, came from a family of Dundee jute spinners and engineers but his early career was in the multinational trading agency, Hendersons, in Liverpool. From 1858, as Henderson's agent, Duff managed and became a partner in the Barnagore mill, owned by the Borneo Company, the most successful of the early Calcutta mills.²⁵³ Returning from India, he set up a jute mill in Barking in London in 1866, which was sold in 1874.²⁵⁴

The other directors of the Samnuggur were the Nicoll brothers, who owned and managed a jute spinning factory in Dundee, and Barrie, a prominent Dundee merchant. Around this nucleus of original directors, was a group of active shareholders, who brought subsidiary competences to the firm, and would join the board of directors of the four companies as the firm expanded. These later directors included the firm's secretary, banker, and solicitor, also local textile machinery manufacturers, merchants, shipbuilders and shipping agents.²⁵⁵ This expertise was translated into an initial competitive advantage for the

²⁵⁰ Mira Wilkins, 'The Free-Standing Company Revisited', Chapter in Wilkins & Schroter (eds), *The Free-Standing Company in the World Economy* (Oxford, 1998), p.8.

²⁵¹ *Ibid.*, p.23.

²⁵² Geoffrey Jones, *Merchants to Multinationals; British Trading Companies in the Nineteenth and Twentieth Centuries*, (Oxford, 2000), p.11.

²⁵³ Wallace, *The Romance of Jute*, p.18.

²⁵⁴ Report in *Dundee Courier*, 5 March 1873.

²⁵⁵ UDA, MS 86/1/1/1, Samnuggur Co., minute of meeting of the directors, 8 Sept 1874, p.3.

Thomas Duff companies in relation to raising capital cheaply, the transfer of knowledge of production processes that permitted them to reduce costs and pioneer the production of higher value-added hessians in Calcutta, and the use of commercial information that facilitated entry into export markets through direct sales that bypassed Calcutta intermediaries.

The transfer of the location-specific knowledge from Dundee embodied in the firm's principals required the selection and monitoring of effective agents in Calcutta, based on Duff's possession of location-specific knowledge of Calcutta market conditions. This latter category of knowledge was renewed and replenished by a system of annual visits to Calcutta by one of the directors of each mill company. Meanwhile, competent managers of the Calcutta office and of the individual mills returned to Dundee periodically to attend directors' and shareholders' meetings or permanently when promoted to a seat on the board in Dundee. Sons and nephews of the original directors succeeded to the board after serving apprenticeships in the Calcutta office. Reduced journey times for personnel and correspondence by letter via the Suez Canal were utilized by the firm to develop a system of monitoring based on weekly reports to the directors from the commercial manager in the Calcutta commercial office and from the individual mill managers. The telegraph was used by principals and agents to relay urgent instructions and enquiries to and from Calcutta based on up to date intelligence about Calcutta market prices for raw jute and jute goods reported in the Dundee press.²⁵⁶

The initial capital of the Samnuggur comprised £121,200 of ordinary voting shares. A 33 per cent stake was held by Duff and a 70 per cent stake by the four original directors.²⁵⁷ The directors' stake was diluted over time as new share capital was issued to finance expansion. The firm's articles of association were designed to concentrate control over the issue of shares in the hands of the directors to preserve their control over the firm, shares reverting to the firm on the death of a shareholder until the new Companies Act entailed a revision of the articles at the turn of the century. Shareholdings in the mill companies were highly personalized and sparsely traded in illiquid secondary markets up to the 1890s, after which they were more actively traded on the Dundee stock exchange, reflected in a dispersion of shareholdings away from Dundee to other locations in the UK.²⁵⁸ Shares in Thomas Duff & Co., the managing agency, were restricted to existing directors of the mill companies, divided roughly in proportion to their existing stakes in the mills.

Table 1: *Expansion of Thomas Duff & Co. jute mills, selected years*²⁵⁹

Financial Year	Hessian looms (% of total looms)				Total looms			
	Sam	Tita	Vic	Weighted average	Sam	Tita	Vic	Total mills
1876	25			25	200			200
1884		0			415	250		665
1891	39	34			560	400	195	1,155
1894	39	39	26	36	560	435	340	1,335
1899	39	35	50	41	560	779	600	1,939

Table 1 demonstrates the rapid expansion of the firm's productive capacity, with hessians occupying a growing share of output while table 2 provides indicators of the Thomas Duff & Co. mills' financial performance up to 1899. Dividend payments to the senior directors of the

²⁵⁶ UDA, MS 86/1-5, Samnuggur, Victoria, Titaghur, Thomas Duff & Co., minute books of the directors.

²⁵⁷ UDA, MS 86/1/1/1, Samnuggur Co., minute of meeting of the directors, 8 Sept 1874, p.3.

²⁵⁸ Compare lists of shareholders in UDA, MS 86/1/1/6, Samnuggur minute book, 1897-1900.

²⁵⁹ Figures compiled from UDA, MS/86/1-3, reports of the directors to the annual general meetings of the shareholders.

Thomas Duff & Co. managing agency correspond to the commission payments from the mills, suggesting they earned a premium on their mill shareholdings for 'management services'. Comparisons of the mills' performance with their Calcutta competitors can be made on the basis of available published figures for dividends. The initial performance of the Samnuggur mill is impressive relative to the 13 mills listed in Calcutta from 1874-81. The Samnuggur paid an average 14 per cent dividend compared to 6 per cent for the other mills, while accumulating a reserve fund of £105,000 which was transferred pro-rata to shareholders as a stake in the new Titaghur mill in 1883, equivalent to a 70 per cent return on their shares.²⁶⁰ Wallace, an editor of the Calcutta business newspaper *Capital* commented:

*Backed by the practical experience and business connections of the home board in foreign markets, this company did more than all the companies put together to invade new markets. They proved the ability of the Calcutta mills to compete with Dundee for the 'Frisco hessian wheat bag and the Australian cornsack, woolpack and hessian bran bag demand (...) It was significant of the superiority of their mill and business methods while the other mills languished or went to the wall in the years that followed the enormous additions of new mills in 1873-5.'*²⁶¹

²⁶⁰ UDA, MS 86/1/3/1, Titaghur Co., minute of extraordinary general meeting of the shareholders, 27 June 1883, p.262.

²⁶¹ Wallace, *Romance of Jute*, pp.35-6.

Table 2: *Financial performance of Thomas Duff & Co. mills*²⁶²

Year	Net profit after interest, other charges & depreciation of rupee exchange (£, current prices)				% Return on capital employed after depreciation			% Dividends on ordinary shares		
	Samn- uggur	Tita- ghur	Vict- oria	TD & Co.	Sam	Tita	Vic	Sam	Tita	Vic
1876	16,462							15		
1877	29,778							15		
1878	31,257							15		
1879	22,410							10		
1880	36,880							15		
1881	59,841							15		
1882	70,538							20		
1883	36,651							15		
1884	-1,047	308		2,777		0		0	0	0
1885	-4,889	1,391		4,218		1		0	0	0
1886	-1,904	3,334		1,548		2	2	0	0	0
1887	19,044	22,559		3,569		14	8	7.5	8	7.5
1888	30,896	39,247		4,780		25	10	10	20	10
1889	26,631	26,191	2,333	6,166		17	13	10	10	10
1890	25,760	22,302	9,871	5,951		15	16	10	10	10
1891	39,532	28,461	12,345	5,125		19	16	12.5	13	12.5
1892	25,853	19,803	10,289	9,278	12	14	9	10	10	7.5
1893	23,794	18,305	6,497	8,221	10	13	2	7.5	8	2.5
1894	20,259	14,727	10,522	7,976	9	11	7	6	6	4
1895	40,004	30,278	25,721	9,483		23	17	12.5	13	10
1896	24,924	12,384	17,294	9,309		10	11	7	3	6.5
1897	29,503	18,580	13,705	11,400		15	12	7.5	5	6
1898	36,883	43,530	19,153	11,321		15		10	10	6
1899	35,316	48,911	12,581	13,889		18	26	10	10	8

By the 1890s, this initial competitive advantage appears to have been eroded to some extent, if dividends are taken as an indicator of firm performance. The 16 mills listed in Calcutta averaged 10 per cent dividends, Samnuggur 9.3 per cent, Titaghur 8.7 per cent, Victoria 7.5 per cent.²⁶³ However, the Calcutta average is skewed by a minority of mill companies which benefited from the low cost of acquiring bankrupt mills at the end of the 1870s after the failure of demand to keep pace with mill expansion led to depressed values for jute mill shares.²⁶⁴

The concern of the firm's directors to remain competitive is indicated by correspondence from Smith, the senior manager in the Calcutta office and a director, to Dundee, urging them to accept reduced prices for the contract with Darling:

²⁶² Figures compiled from UDA, MS/86/1-3, reports of the directors. Figures for capital employed by Samnuggur Co. are not available for some years.

²⁶³ Figures for Thomas Duff & Co. mills compiled from annual reports. Figures for Calcutta mills compiled from *Jute Mills in Bengal* (Dundee, 1880), and various issues of Calcutta newspapers on microfilm, *Friend of India & Statesman* 1882-3, and *Capital* 1898-9, British Library, SM144 and SM203

²⁶⁴ The Calcutta mills were also more dependent on preference shares and debentures for their finance.

*Please bear in mind that it is an absolute necessity for us to retain our Australian connection (...). As I have said buyers here naturally discriminate against us, being their strongest opponents [in colonial markets], and we must in a manner be independent of local Australian orders [placed in Calcutta]. I don't say but that we shall get a big share, as our influence with brokers is very strong, but we must not allow ourselves to be cut out in Australia and be reduced to the position of depending on local orders alone.*²⁶⁵

In a further letter, he states: 'I am sorry to see you are all so much in the dumps – you appear to have gone into black despair and you are evidently quite as nervous and panicky as in '85, '86. Really there is no cause for all this – a little patience will cure all'.²⁶⁶

Smith's optimism appears to have been justified, as sustained growth in global trade and improved output prices returned in the latter part of the 1890s after the periodical crises during the Long Depression. Wallace observes: 'With one or two exceptions, all the mills have averaged good profits since 1896'.²⁶⁷

If their information advantages had declined, financial advantages in capital markets became more significant to the firm to finance large increases in productive capacity. While Calcutta mills issued debentures and preference shares at 6 or 7 per cent, Thomas Duff mills enjoyed rates of 4 and 5 per cent respectively.

²⁶⁵ UDA, MS 86/V/7, Thomas Duff & Co., Letter from William Smith, Calcutta, to Dundee, 10 Aug 1890.

²⁶⁶ UDA, MS 86/V/7, Smith to Dundee, 27 Oct 1890.

²⁶⁷ Wallace, *Romance of Jute*, p.50.

Do social norms reduce civil conflict? An empirical analysis of Confucianism on banditry in late Imperial China

Chicheng Ma, Hong Kong University of Science & Technology
(macc@ust.hk)

Social conflicts are perennial features of human societies. Compared to the effects of economic shocks, the role played by social norms and values in mitigating conflicts remains little understood. By employing a panel dataset (circa 1644-1910) uniquely constructed from a north Chinese province with a strong tradition in banditry – a social organization that involves not only resistance to established social order but also is deeply ingrained with an ethos of social justice, we examine the role of Confucian values – an ideology that promotes social harmony and pacifism – on the intensity of banditry. Using educational attainment – the principal mechanism by which Confucian values were diffused – as the main proxy, we exploit the exogenous variations in the Imperial examination quotas allocated by the emperors for identifying the causal effect of Confucianism on banditry. The results show that Confucianism significantly reduces the incidence of banditry as well as attenuates the effect of economic shocks. These may help to explain why Confucianism had been promoted as state religion throughout the Chinese dynasties.

War and inquisition: social control in the Spanish Empire

Jordi Vidal-Robert, Boston University
(jordivr@bu.edu)

Supervisor: Professor Robert A Margo

1. Introduction

Sometime in the late sixteenth century María Soliña married Pedro Barba, a fisherman and one of the wealthiest men of Cangas, a village in Galicia, Spain. Barba owned real estate, a boat, and a share of the donations collected by the churches *Colexiata de Cangas* and *Iglesia de San Cibrán*.²⁶⁸

In 1617, the Turks sacked the village of Cangas. Thirty-three people died, almost two hundred houses were burned and most of the fishermen's boats and gear were destroyed. According to the story, Maria lost her husband and her son in the attack; subsequently, she inherited all her husband's possessions.

In the aftermath of the conflict the local nobility of Cangas, along with the village's richest men joined with the Inquisition to denounce 'witches' – typically women with significant wealth.²⁶⁹ If convicted (or confessed) the Inquisition would seize the 'witch's' wealth, some of which would also accrue to the local nobility. The nobles and others accused Maria of being a witch, arguing as proof that she used to go for a walk on the beach every night in order to commune with her husband and son; she was tortured until she confessed and her possessions were seized. The story ends with Maria dying poor and alone. This popular story from seventeenth-century Spain paints a very different picture of the Inquisition from the popular one of eradicating religious heresy.

Historians have vigorously debated the motivations of the Spanish Inquisition. Early on, Llorente (1835) argued that the Inquisition's primary motive was to maximize its income, an argument that, needless to say, seems appealing to economists. However the most accepted explanations come from the new and recent wave of Inquisition historians,²⁷⁰ who put forth a social control argument. I interpret the idea of social control in that context as the repression of any political ideology that differed from the official one in order to prevent a successful revolt.

Within the economics literature, Miguel (2003) and Oster (2004) have focused on the economic downturns as possible explanation for an increase in witch killings in Africa and witch trials in modern Europe. They claim that witchcraft is explained by economic downturns – popular reactions to hard times that blamed somebody as a scapegoat.

This paper contributes to the literature by examining theoretically and empirically the hypothesis of social control. The basic idea is that the government's 'demand' for social control was greater during periods of war. Spanish cities were more likely to revolt when the Crown was at war. To minimize the threat of rebellion, the Inquisition conducted more trials when Spain was at war than when she was at peace.

2. Theoretical framework

The theoretical framework presented in this section rationalizes why an absolute monarchy, like the Spanish Crown, might adopt an institution like the Inquisition for the purposes of social control: to impose its political ideology and to stamp out revolt.

²⁶⁸ Barba also had a say in church policies, according to the story.

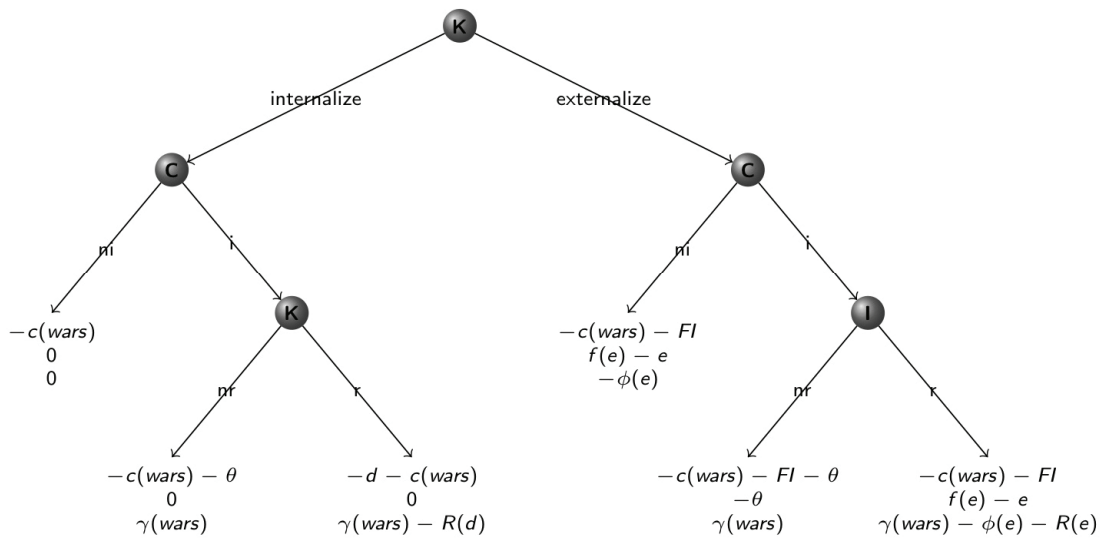
²⁶⁹ Payment of taxes by peasants to the local nobility (an important source of noble incomes) was suspended by the Crown after the attack; the local nobility, therefore, had a financial motive to support the Inquisition's persecution of witches.

²⁷⁰ Some of these historians are Contreras (1984), Henningsen (1984), Garcia Boix (1984), and Garcia Carcel (1984).

In particular, it elucidates the social control mechanism that links wars and inquisitorial activity. The idea behind it is that the government's 'demand' for social control was greater during periods of war. Spanish cities were more likely to revolt when the Crown was at war, because war diverted the Crown's attention away from domestic affairs. To minimize the threat of rebellion, the Inquisition conducted more trials when Spain was at war than when she was at peace.

The game I will describe has three players (King, Cities and Inquisition) and three stages. Before the game starts every player sees the true value of wars. In the first stage, the King decides whether to externalize inquisitorial finances or to exert internal control by himself. Once the Cities observe this decision they decide whether they will insurrect against the King. In the third stage, either the King or the Inquisition will decide to repress an insurrection or not to repress it. Figure 1 represents the extensive form of the game and shows the payoffs for each final node.

Figure 1: *Extensive form*



Setup of the game

King

The King will suffer a cost FI of externalizing inquisitorial finances the first time. He will not face any costs afterwards. Moreover, he is incurring in war costs represented by $c(wars)$, where $c'(\cdot) > 0$.

When the King does not repress the insurrection of the cities, he will have a personal cost θ . Finally, if the King represses a revolt, he will have to exert some effort, d .

Inquisition

The Inquisition would suffer the same personal cost, θ , if it does not repress a revolt. Moreover, inquisitorial trial activity reported some benefits to the institution. These benefits from the trials are represented by $f(e)$, where $f'(\cdot) > 0 > f''(\cdot)$. However, this trial activity generates costs e .

Cities

Cities decide if they insurrect once the King has taken the decision of supporting the Inquisition.

Cities will have disutility from inquisitorial activity ($\phi(e)$, $\phi'(e) > 0$), and from the repression if they insurrect ($R^K(d)$ if the King exerts it or $R^I(e)$ if the Inquisition exerts it, $R'(\cdot) > 0$).

If the cities insurrect they will obtain some utility from the fact that the King is distracted by external wars. The idea is that Cities are more likely to generate a successful insurrection when the King is engaged in more external wars and he is not able to provide enough internal control. This utility is represented by $\gamma(\text{wars})$, where $\gamma'(\text{wars}) > 0$.

Solving the game by backward induction

From the conditions faced by the Inquisition and the Spanish cities we can see how inquisitorial intensity will be increasing until \bar{w} is reached and it will drop when $\text{wars} > \bar{w}$. That describes an inverse-U relationship between inquisitorial intensity and wars.

In a similar way we can see that the King will be indifferent between externalizing inquisitorial finances or facing repressive costs himself when $\text{wars} < \underline{w}$ or $\text{wars} > \bar{w}$. However, when $\bar{w} > \text{wars} > \underline{w}$ the King will always decide to externalize inquisitorial finances.

This simple framework provides four main predictions. First, the King will decide to externalize inquisitorial finances if the number of wars is not very low or very high. Second, once inquisitorial finances have been externalized, the King will never internalize them again. Third, inquisitorial activity is increasing with the number of wars if the optimal activity cannot prevent insurrections. Fourth, if the number of wars is too high, inquisitorial activity will drop and the cities would be very likely to revolt.

3. Data

I bring together time series data of seven Spanish inquisitorial districts on inquisitorial activity, as well as information on the wars the Spanish crown was fighting. Below I describe in detail the sources of information.

Inquisition data

Inquisitorial districts sent periodical activity reports to *La Suprema* (also called ‘Supreme Council of the Inquisition’). In this way, *La Suprema* controlled the activity, procedures and finances of all districts. Therefore, there were two copies of each Inquisitorial district activity report.

Historians have studied these archives and published their work on Inquisitorial activity of several districts. Vicente Vignau wrote the first catalogue of inquisitorial activity (district of Toledo) in 1903. In 1982, Perez Ramirez published the Catalogue of Cuenca. Some years later, Blazquez Miguel published the catalogues of Murcia (1987) and Barcelona (1990). Contreras (1982) and Garcia Carcel (1980) and Gracia Boix (1982) contain the catalogues of Galicia and Valencia respectively.

I assemble time series data with the number of trials per year for seven districts.

Weather data

I use annual indexes of rainfall anomalies as a proxy for weather data in Inquisition districts. Barriendos et al. (1998, 2008) construct an index from ecclesiastical rogations that prayed for some rain.

Wars data

I use data on wars in which Spain was fighting from 1490 to 1820 from Levy (1983) and Kiser et al. (1985). In particular, I use the number of wars in which Spain was involved in a given year. Moreover, I use data on army size obtained in Sorokin (1932). I use this measure as a proxy for intensity of the wars.

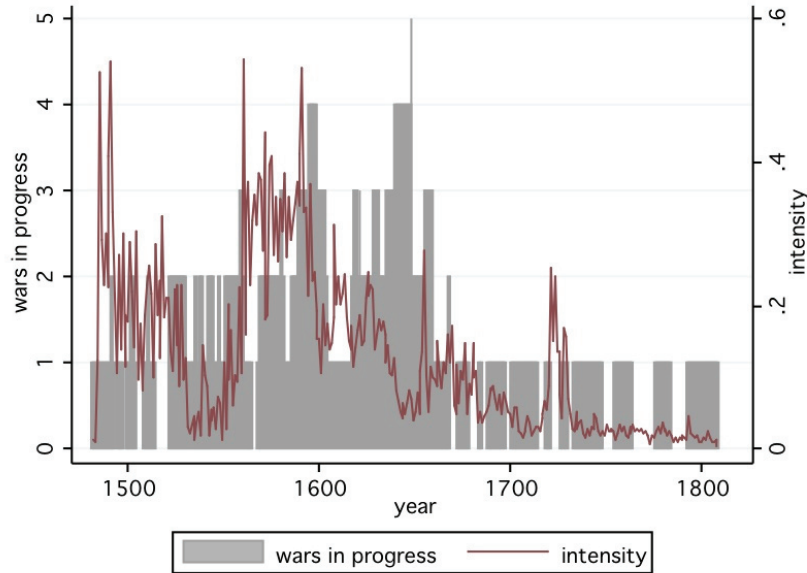
4. Empirical analysis

This section will provide empirical evidence of the four predictions of the theoretical framework.

Figure 2 shows inquisitorial intensity (number of trials per thousand inhabitants) and the number of wars in which Spain was fighting. We can identify the predictions of the

framework in this graph. We observe that the number of wars was neither very high nor very low when the Inquisition took control of its own finances. This fact corresponds to the first prediction of the framework. Moreover, once the finances were externalized, they were not internalized again in the period under consideration (until 1808 when Napoleon abolished the Inquisition). Thus, the second prediction is also observed in the data.

Figure 2: *Wars and inquisitorial intensity*



With respect to the other predictions, table 1 shows the mean intensity of inquisitorial activity in each district by number of wars. We can observe how inquisitorial intensity increases when the number of wars goes from 1 to 2, but this intensity is decreasing when the number of wars is high enough.

Table 1: *Wars and Inquisition intensity*

	War=0	War=1	War=2	War=3	War=4
Spain	.061 (.06)	.023 (.15)	.198 (.24)	.107 (.13)	.026 (.02)
Barcelona	.023 (.05)	.042 (.08)	.076 (.11)	.086 (.05)	.027 (.04)
Murcia	.085 (.15)	.092 (.20)	.198 (.29)	.256 (.25)	.203 (.15)
Cuenca	.092 (.15)	.096 (.02)	.021 (.15)	.036 (.12)	.1 (.17)
Cordoba	.026 (.06)	.067 (.08)	.123 (.03)	.035 (.07)	.165 (.03)
Valencia	.058 (.13)	.068 (.1605)	.144 (.15)	.162 (.25)	.090 (.08)
Galicia	.0088 (.026)	.008 (.15)	.063 (.13)	.141 (.058)	.072 (.06)
Granada	.081 (.17)	.099 (.10)	.177 (.08)	.203 (.03)	.077 (.179)
Observations	66	155	67	30	12

Standard deviations in parentheses

Econometric analysis

Panel Data Analysis

The equation of interest is the following one:

$$\begin{aligned} intensity_{it} = & \alpha_i + \gamma(t) + \beta wars_t + \lambda wars_t^2 + \sigma droughts_{it} + \delta X_{it} \\ & + \theta Spillover_{it-1} + \psi D_{jt} + u_{it} \end{aligned} \quad (1)$$

I regress trials per thousand inhabitants in a given district i and year t ($intensity_{it}$) on wars in year t . I control for severity of the weather in region i ($droughts_{it}$), for ‘spillover’ effects – intensity from other districts than the main district under analysis, time and expulsion of *Moriscs* and Jews and the French Revolution. I also include district fixed effects (α_i).

This specification allows me to test the hypothesis of social control, as predicted in the theoretical framework.

I use the variable number of wars and total army size fighting wars as a proxy for social control. I will test the predictions of the theoretical framework that imply an inverse-U relationship between wars (defined as number of wars or their intensity) and inquisitorial activity. That is, if inquisitorial activity is increasing with wars up to a certain threshold. Once this threshold has been surpassed, inquisitorial activity drops, since the effort of repressive activity is too costly for the Inquisition. That relationship would reflect the social control mechanism described in this paper.

In order to control for other possible motivations of the Inquisitorial activity, I include dummy variables for years close to the expulsion of *moriscos* and *judeoconvertos*, for years posterior to the French Revolution, as well as for adverse weather conditions.

The dummies for the expulsion of *moriscos* or *judeoconvertos* will control for religious persecution motives.

I also control with a dummy for French Revolution years since its ideas, which spread all over Europe, could also have influenced Inquisition activity during the last years of the eighteenth century and the beginning of the nineteenth century.

Finally, I also take into account adverse weather shocks (droughts index) to control for an increasing inquisitorial activity when there are bad economic shocks, like Oster (2004) describes.

5. Results

Table 2 shows the results for Panel Data Analysis of the effects of army size on the Spanish Inquisition activity. We can observe that the inverse-U relationship between army size and inquisitorial intensity is significant across all specifications. Thus, the inverse-U relationship seems robust to the inclusion of adverse weather shocks, spillover effects, and Jewish and moriscos expulsion dummies. This result also holds if we include Inquisitors Fixed Effects (columns 6 and 7).

Table 2: *Army size and inquisitorial activity (panel data)*

The effect of army size on inquisitorial activity							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	intensity	intensity	intensity	intensity	intensity	intensity	intensity
Army Size	0.00112*** (0.000423)	0.00123*** (0.000461)	0.00114** (0.000489)	0.00119* (0.000678)	0.000693* (0.000361)	0.000409*** (0.000116)	0.000557* (0.000309)
Army Size Squared	-9.12e-06** (3.70e-06)	-1.00e-05** (4.09e-06)	-9.66e-06** (4.01e-06)	-1.01e-05* (5.17e-06)	-6.12e-06** (2.69e-06)	-6.03e-06*** (1.74e-06)	-3.89e-06 (3.58e-06)
Cubic time trend	yes	yes	yes	yes	yes	yes	yes
District FE	yes	yes	yes	yes	yes	yes	yes
Droughts		yes	yes	yes	yes	yes	yes
Jewish expulsion			yes	yes	yes	yes	yes
Moriscs expulsion			yes	yes	yes	yes	yes
French Rev.			yes	yes	yes	yes	yes
Spillover				yes	yes	yes	yes
Lagged intensity					yes	yes	
Inquisitor FE						yes	yes
Observations	1,855	1,590	1,590	1,433	1,433	1,433	1,590
Number of id	7	6	6	6	6	6	6
Joint test:	7.736	7.801	5.808	4.069	6.014	14.47	7.538
Prob>chi2	0.0209	0.0202	0.0548	0.131	0.0494	0.000720	0.0231

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

That result supports the hypothesis of social control tool explained before. When more resources are diverged from internal control, the likelihood of an internal revolt increases and, thus, the Inquisition would increase its intensity to prevent it. However, when too many resources are diverged, not even a high level of inquisitorial intensity would stop a revolt and, thus, the Inquisition drops its intensity.

Tables 3 and 4 show the correlations between army size, trials and inquisitorial finances variables. We observe how neither the army size nor the trials are related to an increase in inquisitorial revenues. In fact, it seems the relation goes in the opposite direction. The more trials and intensity of the war the less revenues are obtained by the Inquisition.

Table 3: *Army size and inquisitorial finances*

Correlations between war and inquisitorial finances			
	(1)	(2)	(3)
	Confiscations	Censos	Canonries
Army Size	-17713*** (6089)	-43595*** (10903)	-22362*** (3467)
Cubic time trend	yes	yes	yes
Observations	126	126	122
R-squared	0.202	0.422	0.460

Standard errors in parentheses

Table 4: *Army size, inquisitorial finances and trials*

Correlations between war, trials and finances of the Inquisition					
	Army Size	Trials	Confiscations	Censos	Canonries
Army Size	1				
Trials	-0.0322	1			
Confiscations	-0.2289	-0.26	1		
Censos	-0.295	-0.5011	0.5119	1	
Canonries	-0.4333	-0.4331	0.7288	0.7253	1

These results suggest that the Inquisition was not motivated by the extraction of wealth from the citizens, either to increase its own income or to pay the Spanish Crown's wars.

6. Conclusions and discussion

This paper reexamines the literature of the motivations of the Inquisition activity. In particular, it focuses its analysis on the social control hypothesis. The theoretical framework I develop and the empirical results I provide describe one mechanism through which social control could happen. The idea is that the government's 'demand' for social control was greater during periods of war. Spanish cities were more likely to revolt when the Crown was at war, because war diverted the King's attention from internal control. To minimize the threat of rebellion, the Inquisition conducted more trials when Spain was at war than when she was at peace.

The importance of explaining the motivations behind inquisitorial activity relies on the capability to shed light on the mechanisms through which a repressive institution affects long-run economic performance. If the Inquisition had a negative impact in the long run, it is important to discern what kind of institution it was to explain how it affected economic development. For instance, if the Inquisition were just an extractive institution it would have caused a lack of security of property rights, which would have harmed economic performance. Instead, if the Inquisition were a social control tool, as I propose in this paper, the effect on economic performance would have been through entrepreneurship incentives and lack of new technology adoption given the repression of any idea or ideology that differed from the Spanish Crown's one. The possible effect of the Inquisition on Spanish long-run economic performance does not mean that other institutions or shocks did not play an important role on it. For example, Drelichman (2005) suggested that American silver inflow and an increasing rent seeking society also affected long-run development.

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Formal and informal networks in fifteenth-century Florence

Helen Roberts, University of Warwick
(h.m.roberts@warwick.ac.uk)
Supervisor: Professor Stephen Broadberry

Abstract

The paper examines the contribution of formal and informal institutions to economic outcomes using social networks. The literature identifies features of networks such as clustering and centrality of nodes with good economic outcomes. Using commercial data from the 1427 Florentine *catasto*, the paper examines the contributions of formal and informal institutions to network architecture and community structure compared with random network formation. The results show that informal links are much more significant for transitivity and betweenness though formal links are more significant for closeness. I find informal links have much higher modularity (Newman and Girvan, 2004) and adding formal links lowers overall modularity.

Introduction

The literature finds that institutions account for GDP growth together with history, geography, human capital, and culture or social capital, but institutions, culture and social capital have neither a theoretical underpinning nor an agreed empirical approach.

North, Wallis and Weingast (2006) define institutions as ‘rules of the game’ or ‘patterns of interaction that govern and constrain the relationships of individuals’ (p22), and acknowledge both formal and informal in that ‘Institutions are hard to define precisely because the rules that apply include written laws, formal social conventions, informal norms of behaviour, and shared beliefs about the world’.

In terms of their impact on growth however ‘institutions have remained a black box’ (Nunn, 2008). My earlier paper (Roberts, 2010) showed that informal institutions have a larger, more significant effect on growth than formal institutions.²⁷¹ Countries’ growth, which Acemoglu and Johnson (2004) ascribe to ‘property rights institutions’, is better explained by the quality of informal institutions.

The question arises whether this holds at a micro level. Informal institutions are defined empirically in the economics literature and arise from work on development where informal institutions reduce information inefficiencies of search and trust (Durlauf and Fafchamps, 2004). Definitions are not mathematically formalized and any theoretical underpinning is sociological (Granovetter, 1985).²⁷²

Networks can open the black box. Dasgupta (2003, 2009) suggest networks ‘harbour’ multiple equilibria and each equilibrium ‘is characterized by a distinct institutional structure’ but he argues that institutions emerge from networks and are not themselves the networks.²⁷³ Networks can have multiple equilibria and some may be linked to ‘good’ outcomes such as a functioning market (Greif, 1993) but others will be dysfunctional equilibria such as the mafia (Gambetta, 1996). Using historical data helps identify a network with good outcomes.

The paper examines the network role of formal and informal institutions in two ways: first, analysing network architecture using random networks as a benchmark and second,

²⁷¹ I distinguish formal and informal institutions using five criteria: formal institutions are based on rules, are non-relational, change relatively quickly, are underpinned by external enforcer such as the state and are designed; while informal institutions are not rules-based, are relational, change more slowly, are internally enforced and are endogenous (Helmke and Levitsky, 2004).

²⁷² One exception is Kranton’s (1996) model of spontaneous market emergence.

²⁷³ Theoretically it is not clear whether networks capture all aspects of institutions especially abstract notions such as ‘the rule of law’.

analysing the contribution to community structure using statistical models to detect community structure. It outlines measures of network architecture and methods for detecting community structure and then summarizes the data and methodology. It summarizes results for an elite network in Florence and outlines a second dataset to be presented at the conference.

Measures of network architecture

Directed or undirected: A network is represented as a graph on a set of N nodes with a finite number of members (or agents or players or vertices) n . A graph or network is a pair (N, \mathbf{g}) where \mathbf{g} is an $n \times n$ adjacency matrix on the set of nodes where g_{ij} indicates the relationship between nodes i and j and we assume here a relationship is either present ($g_{ij} = 1$) or absent ($g_{ij} = 0$).

Density: Density of a network is the average degree divided by $n-1$.

Mean degree and distribution of degrees: The degree of a node in a network is the number of neighbours that the node has in the network, with degree for node i denoted $d_i(\mathbf{g})$. Average degrees $\sum_i d_i(\mathbf{g}) / n$ vary significantly across networks and give a general view of density of connections in the network.

The distribution of degrees in a network is also of interest where degree distribution of a network (N, \mathbf{g}) is the frequency distribution P of the degrees in the network where $P(d)$ indicates the fraction of nodes that have degree d .

The paper examines how the frequency of very high and very low degree nodes under formal or informal institutions compare with the distribution if links are formed uniformly at random.

The benchmark network where each link formed at random with same probability p and independently of all other links in the network generates a binomial distribution for the probability that a given node has degree d :

$$\binom{n-1}{d} p^d (1-p)^{n-1-d}$$

For large n and relatively small p the probability that a node has d links is approximately $[e^{-(n-1)p} ((n-1)p)^d] / d!$ and can be approximated by a Poisson distribution. Erdos and Renyi show if $p > 1/n$ a network emerges in that some nodes have more than one link and a giant component and cycles or loops emerge but it does not have ‘fat tails’.²⁷⁴

Average distance: The distance between two nodes is the length of the shortest path (geodesic) between them and the average path length is taken over geodesics. The diameter is the largest distance between two nodes and represents an upper bound of path length.

Centrality: Micro measures of networks allow comparison of nodes and how a given node relates to overall network. There are three relevant measures which define a node’s position in the network (Jackson, 2008, p37).

First, degree centrality measures how connected a node is and a node of degree $n-1$ would be directly connected to all other nodes so degree centrality is measured by $d_i(\mathbf{g}) / (n-1)$ and ranges from 0 to 1.

Second, closeness centrality measures how easily a node can reach other nodes or how close a given node is to any other node. One measure is the inverse of the average distance between i and any other node j : $(n-1) / \sum_{j \neq i} l(i, j)$ where $l(i, j)$ is the number of links in the shortest path between i and j .

Third, betweenness centrality measures how important a node is in connecting other nodes. If $P_i(kj)$ denotes the number of geodesics between k and j that i lies on and $P(kj)$ is the total number of geodesics between k and j then we can assess i ’s importance in connecting k and j by looking at $P_i(kj) / P(kj)$ and then averaging this over all pairs of nodes.²⁷⁵

²⁷⁴ Fat tails means there are many nodes with very small or very large degrees.

²⁷⁵ $\sum_{k \neq i} [P_i(kj) / P(kj)] / (n-1)(n-2)/2$.

Clustering measures: For social and economic networks transitivity is important i.e. if node i is linked to node k and node i is linked to node j to what extent is node j linked to node k ? Clustering refers to the frequency with which relationships are transitive based on transitive triples²⁷⁶

Qualitatively clustering makes a difference to the extent to which connections can be made to new nodes and this will affect the speed of transmission of information and the ability of a group to monitor behaviour and enforce punishment e.g. Coleman's (1988) notion of closure. Ali and Miller (2009) refer to trade diasporas such as the Maghrebi traders (Greif, 1993) and the role of social networks in risk sharing (Fafchamps 2003, 2007). This paper examines how far clustering emerges from informal rather than formal networks. For overall clustering we look at when two links come from the same node such as ij and ik we want to know how often the link jk is also in the network. As n increases overall clustering goes to 0.

$$\text{Overall clustering } Cl(g) = [\sum g_{ij} g_{ik} g_{kj}] / \sum g_{ij} g_{ik}$$

Community structures

A second approach is to look at what formal and informal institutions contribute to network structure using community detection techniques where 'communities' are defined as capturing more of a fraction of links internally than would be expected at random.

Statistical modelling of community structure and detection aims to uncover the unobservable latent social structure of a network or to find the natural communities underlying the network. There are models which view community structure as a partition of nodes, and each partition as a community. Newman and Girvan's (2004) approach is based on repeatedly bisecting a network by link removal: the algorithm repeatedly deletes links from a network based on finding links that have very high measures of betweenness. As edges are removed the community fragments into components and these components represent the underlying community structure.

For any community structure, this approach calculates the modularity Π of the community structure. Modularity measures the proportion of links that lie within communities minus the expected value of the same quantity in a graph such that all nodes have the same degrees but links are generated uniformly at random. When $\Pi > 0$ the communities are capturing more of a fraction of links internally than one would expect at random. So the algorithm is repeated until the modularity measure is maximized to identify community structure.

Data

The Florentine *catasto* was the first tax assessment in early modern times conducted in 1427. It included everyone domiciled in Florence and the surrounding Florentine countryside. It is organized in terms of heads of households and includes all the household debtors and creditors and a record of the counterparty. Often household heads would transcribe summaries of their business account into the tax return. So the full *catasto* contains a record of economic transactions for the whole 37,000 city population. This dataset is a network exhibiting different kinds of links (family, location, property, indebtedness).

Herlihy and Klapisch-Zuber (1978) coded tax information for an elite subset of 9,000 heads of households from the 1427 *catasto* and this is available as an online database (www.stg.brown.edu/projects/catasto). It includes data on sex, age, domicile within 16 sections of the city, measures of overall wealth, information on occupation and dependents but omits the detailed lists of debtors and creditors with amounts owed for each household's tax return contained in the *campioni*. So I used the *catasto* to get the detail of links for these individuals.

²⁷⁶ A transitive triple is an example of a clique which is a maximal, completely connected subnetwork of a given network.

Methodology

Identifying links between individuals in the network, I designate each type of link as either formal or informal according to the five criteria in footnote 1. I assume that all links are undirected and are not weighted. Normalizing for the different numbers of links assigned to formal or informal is done via the software if needed though many of the measures are independent of n . The paper identifies the contribution of formal and informal institutions to network structure and to network features conducive to growth. Firstly, I examine a range of relationships among elite families based on the online *catasto* and general historical data and secondly, I look at business relationships and the informal relationships underpinning these using a much larger dataset from the original *catasto* manuscripts.

Elite network

I have coded a network of Florentine elites based on data in the online *catasto* and Dale Kent's *Rise of the Medici*. Based on data in the *tratte* (list of Florentine office holders) Padgett and Ansell (1993) identified 92 families or clans sharing the same surname. This gives an exogenous definition of elites. I coded nine types of relationships between these clans: marriage, trading or business ties, joint ownerships or partnerships, bank employment, real estate ties, patronage, personal loans, personal friends, place of domicile, and separated them into formal and informal relations.

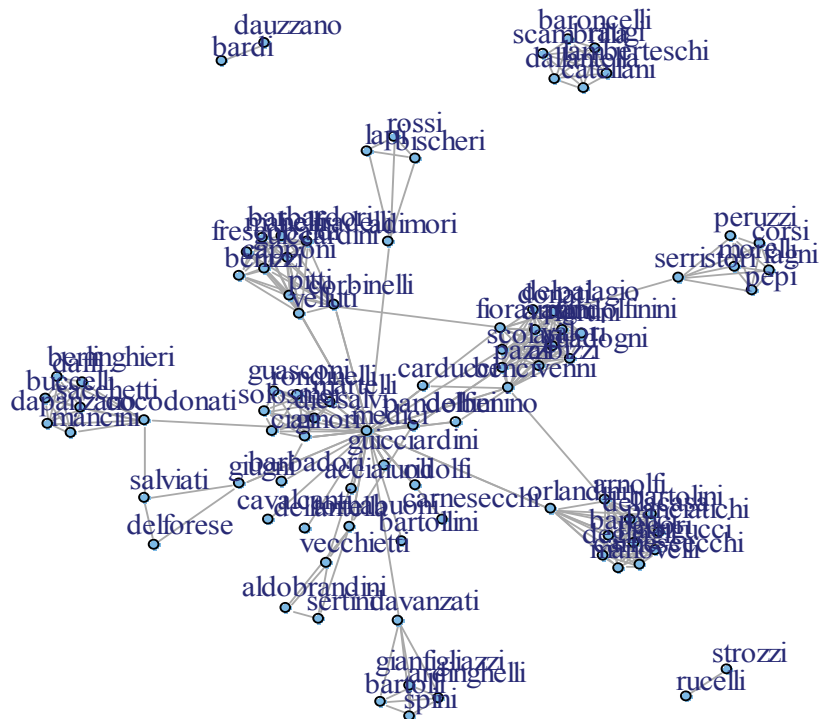
Results

Images of the formal, informal and overall networks are shown below. Results in table 1 show some significant differences between formal and informal networks in Florence. The mean degree is much higher for informal than formal reflecting the larger number of links but density is lower. Measures of centrality show that closeness is higher for the formal network but betweenness is much higher for the informal network and drives up the overall betweenness for the network. Local clustering measured by transitivity is much higher for the informal network on its own suggesting that the formal network reduces the overall transitivity or clustering.

Community structure as measured by modularity which measures the degree of community compared with random links is higher for informal network than for formal network or the network as a whole. So again we have the result that the formal networks may be reducing the overall community structure.

Table 1: Contribution of formal and informal institutions to Florentine elite network

	Formal	Informal	Total network	Mathematical formula
network statistics				
Nodes	35	91	91	
Links	76	329	405	
mean degree	4.34	7.23	8.90	
Density	0.13	0.08	0.098	
average path length	2.98	2.47	2.66	
centrality measures				
closeness	0.22	0.07	0.11	$(n-1) / \sum_{i \neq j} l(i, j)$
betweenness	22.2	70.4	65.3	$\sum_{k \neq i} [P_i(kj) / P(kj)] / (n-1)(n-2)/2$
clustering measures				
transitivity	0.06	0.75	0.62	
overall clustering				$[\sum g_{ij} g_{ik} g_{kj}] / \sum g_{ij} g_{ik}$
largest component				
modularity measures				
Newman and Girvan modularity	0.36	0.76	0.71	
Fastgreedy community				

Informal network

Business network

Padgett and McLean's (2007) study of economic credit in Renaissance Florence supplements the online *catasto* by coding business debts based on identifying from the *campioni* those who worked in companies or partnerships. The *campioni*²⁷⁷ data was supplemented by data on individual companies returns in the *portate*.²⁷⁸ Their dataset of over 756 companies includes the names of business partners (companies of 1 or 2 or 3 or 4 partners), industry, and total of different types of debt. I coded these formal links between business partners and supplemented by informal links of three kinds: location, family, private debts between the partners. I have conducted a similar analysis to evaluate the contribution of formal and informal institutions and the results will be presented at the conference.

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²⁷⁷ Scribal summaries.

²⁷⁸ Original tax submissions.

Postwar reconstruction and the West German export miracle

Tamás Vonyó, University of Groningen
(t.vonyo@rug.nl)
Supervisor: Dr Oliver Grant

The role of international trade in economic growth has long been a major interest for economists and economic historians alike. It is widely agreed that trade expansion was instrumental in the growth miracles of the postwar Golden Age in particular. Perhaps nowhere was this catalysing role more evident than in West Germany, where exports grew twice and three times as fast as industrial production and national income respectively.²⁷⁹ Hence, the *Wirtschaftswunder* has been interpreted by many as the outcome of an even more extraordinary export miracle.²⁸⁰ The most popular explanations of the latter can be organized into three camps. The first argues that new international institutions promoting trade liberalization and market integration in Europe made conditions for export-led growth much more favourable than in any preceding period.²⁸¹ The second emphasizes the role of favourable domestic production costs and monetary protectionism in enhancing the competitiveness of West German firms.²⁸² According to the third, the development of Germany's external trade was path-dependent and, therefore, both the commodity structure and the regional composition of West German exports reflected patterns, or followed trends, that had been established long before the postwar Golden Age.²⁸³

I test for these alternative explanations, particularly for the presence and persistence of a reconstruction dynamic. More specifically, I aim to determine to what extent and for how long the restoration of pre-existing trade patterns shaped the structure of West German exports after 1950, and how large an impact the new institutional forms of regional market integration generated. Finally, I reinvestigate the proposition that the German growth miracle was export led.

I demonstrate that in the early phase of postwar reconstruction export expansion itself was driven by a reconstruction dynamic, not by the new institutions of a new international order. In this period, the growth of industrial output and productivity was also strongly export led. However, once the commodity structure of West German exports began to part with long-established comparative advantages, due to trade diversion caused by regional market integration, the strong positive correlation between the growth of export intensity and industrial expansion broke down. After pre-existing patterns of trade had largely been restored, the growth of West German industry was no longer export led, contrary to the mainstream view. This outcome was also fostered by a marked shift in fiscal policy in the late 1950s and rapid real-wage growth that made the domestic market increasingly attractive for German manufacturers.

Shifts in the regional composition of German exports

In this section, I test econometrically to what extent the regional composition of West German exports reflected interwar trade patterns, and how much diversion trade-promoting institutions, particularly the European Payments Union (EPU) and the European Economic Community (EEC), generated. I computed the share of 94 countries or country groups in total

²⁷⁹ L. von Delhaes-Guenther, (2003), p. 17, and Giersch *et al.* (1992), p. 164.

²⁸⁰ See Michalski (1970), Boltho (1982), pp. 479-85, and Wallich (1955), pp. 228-29, among others.

²⁸¹ See Milward (1987), Buchheim (1990), and Eichengreen (1995).

²⁸² Carlin (1989), pp. 60-5, and Giersch *et al.* (1992), pp. 108-16, 176-84.

²⁸³ Advocated most strongly in Abelshauser (2001), pp. 510-22, and in Delhaes/Guenther (2003), pp. 85-86. Ritschl (2001) even argued that the continental division of labour was further intensified under the Nazi New Order, which laid the foundations for the main pillars of European market integration in the 1950s.

German exports, based on current values, for several benchmark years. For the 1950s and 1960s, data is drawn from the annual foreign trade statistics.²⁸⁴ The 1950 volume reports equivalent figures for 1936. I also analysed wartime trade patterns based on the confidential foreign trade statistics of the Third Reich, which were compiled strictly for internal use only, but which survived in the archives.²⁸⁵ I collected data for 1928 to show that the Great Depression did not substantially alter the geography of German's external trade.²⁸⁶ However, in this paper, I only report my main results.

I estimate a linear regression model to explain the percentage share of the countries represented in my dataset in total West German exports in five benchmark years between 1950 and 1970. My model includes the following explanatory variables:

1. The percentage share of the country in German exports in 1936.
2. The interaction of variable (1) with a dummy for EPU members.
3. The interaction of variable (1) with a dummy for EEC members.
4. The interaction of variable (1) with a dummy for members of the Council of Mutual Economic Assistance (CMEA), i.e. state-trading economies in the Soviet bloc.

In order to demonstrate the impact of institutional arrangements on trade patterns, I designate all countries as EPU and EEC members that traded within these frameworks: the signatory states in Europe, their overseas possessions, and the members of their currency blocs. Since the clearing system of the EPU was abolished with the return to full convertibility in 1958, variable (2) is excluded from the model in the 1960s. By contrast, I included variable (3) for 1950 and 1955 as well. In 1955, the European Coal and Steel Community (ECSC) had already been established, and it replaced the international control of the Ruhr under the aegis of the Inter-Allied Reparations Agency (IARA).²⁸⁷ The model is estimated with robust standard errors.

Table 1: *Regressions explaining the regional composition of West German exports (robust SE)*

<i>Variables</i>	<i>1950</i>	<i>1955</i>	<i>1950</i>	<i>1955</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>
Export share 1936	0.9329* (4.13)	0.9824* (2.94)	0.8895* (4.57)	0.8985* (5.93)	0.8835* (4.32)	0.8432* (3.81)	0.7695* (3.49)
* CMEA dummy	-0.7521* (-3.23)	-0.8994* (-2.90)	-0.7122* (-3.70)	-0.8231* (-4.27)	-0.6154* (-3.32)	-0.6540* (-3.45)	-0.5130* (-2.66)
* EPU dummy	-0.0508 (-0.18)	-0.1098 (-0.29)					
* ECSC/EEC dummy	0.6936* (2.95)	0.2928 (1.22)	0.6848* (3.22)	0.2737 (1.25)	0.3311 (1.56)	0.6095** (2.27)	0.8751* (2.83)
(constant)	0.0490 (0.63)	0.1584 (1.65)	0.0577 (0.61)	0.1773 (1.64)	0.1389 (1.49)	0.1183 (1.19)	0.1080 (1.16)
Observations	94	94	94	94	94	94	94
F	53.46	100.20	68.52	133.99	37.58	28.42	25.38
R ²	0.9059	0.8361	0.9057	0.8351	0.8260	0.8176	0.8142

Note: *t*-statistics are reported in brackets below the coefficients. The superscript * indicates statistical significance at the 1, ** at the 5 per cent level.

²⁸⁴ *Der Außenhandel der Bundesrepublik Deutschland*, Teil 1, Jahresheft (1950, 1955, and 1960); Fachserie G, Reihe 1, Jahresheft (1965 and 1970).

²⁸⁵ *Der Außenhandel Deutschlands*. Sondernachweis. Ergänzungshefte: Der deutsche Außenhandel nach Ländern (1941, 1942, and 1943).

²⁸⁶ *Statistik des Deutschen Reichs*, vol. 366.2. (1929).

²⁸⁷ This regime entailed the forced export of coal, coke, scrap iron and other materials to reparations claimants, most prominently France and the Benelux countries.

The large R^2 's signal that the model explains the regional composition of West German exports in the early postwar period almost completely. I do not obtain a statistically significant coefficient for variable (2), which supports the view that the EPU was more of a force for trade creation than trade diversion and regional market integration. By contrast, centrally planned economies could only retain a small fraction of their interwar share in German exports. This was especially the case in the early 1950s, when Cold War tensions were exceptionally intense. The coefficients on variable (3) show that the impact of wartime trade and the IARA reparations regime was still felt strongly in 1950, but vanished until 1955. The share of ECSC member states in German exports did no longer differ significantly from their equivalent weight in the mid-1930s. This result and the fact that the coefficient on 1936 country shares is closer to 1 for 1955 than for 1950 confirm that the growth of West German exports in the early phase of postwar reconstruction was itself driven by a reconstruction dynamic. In the late 1950s, trade patterns were largely conserved. However, this trend changed markedly during the 1960s, when the EEC rapidly increased its share in German exports, particularly after the completion of the customs union. In 1970, the EEC absorbed a 65 per cent larger share than its constituents had done in 1936, while the corresponding share of other non-communist countries was, on average, 23 per cent smaller.

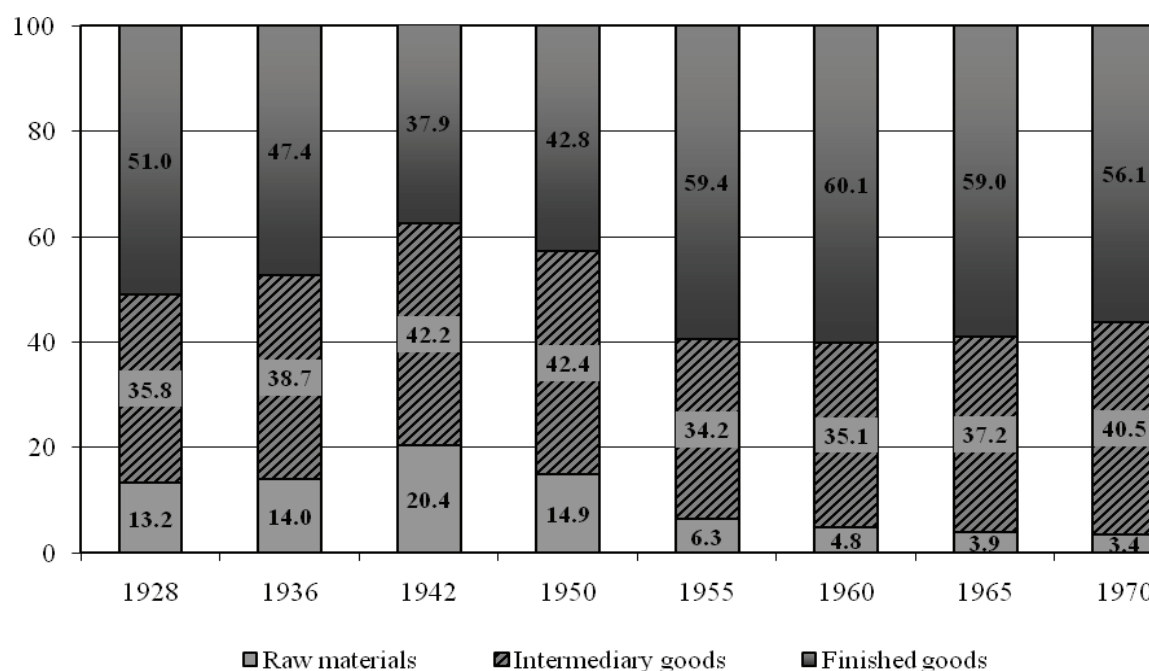
Shifts in the commodity structure of German industrial exports

The restoration of pre-existing trade patterns during the early 1950s can only be seen as the product of a reconstruction dynamic, if such a dynamic manifested itself in the commodity structure of West German exports as well. Similarly, the establishment of a free-trade zone and later a customs union in Western Europe could only constitute a structural break in Germany's external trade, if it induced marked shifts in the areas of specialization for German exporters.

I constructed a constant-price dataset on industrial exports in 56 commodity groups for all benchmark years studied in the previous section. Values for the 1950s and 1960s were obtained by linking several constant-price series reported in the annual trade statistics.²⁸⁸ Figures for 1928, 1936 and 1942 were converted into 1950 DM based on the ratio of export weights.²⁸⁹ The volume of exports declined sharply between 1928 and 1936, but was maintained at close to peacetime levels during the early 1940s, albeit on an enlarged territorial basis. From the postwar nadir, exports grew rapidly, and by 1955 reached the volume attained in 1928. In the subsequent ten years, the rate of expansion fell back somewhat, but increased again during the late 1960s.

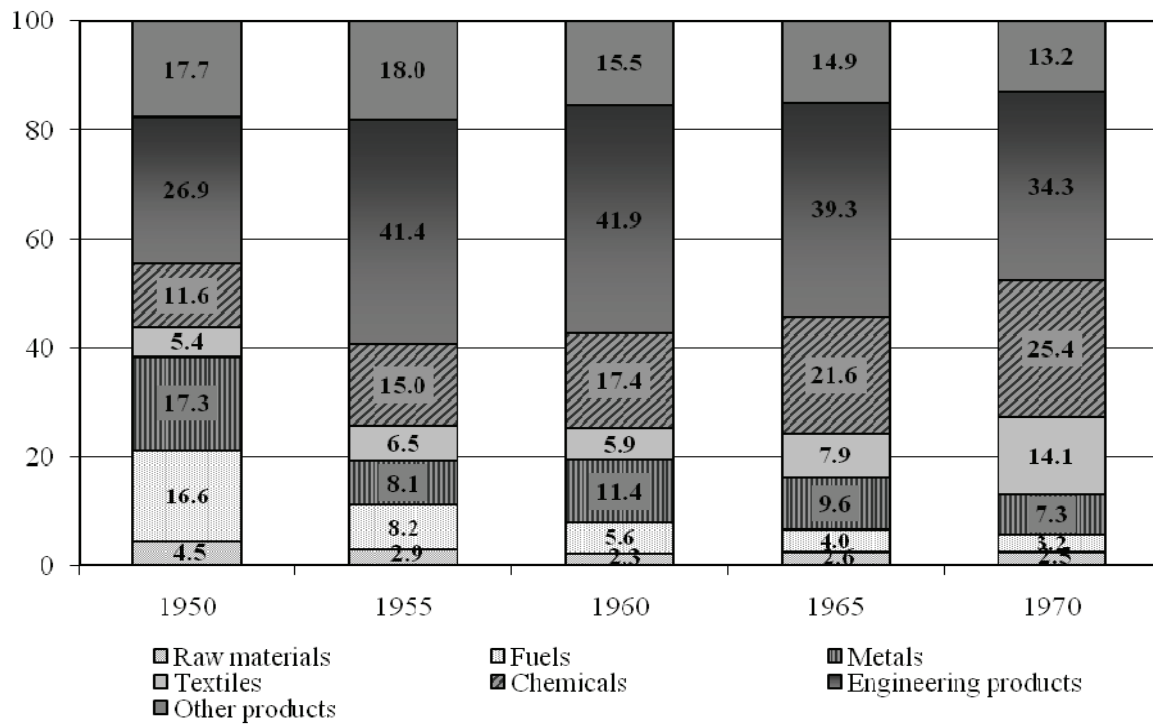
²⁸⁸ See footnote 284.

²⁸⁹ *Statistik des Deutschen Reichs*, vol. 383.1. (1930), pp. 10-13. *Der Außenhandel der Bundesrepublik Deutschland*, Teil 1, Jahresheft 1950, pp. 7-11. *Der Außenhandel Deutschlands*, Ergänzungsheft 1942, pp. 8-12.

Figure 1: *The basic product structure of German industrial exports (%)*

As shown in figure 1 and in the text above, until the late 1950s, there was a strong positive correlation between the volume of exports and the share of finished products. In the 1960s, however, exports of intermediates expanded disproportionately fast, which confirms the increasing importance of intra-industry trade within the EEC. Figure 2 shows the composition of industrial exports by seven major product groups. The restoration of West Germany's world market position in the 1950s rested on her long-established comparative advantages in engineering products, but the further expansion of her exports was driven by chemicals and textiles. While Germany had long been a leading producer of chemical intermediaries, the share of textiles in her exports had been in constant decline since the late nineteenth century. Moreover, the composition of chemical exports changed fundamentally. The once dominant role of dye-stuffs, fertilizers, pesticides, and basic household chemicals was reassigned to synthetic materials, petrochemicals, pharmaceuticals, and cosmetics. The EEC tariffs protected the new darlings of the German chemical industry from US competition, while the self-imposed exclusion of Great Britain from the customs union eased the way of West German textile exports into France and the Benelux countries.

Figure 2: The share of major product groups in West German industrial exports (%)



Export intensity and industrial expansion

In this section, I reinvestigate the proposition that industrial expansion in West Germany during the postwar Golden Age was export driven. I collected data for a panel of 40 industrial branches on gross value-added, annual working hours, and the composition of total turnover according to domestic and export sales.²⁹⁰ Table 2 reports correlation coefficients between percentage-point increments in export intensity, i.e. the share of export sales in total turnover, on the one hand, and the percentage growth rate of value-added and labour productivity, expressed as value-added per hour worked, on the other. The four subsequent periods are separated by the benchmark years analysed in the previous sections, which conveniently all represent business-cycle peaks, at least for industry as a whole, meaning that my results are not distorted by cyclical effects.

Table 2: Correlations testing for export-led growth in West German industry ($N = 40$)

Period	Δ Export intensity – Δ Value-added		Δ Export intensity – Δ Productivity	
	Coefficient	Sig. Level	Coefficient	Sig. Level
1951-1955	0.653	0.000	0.510	0.000
1956-1960	-0.324	0.041	-0.323	0.042
1961-1965	-0.047	0.772	-0.108	0.520
1966-1970	0.269	0.093	-0.270	0.092

The coefficients confirm that the growth of industrial production was strongly export led during the early 1950s and that expansion into foreign markets substantially increased the scope for efficiency gains through greater specialization. However, this dynamic had been

²⁹⁰ Index numbers on value-added from Fachserie D, Reihe 4: Neuberechnung des Index der industriellen Netto-
produktion auf Basis 1958 (1965), and Fachserie D, Reihe 2 (Oct. 1970, Dec. 1971). Employment and
turnover statistics from annual industry surveys, *Industrie der Bundesrepublik Deutschland*,
Sonderveröffentlichungen 9 (1956) and 14 (1957), and Fachserie D, Reihe 1, Jahresheft (1961, 1965, and
1970).

exhausted by 1955. Subsequently, labour productivity improved the most in branches that were prompted to rationalize by diminishing external demand, as the mining sector, or by increasing competition from foreign suppliers in world markets. The growth of output was no longer export driven either. This finding becomes less surprising, if we look at actual trends in export intensity. Its rate jumped from 8.3 per cent to 13.4 per cent between 1950 and 1955, increased modestly until the mid-1960s, and then made another surge between 1965 and 1970. Since external demand for German manufactures expanded continuously throughout the postwar period, not least due to the increasingly under-valued DM and the gradually enhanced integration of European markets, the very uneven temporal distribution of the growth of export intensity must be explained by domestic conditions.

In the early 1950s, the federal government pursued a restrictive fiscal policy to stem inflation in the face of rapid economic growth and to improve the balance of payments. Between 1952 and 1956, the budget surplus averaged over four per cent of GDP and was deposited in the Bundesbank to cover the costs of eventual rearmament.²⁹¹ Since the expansion of domestic purchasing power could not keep pace with the staggering growth of industrial production, West German manufacturers had to find external outlets for a swiftly increasing share of their produce. This aim was supported by a string of neo-mercantilist legislation, such as tax concessions on maritime shipping and subsidized interest rates on commercial loans financing exports. After the establishment of the EEC, export subsidies affecting intra-European trade had to be abolished. By contrast, the domestic market became increasingly more lucrative for industrial producers. The 1957 election campaign signalled a marked shift towards a more expansionary fiscal policy. The central-bank deposits of the government were released to facilitate the introduction of a new pension system and subsidies to agriculture. Rearmament after the NATO accession in 1955 produced a further stimulus.²⁹² Finally, as real-wage growth during the late 1950s and early 1960s was twice as fast as in the rest of Europe private consumption also increased at a higher rate in Germany than in external markets.

Conclusions

My findings demonstrate that the understanding of the West German export miracle of the 1950s and 1960s requires different explanations at different stages. In other words, the largely mono-causal interpretations prevalent in the existing literature are complementary rather than exclusive to one another, once we realize that the dynamics of export expansion and its contribution to the spectacular growth of German industry changed over time. The wartime division of labour in continental Europe did not leave a lasting impact of the structure of West German exports, which until the mid-1950s were restored to resemble interwar patterns, and only deviated from long-established comparative advantages after the establishment of the EEC. Finally, in contrast with the mainstream view, while the remarkable revival of Germany's industrial phoenix in the early 1950s was indeed strongly export led, its further expansion did not rest on external markets.

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²⁹¹ Weimer (1998), p. 121.

²⁹² Jäkli (1990), pp. 35-7, 80-1.

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Calvet de Magalhães: Portugal and Europe

Isabel Valente, University of Coimbra

(valente.isa@gmail.com)

Supervisor: Mrs Maria Manuela Tavares Ribeiro

This article is part of a PhD research project²⁹³ about ‘Portugal and the European integration’ and investigates key ideas of Europe in the speeches of Calvet de Magalhães, and how he tried to juggle his belief in Portugal’s participation in the European integration process and translate this into a reinvention of Portugal’s position. The research is also concerned with how it is possible to document the European thought of Calvet de Magalhães before the Carnation Revolution of 25 April 1974, which was the military bloodless Carnation Revolution that re-established democracy in Portugal and handed to independence the Portuguese African colonies.

The research is interesting because it highlights in a new way the boundaries between diplomacy and international law at a time when Portuguese political history was often seen as insular due to Salazar’s *Estado Novo*. Moreover, the research shows that there were continuities of thinking about European Union (EU) also prior to the 1974 Revolution and Portugal’s entry to the European Community (EC) in 1986. We believe that these issues lie at the crossroads between several historical problems, and the biographical approach is a good reflection exercise into some of the queries raised by the path of Portugal to European integration.

Calvet de Magalhães became one of the most high-ranking diplomats in Portugal. In 1941 he applied for and joined the Ministry of Foreign Affairs (MFA) at the same time as Franco Nogueira. Between 1961 and 1969, Franco Nogueira became Foreign Minister of Portugal and in some aspects enlarged on the doctrines of the philosopher-dictator Salazar, which were embodied in the regime’s constitution, whereby the remnants of the old overseas empire were merely ‘provinces’ of a single country. This context is important to point out these because Calvet de Magalhães would work directly with Nogueira who was against political integration with Europe.

In 1941, Calvet de Magalhães made his debut in the directorate-general of economic affairs in the MFA, in an area of diplomacy in which he would become specialized. He was born in Lisbon, on 2nd October, 1915, during the First World War. He did his secondary education in the Passos de Manuel Secondary School. From that period we can highlight the role that two teachers had in his education: João de Barros and Alberto Reis Machado. With them Calvet de Magalhães took a particularly interest in classes in history, the Portuguese language as well as Portuguese literature. The interaction between these subjects was of

²⁹³ The main sources of information on Portugal’s relations with the European Community are the Lisbon-based Arquivo Nacional – Torre do Tombo (ANTT), which is considered to be one of the oldest and richest in the whole world. There are kept millions of records belonging to countless holdings and collections. There can be found true treasures which constitute the memory of the History of Portugal and of the World. The District Archives contain diversified documentation, namely from the Registry Offices, the Notary Public’s Offices, Courts, Local Governments, Financial Departments and Customs, among others; the Arquivo da Presidência do Conselho de Ministros (PCM), the PCM as information concerning previous Governments, namely: government structure, list of the minister’s cabinets, Organic law and Rules and Arquivo Histórico-Diplomático do Ministério dos Negócios Estrangeiros (AHD-MNE), where are kept millions of records belonging to Ministry of the Foreign Affairs and also to Private Archives. First the deep one includes documentation proceeding of the services of the central administration, since 1850 to 1985; of the Portuguese embassies, legations and representations in the foreigner, since 1819 to 1985; of the missions and permanent delegations of Portugal next to the main International Organizations, from 1949 to 1977; Treated and other international acts subscripts for Portugal, including ratifications and adhesions, between 1839 and 1995; and, finally, monographs elaborated for diplomats and other employees of the MNE, in exercise of its functions from 1922 to 1966.

particular interest to him.²⁹⁴ His family also provided an important contribution to his intellectual and political education. He lived and grew up in a family that was deeply liberal and that encouraged critical reflection. His two great-grandparents, the Pinto de Magalhães', took part in the liberal revolution in 1820. His father was a well-known political caricaturist.

He graduated in Law, in 1940 from the University of Lisbon and he entered the MFA where the admission contest allowed him to become an attaché in January 1941. In 1945 he left to go to New York as a Deputy Consul. In 1946, he held functions as a Consul and he managed temporarily the Portuguese Consulate of Boston, and in the same year became a consul in Canton. In 1951, Calvet de Magalhães assumed the position of secretary at the Embassy in Paris, holding simultaneously functions as a Portuguese representative in the COCOM.²⁹⁵ In 1952, he becomes part of Portugal's North Atlantic Treaty Organization (OTAN/NATO) delegation in Paris. From 1956 onwards, he held the title of plenipotentiary minister which gave him the position of chief of the Technical Commission of EEC on the delegation in Paris and the position of permanent representative to the OEEC. When the OEEC was reorganized to become the OECD, he headed the Portuguese delegation in these negotiations. In 1959, he directed the Portuguese delegation during the negotiations of the Stockholm Treaty that led to the creation of EFTA. In 1962, Calvet de Magalhães was assigned, with the title of Ambassador, to the European Communities and was thus permanent representative and chief of the Portuguese delegation to EEC and the EURATOM.

His professional activities also went beyond Europe. In 1964, he presided over the Portuguese delegation in the negotiations of Ottawa on the new agreements of the fishing limits between Portugal and Canada. In the same year he was given the post of director-general of Economic Affairs in the PFM and, in the following years, he was appointed delegate of the Government with the SACOR.²⁹⁶ In 1969, he went to administer, on behalf of the Portuguese state, the DIAMANG. Moreover, in 1969 he also chaired the negotiations of the Agreement with the Republic of South Africa for the construction of the Cabora Bassa dam. In the following year, he presided at the negotiations for an agreement for economic and trade cooperation with Spain. It was in 1971 that Calvet de Magalhães took over the works of the Department of the MFA and that he negotiated with the United States an agreement related to the use of the Base of Lages. In 1974, he was the Ambassador to the Holy See, and he chaired the negotiations for the revision of the Concordat with the Holy See,²⁹⁷ in 1975.

In 1980, Calvet de Magalhães ended the external work in the MFA, although the government occasionally asked for his services, for instance to re-negotiate the contract over the base in Lages with the United States in 1983. Subsequently, he decided to enter academic life and held positions at both the Autonomous University of Lisbon, in 1995, and at the New University of Lisbon, in 2000. In 1985, Calvet de Magalhães took the presidency of the Institute of Strategic and International Studies (1985-2004), where he began an overflowing activity as an essayist, biographer, columnist and a teacher focusing on the analysis of international themes and specifically on European matters.

In short, since his secondary school, Calvet de Magalhães had dealt with issues of European institutions and integration in a variety of ways. He considered himself a

²⁹⁴ Already in a history class, in the 6th grade of secondary school, taught by Professor Alberto Reis Machado, the young Calvet de Magalhães took an interest in European unity in the field of culture when he completed an assignment called 'the roots of cultural Europe.' (Vasconcelos, 2005:22-23).

²⁹⁵ COCOM was created in 1949 for the purpose of preventing Western companies and countries from selling strategic goods and services to the Eastern bloc countries behind the 'iron curtain'.

²⁹⁶ In the following years, Calvet de Magalhães presided over the Portuguese delegations in the negotiation of trade agreements with Rhodesia (1965), Japan (1966), Brazil (1966) and with the People's Republic of Romania (1967).

²⁹⁷ A *concordat* is an agreement between the Holy See and the government of a country on religious matters. This often included both recognition and privileges for the Catholic Church in a particular country. Privileges might include exemptions from certain legal matters and processes, and issues such as taxation as well as the right of a state to influence the selection of bishops within its territory.

prehistorical Europeanist, a kind of *avis rara* in Portugal. As he has said himself, this happened as a matter of change as well as due to his relations with relatives of diplomats. Exactly how the interest came about is still unclear, but we know that already in his late teenage years he had access to a little-known magazine in Portugal, called *Pan-European Magazine* that was run by Richard Coudenhove-Kalergi.

Throughout his career, the writings of Calvet de Magalhães were penetrated by a Kantian conception of peace, to be obtained through the instruments of professional diplomacy. He called this 'pure diplomacy', and saw the essential function of the diplomat as one of 'peace maker' (Magalhães, 1988; 2005). It simultaneously refers back to 'liberal and humanitarian thought' of the school of Andrade Corvo²⁹⁸ as well as of the liberal thought of the called generation of the 1870s, of Eça de Queirós and Antero de Quental, to whom he has dedicated two biographies, in parallel with studies about Almeida Garrett, 'a fierce fighter of liberalism' (Magalhães, 1996). These thoughts add up to a refusal of nationalism that was, from his point of view, the cause of European and world terrible tragedy. In this sense, he was part of a debate between Europeanists and isolationists that has taken place within the Portuguese diplomatic service since the end of the Second World War. As he himself wrote in 2005, his 'ideal of European unity was prior to the Second World War, to the Congress of The Hague and to the creation of the European Communities. These emerged to me, as to the Europeanists of my generation, disciples of Coudenhove-Kalergi, as means or processes to reach the longed-for European political integration' (Magalhães, 2005, n°58: 7-12). Calvet de Magalhães himself believed that the approximation of Portugal to the international movements 'resulted mainly from the joining of several efforts and personal initiatives more than the result of a conscious governmental policy' (1981).

This way, the appearance and growing of an internationalist stream pro-European in the MFA, during the old regime, is a key aspect of the history of Portuguese diplomacy of that period. As Álvaro de Vasconcelos mentions it was 'a quiet adventure almost always counter current, but successful in what was possible, that is, the participation of Portugal in the European organizations of economic cooperation, what allows to state that the process of European integration of Portugal did not start with the adhesion to the Community, in 1986' (Vasconcelos, 2005:12).

Calvet de Magalhães and Teixeira Guerra were two of the protagonists involved with Portugal's participation in the process of European integration. They were, however, to some extent tilting at windmills inside their native country. This is above all exemplified in 1962 and in 1970, when they tried to negotiate an association agreement with the EEC, with the long-term objective of complete adhesion, but the attempt was soon blocked by the dictatorial regime of António Oliveira Salazar (Magalhães, 1987 and 1981; AR, 2001). Another example was the direct intervention of Calvet de Magalhães in multilateral economic negotiations that began with the attempted creation of a Free Trade Zone (FTZ), proposed by Great Britain in 1957. The outcome of these negotiations was more successful, and Portugal became a founding member of EFTA that was established in 1960.

Interestingly, the ideas of Calvet de Magalhães about the European project were not static, but in steady transformation. His continuous interest in the matter was for instance expressed in the article 'Portugal in Europe: the right path', a remarkable article written in defence of the Maastricht Treaty.²⁹⁹ Here he argued that ideological nationalism, Portuguese anti-Europeanism 'is a doctrinaire attitude that considers the national values as absolute ones, opposing everything that forces it, in the name of superior human values, to recognize the relativity of national values' (1997). In the field of the thematic 'Atlantic versus Europe' two texts stand out. One is the article *O Euro-Atlantismo Revisitado* where he re-emphasizes his belief in an Atlantic-leaning internationalism. The other, about Portugal's Atlantic paradox

²⁹⁸ Who was MFA in Portugal from 1871 to 1879.

²⁹⁹ Later in 1997 the article became a book published by Bertrand Editors.

(1990/1993), where he tries to explain the apparent contradiction between the affirmation of Atlanticism by the Portuguese elites, and the almost complete reduction of those relations with the concession of the base of Lajes, in Azores.

One last reference that is particularly clarifying, amongst the countless ones that can be pointed out, is the thorough analysis of the work written with Teixeira Guerra and Siqueira Freire about European cooperation and integration in the postwar period and the participation of Portugal in those developments, published in 1981 by INA. This collection of articles constitutes the first survey of literature in the field only a few years after the country's transition to democracy.³⁰⁰ Thus, one can conclude that Calvet de Magalhães dreams about and defends a political project for Europe, with no fears of vulnerabilities for the Portuguese sovereignty. He got excited with every step of the process of the European political union, widening and deepening his European reflection, as he mentioned in conversations with José Calvet de Magalhães – Europeanists and Isolationists in the Portuguese Foreign Policy 'now in much more propitious conditions to fulfil his intentions of defender of a true federalism' (Vasconcelos, 2005).

Calvet de Magalhães was a leading figure in the history of the participation of Portugal in European movements, and he exchanged opinions with the authoritarian Portuguese president about this on several occasions when the opportunities of participating more actively in the European integration process presented itself. An example is the letter sent by the President of the Council of Ministers, Salazar, in 1953 to the Portuguese ambassadors around the world. In that letter Salazar restated that the Portuguese aim was not to join European institutions, but to maintain connections with extraterritorial regions.³⁰¹ In this document, Salazar questioned the viability of the European project pointing to the fact, among others, that it involved countries with different political regimes, some countries having republics and others having monarchies.

It thus seems clear that the attitude of the Portuguese government of the time was clearly against joining European political institutions, even in the economic field which was the area where Portugal first changed opinion. The dispatch also mentioned that Britain would never embrace the idea of a European union, and that Portugal should reinforce its ties with Brazil, and create a vast Ibero-American community with Spain that, such as the British Commonwealth, would out stand from the continental Western European bloc.

Salazar's position in the letter, of course, ignores the success obtained by the Marshall Plan in the economic reconstruction of Europe and of the relatively advanced level of cooperation already initiated between core European countries. As Cantino Pereira writes: 'Lisbon rejected any form of supranationalism that might lead to European integration, (thereby threatening the Salazar regime), mistrusted, but at the same time accepted, the importance of the United States, recognized the need to face the Soviet threat and, finally, rejected any external interference in Portuguese internal policy' (2006). Rather, in order to reach goals of internal affairs, historians have shown that the Portuguese trade policy in the postwar period was in reality an answer to the policies of the OEEC. The European policy of Portugal in the postwar period certainly had similarities to other member countries of the OEEC such as Great Britain that initially had refuted the political objectives of the EEC, but who would later become members. It was against this background that 'an essential part of the diplomatic and intellectual activity of Calvet de Magalhães was the search for a European

³⁰⁰ The contributors as career diplomats played a crucial role in Portugal's relations with Europe from 1948 to 1979. Guerra was ambassador to the OEEC 1948-56, director-general of economic and consular affairs during 1956-64 and head of delegation for both the 1959 EFTA negotiations and the 1972 trade agreement with the EEC.

³⁰¹ *Circular sobre a Integração Europeia, para as Missões Diplomáticas, do Presidente do Conselho de Ministros, de 6 de Março de 1953*, published in *Adesão de Portugal às Comunidades Europeias: História e documentos, op. cit.*, pp.61-65.

path for Portugal and also a solid relationship with the United States, as a field of application of pure diplomacy' (Vasconcelos, 2005).

Conclusion

On the basis of the above analysis, we can conclude that Calvet de Magalhães was an internationalist, a diplomat who defended international cooperation and, subsequently, an anti-isolationist inside the authoritarian regime of Salazar. He was a firm believer in European cooperation, and he pursued this ideal during much of his work life. As a diplomat he worked for many years to integrate Portugal in Europe's movements of integration. Despite Salazar's strict political regime, Portugal did have a wide set of connections and networks with the countries in Europe, largely made possible by someone like Calvet de Magalhães. As late as 2003, he wrote 'I continue to think that the Portuguese adhesion to the European communities, nowadays EU, stresses the European component of Portuguese foreign affairs, though not nullifying or weakening the importance of the Atlantic component in the external positioning of our country' (2003). In that sense, Calvet de Magalhães can also be seen as an example of a broader Portuguese tradition among intellectuals to support the European project.

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The urban back garden in England in the long nineteenth century

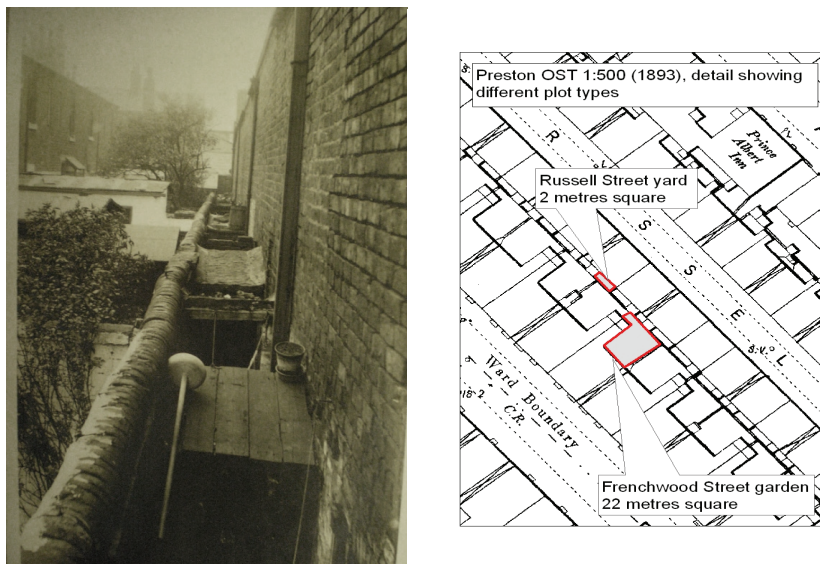
Zoë Crisp, University of Cambridge
(zfc21@cam.ac.uk)
Supervisor: Dr Leigh Shaw-Taylor

Despite the centrality of gardens and gardening to English culture, no historian to date has systematically investigated the extent to which the working- or middle-class urban family was provided with gardens in the nineteenth century. It is asserted (or assumed) by social, urban, and garden historians that urban gardens, variously: did not exist; where they did exist, they were the preserve of urban elites (eighteenth-century aristocrats or nineteenth-century upper-middle-class suburbanites); that they were not provided for the working classes until after the First World War; and that unless they were large or lavishly planted they were not 'real gardens'. This last assumption goes some way towards explaining the first: urban overcrowding and air pollution indeed prevented extravagant, large-scale urban gardening in industrial English towns.

One of the aims of my PhD project is to pioneer a new, quantitative approach to garden history. No previous quantitative survey has been made of the size, contents, or even provision of back plots in English towns across the nineteenth century. Using an in-depth and detailed cartographic and census-based analysis of English towns, I have shown that gardens for all classes existed in differing urban areas well before the last quarter of the nineteenth century, and as early as the first quarter. This paper presents some of these initial findings.

Most historians tend to assume that for an outdoor space to be 'a garden', it must be 'large' (itself a highly subjective term), and have contents which indicate recreational use: a lawn, fruit, some degree of planting. However, ordinary nineteenth-century English houses have, at their backs, a wide variety of outdoor spaces – from the yard-and-back-passage system of Manchester terraces to the shared plots of Sheffield. This variety of outdoor space has not previously been acknowledged. My research is concerned with all these plots, but a definition of 'a garden' is still required. A garden does not have to be large, as this 1930s photograph of several mid-nineteenth-century Preston back plots illustrates. The plot to the left of the wall in the picture is small (measured, as the accompanying map shows, at 22m²), but the 1930s caption clearly considers it a 'garden' in comparison to the 'defective yards' to the right.

Figure 1: (left) and Figure 2 (right): Preston plots on Frenchwood and Russell Streets (Lancashire CRO, CBP4/1/1-200)



A plot 20m² or larger is therefore taken as a space large enough to have the potential to be used as a garden by the occupiers of the house. Anything smaller is considered ‘a yard’.

This paper looks at the plot provision in three English towns, Sheffield, Preston, and Northampton, which vary according to location, type, population, and population density.³⁰² Sheffield was the largest, with a population already bigger in 1801 than the 1841 populations of both Preston and Northampton. None of these towns benefited from a national Housing Act to regulate open space until the late 1880s, but each did pass their own set of building and public health bye-laws at various points in the nineteenth century. In 1864, bye-laws were passed in Sheffield forbidding the building of houses back-to-back, and there were Preston Improvement Acts in 1815 and 1880. Preston, however, was infamous for its slum dwellings and severe overcrowding.

In each of these towns, an independent random sample of 300 records (600 in the case of Sheffield) was taken from the relevant 1881 Census Enumerators’ Books (CEBs) (filtered to include only heads of households), which give exact street addresses together with occupations.³⁰³ These samples represented about 1 per cent of the population of the towns. The addresses given in around 80 per cent of the sampled records could be located on digitized 1880s or 1890s Ordnance Survey (OS) 1:2500 maps of each town, and the plot type and size noted. A few records could not be found on the nineteenth-century maps; had addresses given that were ambiguous; or, when found, were too rural to be included in an urban survey. Table 1 shows the numbers of each type of plot found in each of the three towns (only linked, or found, records are included).

Table 1: *Plot provision in three English towns in the nineteenth century*

	Sheffield		Preston		Northampton	
	Frequency	%	Frequency	%	Frequency	%
Private plots	38	8	169	66	179	75
Shared plots	173	38	44	17	25	11
No plots	244	54	45	17	34	14
Total	455	100	258	100	238	100

The percentage figures for private plot provision differ considerably between the three towns. At first sight, Sheffield broadly fits the pattern assumed in the historiography: only 8 per cent of sampled houses in this heavily industrialized town had private plots. However, a further 38 per cent of houses had shared space, generally a plot shared between two or three houses, as figure 3 shows. In contrast with Sheffield, 66 per cent and 75 per cent of the linked samples of households in Preston and Northampton respectively had private plots.

³⁰² London, housing half the urban population of England in 1801, must be looked at if the survey is to be truly representative. The constraints of a four-year PhD do not allow for it at the moment, but following the PhD, London will indeed be analysed.

³⁰³ UK Data Archive, SN4177, Schurer and Woollard, 1881 Census for England and Wales (Enhanced Version).

Figure 3: *Shared plots in SW Sheffield*

The following data show how plot provision and size varied according to the period in which the house was built. Using maps from the eighteenth and nineteenth centuries, we can gain information about the broad period of construction of the sampled houses in each town. Comparing four maps over time, it is clear how a town developed and roughly when houses were built.

Table 2: *Plot type percentages according to period of house construction*

Sheffield	% Private plots	% Shared plots	% No. plots	No. of observations
Before 1800	0	5	95	81
1800-1840	4	35	61	161
1840-1870	18	43	38	92
1870-1881	12	60	28	121
Preston				
Before 1800	27	24	49	41
1800-1840	62	24	14	86
1840-1870	81	9	10	67
1870-1881	80	11	9	64
Northampton				
Before 1800	42	10	48	48
1800-1840	58	25	17	65
1840-1870	97	3	0	118
1870-1881	100	0	0	7

The pattern is clear. The percentage of houses with no plots at all decreases as the nineteenth century progresses in all three towns; the percentage of houses with private plots increases. In Sheffield, the correlation between period of construction and allocation of outside space is particularly striking: 95 per cent of the sampled houses that were built in the period before 1800 had no outside space at all. This figure falls to 28 per cent at the end of the nineteenth century. Not a single house in the Sheffield sample built pre-1800 had a private plot. The

period 1840-70 marked a high for private plot possession, with 18 per cent of sampled houses having them. The percentage of houses with shared space also increased across the nineteenth century, from 5 to 60 per cent.

In Preston, nearly 50 per cent of houses built pre-1800 had no plots. This figure decreased across the nineteenth century, to 9 per cent in 1870-81. It is perhaps unsurprising that the period pre-1800 had the smallest percentage of houses with private plots. What is surprising is the large percentage of private plots across all four periods. The Sheffield data reveal that, although private plots did exist, in each chronological period the percentage of houses with them was low. Compare Sheffield with Preston: 27 per cent of houses built in the pre-1800 historic core of Preston had private plots; this figure rose to 80 or 81 per cent of houses with private plots 1840-81.

In Northampton, the figures are equally striking. The percentage of sampled houses built with no outdoor space fell as the century progressed, from 48 per cent pre-1800 down to zero per cent from 1840. Private plots were already common in areas of the town developed pre-1800: 42 per cent of houses sampled had them – more than Sheffield managed in the entire period 1800-81. This figure rose to 58 per cent 1800-40, and then to 97 per cent in 1840-70, when the majority of Northampton was developed. Of the few sampled houses built after 1870, 100 per cent had private plots.

Plot provision in all three towns is directly correlated with the period of construction of the house. Houses built in the last quarter of the nineteenth century, in the suburbs, are more likely to have plots than older houses built nearer the historic core. However, houses in both Preston and Northampton had private plots from as early as 1800.

The question now arises: were these plots small yards or large gardens? The table below illustrates some of the variety over time.

Table 3: *Plot sizes in two English towns over time*

Preston	Mean (m ²)	Median (m ²)	N	Min. (m ²)	Max. (m ²)	Std. Dev.
Before 1800	19.09	18	11	9	32	7.516
1800-1840	19.15	17	53	6	68	11.563
1840-1870	20.94	18.5	54	7	75	11.663
1870-1881	21.43	21	51	8	41	6.694
Northampton						
Before 1800	43.15	26.5	20	7	185	45.887
1800-1840	29.13	25	38	5	80	19.465
1840-1870	48.37	40	114	10	219	32.595
1870-1881	40.57	46	7	21	53	11.559

(Sheffield had too few private plots – 38 overall – for a meaningful discussion of average plot sizes)

The majority of private plots in Preston were on average very small. The median plot size marginally increased over time, from 18m² to 21m², but the minimum plot size in each period was consistently smaller than 10m².

Table 4: *Preston plot areas by size group*

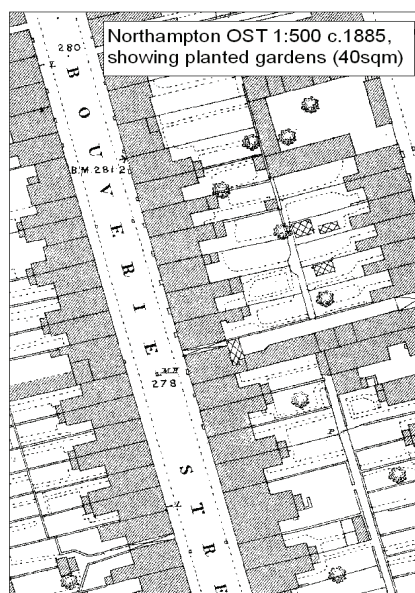
Area	Frequency	%	Cumulative %
Under 10m ²	15	9	15
10m ² -19m ²	71	42	51
20m ² -29m ²	60	36	86
30m ² -39m ²	16	9	96
40m ² and over	7	4	100
TOTAL	169	100	

Table 4 shows that 42 per cent of plots in Preston were over 10m² in size but under 20m². Cumulatively, 51 per cent of plots were smaller than 20m², and therefore more yards than gardens. 96 per cent were smaller than 40m². In Northampton, however, there was a contrasting picture. Not only did 75 per cent of houses have private plots (see table 1), but those plots were, in all periods, larger than in Preston. The minimum plot areas were again very small (5m² minimum), but even in the earliest pre-1800 period, the median plot size was 26.5m², rising to 40m² by 1840.

Table 5: *Northampton plot areas by group*

Area	Frequency	%	Cumulative%
Under 10m	7	4	4
10m-19m	24	13	17
20m-29m	28	16	33
30m-39m	42	23	56
40m and over	78	44	100
TOTAL	179	100	

Here we can see that although 56 per cent of the sampled houses had plots below 40m² in area, 44 per cent had plots over 40m². 83 per cent of plots were gardens by my definition. Comparing figure 1 above to figure 3 below further illustrates the differences between the sizes and types of private plots in Preston and Northampton.

Figure 3: *Northampton gardens*

I have argued that plot size is correlated with period of construction, but that the picture is more varied than previously assumed. The analysis now turns to class. The table below shows the percentage of types of plot in each town between classes. (Once again, only linked records are included. Those occupations which were unclassifiable are excluded from these tables.)

Table 6: *Plot type percentages according to occupational class*

Sheffield	% Private plots	% Shared plots	% No plots	No. of observations
Unemployed/paupers	0	14	86	7
Unskilled working class	0	34	66	89
Skilled working class	3	39	58	214
Lower middle class	21	49	30	43
Middle-class	14	45	41	49
Upper middle class	55	30	15	20
Independent incomes	20	60	20	5
Preston				
Unemployed/paupers	40	20	40	5
Unskilled working class	57	25	18	51
Skilled working class	75	13	12	110
Lower middle class	67	33	0	15
Middle class	63	16	21	56
Upper middle class	50	10	40	10
Independent incomes	0	0	100	1
Northampton				
Unemployed/paupers	100	0	0	1
Unskilled working class	71	6	23	31
Skilled working class	76	15	9	135
Lower middle class	83	4	13	24
Middle class	68	7	25	28
Upper middle class	75	0	25	8
Independent incomes	100	0	0	3

(These classifications are based on a simple but serviceable system; space does not allow for a discussion here.)

The orthodoxy suggests that only the middle classes had private plots in the nineteenth century. Table 6 shows that, while Sheffield confirms this assumption (55 per cent of the upper middle classes had private plots, compared to 3 per cent of the skilled working classes), Preston and Northampton do not. Even the very lowest classes here had access to private plots throughout the period. Over half of those in each of the sampled classes (with the exception, in Preston, of the unemployed and independent groups) had private plots, and three-quarters of the sampled skilled working classes in both towns had them. Table 7 shows the sizes of these plots according to class.

Table 7: *Plot sizes according to occupational class*

Preston	Mean (m ²)	Median (m ²)	N	Min. (m ²)	Max. (m ²)	Std. Dev.
Unemployed/paupers	20.5	20.5	2	15	26	7.778
Unskilled working class	17.34	17	29	7	30	6.212
Skilled working class	21.05	20.5	82	8	75	10.786
Lower middle class	16.7	16.5	10	6	29	6.832
Middle class	22.63	21	35	7	68	11.845
Upper middle class	24.6	30	5	11	33	9.29
Northampton						
Unemployed/paupers	10	10	1	10	10	.
Unskilled working class	32.27	30.5	22	5	100	19.739
Skilled working class	43.11	38	103	6	219	32.991
Lower middle class	47.65	41.5	20	7	153	39.674
Middle class	47.05	39	19	19	110	25.52
Upper middle class	61.67	40	6	22	128	47.137
Independent incomes	63	45	3	34	110	41.073

In Preston, the upper middle classes had on average the largest plots; the median for this class is 30m² (gardens) compared with 20.5m² (yards) for the skilled working classes. In Northampton, however, all groups (with the exception of the one unemployed household sampled) had a median garden size of over 30m², and all classes bar the unskilled working classes had a median garden size of 40m² (or just under in the case of the skilled working class and middle class). Overall, plot size increased with social/occupational status, but there is again variation within this pattern.

There is much more to analyse, but initial data are sufficient to overthrow existing historiographical assumptions. Plot provision does appear to be correlated with chronology of construction and class of occupant, but it is not that simple. Plots were not the sole preserve of urban elites; nor were they solely late nineteenth-century phenomena. Rather, private plots existed from 1800 for all classes. The assumed lack of urban gardens before the last quarter of the nineteenth century for the middle classes, and the first quarter of the twentieth century for the working classes is incorrect. The differences between Sheffield, Preston, and Northampton, and between all three and existing historical research, show that a broad-brush, national approach is itself flawed. It is obvious that a closer look is required.

There is not space here to trace changing uses of urban back plots from Victorian 'ventilation spaces' to gardens as we recognize them today, but the evidence, once again, points to variety rather than uniformity. The consideration of the provision and uses of back plots as either: insanitary extensions of the privy; health-giving and morally-improving social spaces; or economically-productive allotment-like plots, will add important new dimensions to studies of standards of living and sanitary conditions in nineteenth-century urban England. Stephen Constantine has asserted that 'assessing the number of houses which had gardens is a difficult business',³⁰⁴ but the preliminary results briefly discussed in this paper have shown that the quantification of the provision and size of back plots in England in the nineteenth century is an achievable and valuable process. The analyses of these three towns will be supplemented by three further towns together with evidence from qualitative sources to provide a new and revisionist history of the urban back garden in England in the long nineteenth century, underpinned, for the very first time, by a rigorous quantitative assessment of the incidence and size of outdoor plots over time and across social classes.³⁰⁵

³⁰⁴ S. Constantine, 'Amateur Gardening and Popular Recreation in the Nineteenth and Twentieth Centuries', (Journal of Social History, 1981).

³⁰⁵ Samuel Oldknow Papers, SO/4/3.

Land ownership concentration and the expansion of education in nineteenth-century Prussia

Erik Hornung, ifo Institute of Munich
(hornung@ifo.de)

&

Francesco Cinnirella, University of Munich
Supervisor: Dr Ludger Woessmann

Before the onset of industrialization, wealth and political power were associated with the possession of land since agriculture was the single driving force of the economy (Doepke and Zilibotti, 2008).

High concentration of land ownership might result in social and political inequality as landed elites are motivated to set barriers to industrialization and progress in order to protect their status (Adamopoulos, 2008, Frankema 2010). As suggested by Galor et al. (2009), an unequal distribution of land among the population delays the implementation of educational institutions and indirectly affects growth. The delay in the expansion of formal education is caused by large landowners who oppose educational reforms to reduce the mobility of the rural labour force. Similarly, Engerman and Sokoloff (1997) and Sokoloff and Engerman (2000) suggest that the elite in Latin America opposed democracy and mass investment in human capital because they were afraid of the poor majority gaining power.

The case of Prussia appears to be somewhat different at first glance. Her devastating defeat in the war against France led to the introduction of reforms for different parts of society. The agrarian reforms made land ownership possible for a broader part of the population and led to massive gains in agricultural productivity. Simultaneously, educational reforms aimed at a general education which aimed to implant the ability of rational thinking in the broad masses. By the time Prussia had regained its strength after the Congress of Vienna, primary school enrolment already reached rates beyond any other country in the world at that time.

According to Lindert (2004), Prussian education was highly decentralized and therefore determined locally. We shall show that the expansion of primary education in Prussia was indeed a local process influenced to a large extent by the concentration of large landowners, which explains much of the variation in enrolment rates between counties. While agrarian reform as well as educational reform could not be prevented by the agrarian elites, the implementation of the latter could still be retarded, particularly in regions where land ownership was highly concentrated and large landowners maintained their elite status after 1815. In fact, the landed elite had the political power to hinder the spread of mass education as they had control over jurisdiction and policing and were patrons over church and schools.

This paper presents substantial empirical evidence of a causal negative effect of the concentration of large landowners on mass education. Furthermore, we find that the gradual loss of elitist political power throughout the nineteenth century led to a decreasing influence on primary school enrolment rates.

Identification

We test the hypothesis of a negative association between the concentration of large landowners and schooling in Prussia. We estimate this relationship at five different points in time to understand if and to what extent the political power of the landed elite lost influence in opposing the expansion of mass education. In our model the enrolment rate (EDU) in county i for a given year t is a function of the concentration of land ownership ($LAND$):

$$EDU_i^t = \alpha_1 + \beta_1 LAND_i^t + X_i^t \gamma_1 + \varepsilon_i^t \quad (1)$$

where ε is the error term and β is the coefficient of interest. The vector X contains the share of Protestants in a county, the share of population living in cities, the share of the population working in the industrial sector, the share of the population in agriculture, population density, and the child dependency ratio. In addition, we control for the number of schools per child in schooling age, the share of population with German as their first language, and a binary variable which takes into account the difference in inheritance laws.

To address the worry that the concentration of land ownership may be endogenous to education we suggest an instrumental variable strategy. We identify the causal effect of land ownership concentration on education by using the geological composition of soil (soil texture) in the county. Regions which exhibit relatively lower quality of soil, therefore with lower marginal value of land, experience lower demand for land and are characterized by higher average farm sizes (Bhalla 1998). For example, we find that in the regions of Rheinland and parts of Saxony and Silesia, where the soil is dominated by loam and clay (i.e. higher quality), average farm-size is on average small, leading to a low concentration of large landholdings. Therefore, this instrument isolates the part of the variation in land ownership concentration that is simply due to exogenous variation in soil texture. Thus, in equation (2) we instrument *LAND* by soil composition (*SOIL*):

$$LAND_i' = \alpha_2 + \beta_2 SOIL_i + X_i' \gamma_2 + \eta_i' \quad (2)$$

The exclusion restriction might still be violated if the instrument soil texture has a direct effect on the dependent variable enrolment rates. This might be the case if productivity of the soil led to variation in employment of child labour in agriculture and drove children out of school. In order to solve this problem, we control for productivity (yields per hectare) of the most important crops (not shown here).

The data

Based on several full Population, Factory, Occupation, and School Censuses conducted by the Prussian Statistical Office, we compile a historically unique micro-regional panel dataset of 335 Prussian counties that spans the entire nineteenth century. Despite some changes in the administrative boundaries of counties between 1816, 1849, 1864, 1886, and 1896, we were able to compile comparable cross sections over time.

We measure the concentration of large landowners in 1816, 1849, and 1858 by the number of farms larger than 300 Prussian Morgen (equal to 75 hectare – roughly the size from which a farm could only be operated by labourers) over the total number of farms. Owners of these large farms had an interest in sustaining a large and submissive workforce and thus might have opposed mass education. Later censuses collected information on the number of farms only by arable land and measured in hectare, which forced us to redefine concentration of land ownership in 1882 and 1895 as the number of farms whose arable land was larger than 100 hectares, over the total number of farms.

The corresponding education measures are enrolment rates for 1816, 1849, 1864, 1886, and 1896, computed as the number of youths enrolled in elementary and middle schools over the number of children aged 6-14. The mean enrolment rates increased from 60.3 per cent in 1816 to a nearly complete enrolment of 94.4 per cent in 1896. Nevertheless, regional variation which might have been determined by local powers was extremely large.

All censuses contain a wealth of additional information, including data on population demographics, religion, and occupations. We compile an extensive set of indicators of development like urbanization, occupation in industry, occupation in agriculture, religious denomination, and population density which reflects the demand for education at the local level.

Results

We first estimate the relationship between land ownership concentration and education through OLS. The results are presented in table 1. We consistently find a significant negative association between the share of large land holdings and the enrolment rate. This effect, very large in 1816, seems to fade throughout the nineteenth century. In fact, it is possible to compare the results of the first three years (1816, 1849, and 1864), as the variables are defined in the same way and have the same unit of measurement. The estimates show that the three coefficients are statistically different, which means that the negative effect of the large land holdings became progressively smaller in the first half of the nineteenth century. The coefficients for large landholdings in the two years towards the end of the century do not differ in magnitude and in 1896 the coefficient is not statistically significant. Yet, comparing the coefficients over the five periods might lead to problematic conclusions. Since the dependent variable is naturally bounded to one, the steady increase in school enrolment over time leads to decreasing variation. Therefore, we concentrate on the interpretation of the effects in terms of standard deviations (sd). In 1816, an increase of the share of large estates by one sd is associated with a decrease of the county enrolment rate by about 0.35 sd. The effect is of about 0.37 sd in 1849, 0.32 sd in 1864, to 0.1 sd in 1886, and 0.08 sd in 1896.

Table 1: *Land ownership concentration and enrolment rates (OLS)*

Variables	(1) 1816	(2) 1849	(3) 1864	(4) 1886	(5) 1896
% large landholdings	-3.253*** (0.483)	-1.609*** (0.236)	-1.269*** (0.186)	-0.677** (0.332)	-0.628 (0.441)
% protestant	0.085*** (0.033)	0.017 (0.019)	0.025* (0.014)	-0.013 (0.008)	-0.002 (0.007)
% urban	-0.071 (0.061)	-0.077* (0.042)	0.057 (0.055)	-0.101*** (0.023)	-0.081*** (0.019)
% industrial	-0.363 (0.269)	0.009 (0.074)	0.439** (0.192)	0.683*** (0.112)	0.671*** (0.099)
% agricultural	-0.187 (0.235)	-0.143*** (0.049)	0.245 (0.149)	0.510*** (0.107)	0.441*** (0.070)
child dependency ratio	-0.353*** (0.127)	0.035 (0.084)	-0.089 (0.090)	0.205*** (0.032)	0.246*** (0.031)
population density	-0.006 (0.004)	-0.001 (0.001)	-0.001 (0.001)	0.000* (0.000)	0.000 (0.000)
schools per 100 children (6-14)	0.151*** (0.025)	0.137*** (0.029)	0.100*** (0.029)	0.044*** (0.015)	0.031*** (0.012)
inheritance	-0.032 (0.025)	0.011 (0.012)	0.019 (0.012)	-0.002 (0.007)	-0.004 (0.007)
first language not German (1900)	-0.252*** (0.052)	-0.147*** (0.028)	-0.126*** (0.025)	-0.053*** (0.012)	-0.011 (0.010)
Constant	0.753*** (0.092)	0.797*** (0.060)	0.669*** (0.094)	0.587*** (0.063)	0.593*** (0.049)
Observations	267	335	335	335	335
R-squared	0.57	0.41	0.42	0.58	0.60

Notes: Table shows OLS estimates at the county level. Robust standard errors in parentheses. Significance: ***p<0.01, ** p<0.05, * p<0.1. Source: Data for Prussian counties from different censuses.

Second stage estimates are presented in table 2. The results confirm the negative effect of land ownership concentration on education and imply that the effect is causal. Similar to the OLS estimates, the effects for the years 1816, 1849, and 1864 are statistically different among each

other. As already shown by the OLS estimates, the results imply that the opposition of the large landowners to the spread of mass education faded more or less steadily in the first two thirds of the nineteenth century, reaching a lower level in the last part of the century. In terms of magnitude, we find that if the share of large estates increases by one sd, the county enrolment rate would decrease by about 1 sd in 1816, by 0.84 sd in 1849, by 0.57 sd in 1864, by 0.28 sd in 1886, and by 0.25 sd in 1896. These result hold even when controlling for the yields per hectare in the five most important crops at the county level (not shown).

Table 2: *Instrumenting land ownership concentration with soil texture (second stage)*

Variables	(1) 1816	(2) 1849	(3) 1864	(4) 1886	(5) 1896
% large landholdings	-9.264*** (2.481)	-3.672*** (0.951)	-2.266** (0.994)	-1.908* (1.075)	-1.961 (1.280)
% protestant	0.142*** (0.044)	0.027 (0.020)	0.033** (0.014)	-0.006 (0.009)	0.005 (0.010)
% urban	0.119 (0.145)	-0.027 (0.051)	0.101 (0.076)	-0.096*** (0.023)	-0.071*** (0.022)
% industrial	-1.001* (0.528)	-0.046 (0.079)	0.379* (0.200)	0.595*** (0.126)	0.610*** (0.105)
% agricultural	0.477 (0.322)	-0.098* (0.052)	0.404* (0.207)	0.501*** (0.106)	0.451*** (0.073)
child dependency ratio	-0.129 (0.166)	0.251* (0.151)	0.038 (0.158)	0.216*** (0.033)	0.255*** (0.034)
population density	-0.013* (0.007)	-0.001 (0.001)	-0.001 (0.001)	0.000* (0.000)	0.000 (0.000)
schools per 100 children (6-14)	0.206*** (0.046)	0.193*** (0.044)	0.107*** (0.031)	0.047*** (0.015)	0.033*** (0.012)
Inheritance	-0.063** (0.029)	-0.022 (0.020)	0.012 (0.014)	-0.008 (0.008)	-0.010 (0.009)
first language not German (1900)	-0.158** (0.069)	-0.128*** (0.031)	-0.127*** (0.025)	-0.048*** (0.013)	-0.007 (0.010)
Constant	0.522*** (0.136)	0.646*** (0.102)	0.573*** (0.136)	0.594*** (0.062)	0.595*** (0.049)
Observations	267	335	335	335	335
Kleibergen-Paap F statistic	5.662	12.65	10.11	13.04	13.41

Notes: Table shows the second stage of the IV estimates, instrumenting land ownership concentration with soil texture. Robust standard errors in parentheses. Significance: *** p<0.01, ** p<0.05, * p<0.1. Source: Data for Prussian counties from different censuses.

Conclusion

Using a unique county-level dataset that covers the entire nineteenth century, we study the relationship between land ownership concentration and primary school enrolment rates. The cross-section analysis shows that counties with a larger share of large landholdings had significantly lower enrolment rates. In terms of standard deviations the negative effect on education faded over time suggesting a diminishing political influence of the landed elite towards the end of the nineteenth century.

In order to overcome possible biases due to omitted variables and reverse causality, we adopt an instrumental variable approach. We exploit the exogenous variation in the size of land holdings due to the composition of soil, which determines the size of farms due to lower demand for low quality soils. In fact, large estates tend to proliferate in areas with relatively lower quality land. The instrumental variables estimates show that the negative effect of land ownership concentration on primary school enrolment rate is indeed causal.

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Geographic clustering and productivity: an instrumental variable approach for classical composers

Karol Jan Borowiecki, Trinity College Dublin
(borowiek@tcd.ie)

Supervisor: Professor John O'Hagan

1. Introduction

The best are located in geographic clusters. In locations with a high concentration of individuals or firms, workers earn more (e.g. Glaeser and Mare, 2001), firms perform better (e.g. Nickell, 1996), visual artists peak earlier (Hellmanzik, 2010); but knowledge on causality is still limited. Are geographic clusters attracting the best or are individuals and firms who cluster the best because of positive externalities associated with cluster locations? This question is of considerable importance not only for individuals or firms that are located in geographic clusters, but also for policymakers who try to replicate the success stories of clusters such as Silicon Valley and create, for example, special economic zones in their regions. However, without knowledge of the causal relationship between clustering and productivity, interventionism can cause harmful distortions to the market (Desrochers and Sautet, 2004).

There is a large body of literature that highlights the association between geographic clustering (or more in general – locating in cities) and productivity (see Rosenthal and Strange, 2004, for a review). However, the existing literature does not always adequately address the endogeneity of clustering to productivity and thus does not convincingly establish a causal relationship. Apart from endogeneity issues, omitted variables (e.g. city size and wealth or the quality of local infrastructure) may drive both clustering and economic outcomes, producing misleading estimates. This study is based on a unique historical individual-level dataset that allows us to address both identification issues. I use exogenous geographic birthplace-cluster distance as an instrumental variable for the incidence of clustering in order to estimate the impact of locating in geographic clusters on productivity. The instrumental variable method makes it credible to assert that the association between clustering and productivity is a causal relationship rather than simply a correlation. One would expect geographic distance to be a determinant for location choice in historical time periods when travelling was constrained. I therefore chose for the analysis the time period roughly associated with the beginnings and duration of the industrial revolution. In the late eighteenth and nineteenth centuries, due to technological inventions such as the railway or the steamboat, travelling was possible, however still very expensive in terms of time and price (see Clark, 2007). I also focus, for several reasons as outlined in Borowiecki (2011), only on classical composers.

2. The mechanism

There are three predominant theories that explain the incidence of geographic clustering and advocate the associated benefit of clustering or, in a broader sense, of urbanization. Marshall (1890) argues that geographic proximity enables faster and easier spillover effects between firms in an industry. Also in cities with a particularly high concentration of composers, when some kind of face-to-face contact between artists is enabled, synergies and spillovers may positively impact the individual's ability to innovate. Historical archives assert that close contact and collaboration between prominent composers was common. For example, as recorded in a letter from Carl Kragen to his friend, Robert Schumann (1810-56):

Tomorrow (...) [Franz] Liszt [1811-86] is to play at our house with [Karol] Lipinski [1790-1861]! Do come for it! Ah, if you could only induce [Felix] Mendelssohn [1809-47] and his wife to come too! (Letter of 27 March 1840).

The second theory advocating a clustering benefit is posited by Porter (1990). In Porter's view, the local competition in specialized, geographically-concentrated industries is the biggest stimulus for growth. The importance of composing better works than the other composer seems to be of considerable importance also in classical music. The high concentration of composers might create a very competitive working environment, where only extraordinary performance is acknowledged. Amadeus Mozart (1756-91) was aware of that and was mostly motivated to make his presence in the French capital:

In Paris they are accustomed to hear nothing but Gluck's choruses. Only place confidence in me; I shall strive with all my might to do honor to the name of Mozart. I have no fears at all on the subject. (Letter of 28 February 1778).

Mozart's productivity in Paris was three times higher than his average annual productivity.

The third theory of positive externalities associated with geographic clusters is proposed by Jacobs (1969), who argues that the most important knowledge transfers come from outside the core industry. Knowledge may spillover between composers specializing in different types of works (e.g. concert or theatre works) or between composers and other creative individuals (e.g. writers). Composers of the time period analysed were highly literate and fully part of the cultured world of the local elite. The diverse entourage of composers is well documented in a letter from Hector Berlioz (1803-69) to his sister Adele:

Last Monday we had a kind of little country outing. My friends came to spend half a day with us. They included famous musicians and poets, Messrs. Alfred de Vigny, Antoni Deschamps, Liszt, Hiller and Chopin. We talked and discussed art, poetry, thought, music, drama, in short everything that constitutes life (...) (Letter of 12 May 1834).

3. Data

As a result of data availability issues I focus only on prominent individuals and use the list of the most important composers from Murray (2003).³⁰⁶ Murray's work is based on numerous international references hence the risk of country- or marketing-biases in the selection is minimal. Data on composers' artistic output is taken from 'The Dictionary of Composers and Their Music' (Gilder and Port, 1978). The two prominent musicologists provide a list of 275 composers born between 1500 and 1949 with their important works dated and arranged chronologically. The dictionary is a recognized survey of the most influential classical compositions and served often as a source for composer's output. Combining both sources for the period analysed, an intersection of 116 composers emerges.³⁰⁷ For these composers I extract background information from 'Grove Music Online' (2009), the leading online source for music research. This large multivolume dictionary is detailed enough to track the movements of all 116 composers. It is 'a critically organized repository of historically significant information' (Grove, 2009, Preface) and hence is an ideal source for the purposes of this article.³⁰⁸

The data is summarized in Borowiecki (2011) and it reveals that Paris was consistently the single most important location throughout the entire time-period. The predominance of the French capital can be reaffirmed when major cities are ranked using four different criteria (e.g. number of composers visiting each city; not reported).

³⁰⁶ The methodological approach is designed to mitigate the extreme non-random sample bias arising (see Identification Section).

³⁰⁷ Note that from now on with each reference to composer, I mean, *prominent* composer, the focus of this study. As the study encompasses only male composers, I use the male form.

³⁰⁸ The author acknowledges the excellent research assistance provided by Jean Acheson and James Walsh, and a generous research fund provided by John O'Hagan.

4. Identification

The aim of the econometric analysis is to estimate the causal relationship between composers' productivity and the incidence of geographic clustering. In order to deal with potential endogeneity of the incidence of clustering, I identify the location variable as follows:

$$\text{cluster}_{ijt} = \alpha_i + \alpha_t + \beta \text{distance}_{ij} + \gamma_1 \text{age}_{it} + \gamma_2 \text{age}_{it}^2 + \varepsilon_{it}. \quad (1)$$

The geographic distance between the birthplace of composer i and the geographic cluster j (distance_{ij}) is employed to instrument in the first stage for the incidence of locating of composer i in cluster j at year t (cluster_{ijt}). The birthplace-cluster distance is captured as a logarithm in order to allow for decreasing importance of large distances. The equation (1) contains composer dummies (α_i) to take account of composers' individual effects and I further introduce time dummies (α_t) to deal with intertemporal differences in travel and productivity differences. Furthermore, I control for composer-specific time effects with a quadratic age polynomial (age_{it} and age_{it}^2). The standard errors (ε_{it}) are clustered at the composer level, allowing for correlations between observations of a single composer (within individual i), but remaining independent between composers (i.e. individual i and j do not have correlated errors).

The validity of the identification strategy rests on three assumptions. First, there exists a significant first-stage relationship with sufficient explanatory power. I investigate therefore the probability to locate in a geographic cluster as a function of the logged birthplace-cluster distance. The estimated probabilities to locate in Paris are presented in table 1. The first-stage relationship between birthplace-Paris distance and locating in Paris in a given year is determined precisely at a confidence level of over 99 per cent. There is also no sign of the instrument being weak (Cragg-Donald eigenvalue statistics is 121.28).³⁰⁹ Composers born further away from the cluster are typically less probable to locate in the French capital.

Table 1: *Birthplace-cluster distance and clustering*

	Locating in Paris	Clustering intensity
	OLS	OLS
	(1)	(2)
Birthplace-Paris distance	-0.130*** (0.0083)	-1.539*** (0.1525)
composer-age controls	yes	yes
composer controls	yes	yes
time controls	yes	yes
Observations	5213	5213
R-squared	0.769	0.6919
Cragg-Donal EV Statistic	121.28	81.97
<i>Note:</i> Standard errors are clustered at the composer level and reported in parentheses. The birthplace-cluster distances are measured at logs. We do not report composer-specific age time trend (estimated with a quadratic polynomial), composer controls (estimated with an indicator function that is equal to one for each single composer) and time controls (estimated with an indicator function that is equal to one for each decade).		

³⁰⁹ See Stock and Yogo (2005) for testing of weak instrument bias.

The instrument needs to be as good as randomly assigned. Given that a person cannot affect his birth location after he is born and that births are almost uniformly dispersed over geographic space this assumption seems to be satisfied. Furthermore, in a robustness test I demonstrate that composers' birth location and their choice to locate in Paris are independent from the influence of their parents and hence the risk of non-randomness of the instrument mitigates.

In analogy to the main identification strategies, I use logged distances between composers' birthplace and Paris, in order to instrument for composers' clustering intensity, measured with the number of composers located in a given location. The results are reported in column (2) of table 1. The distance parameter is estimated with high precision and I obtain a large Cragg-Donald eigenvalue statistic.

The second-stage equation estimates the impact of clustering on composers' productivity:

$$\text{output}_{it} = \alpha_i + \alpha_t + \beta \text{cluster}_{ijt} + \gamma_1 \text{age}_{it} + \gamma_2 \text{age}_{it}^2 + \varepsilon_{it}, \quad (2)$$

where the variable of main interest – composer's productivity (output_{it}) – measures the number of important works written by composer i in year t (as listed in Gilder and Port, 1978). I use two-stage least squares estimator as it is typically the most efficient instrumental variable estimator (Wooldridge, 2002).

5. Results

The results are presented in table 2. The OLS relationship between locating in a geographic cluster and the number of written compositions in a given year is presented in column (1) and the instrumental variable (IV) estimates in column (2). The correlation between clustering and composers' output is almost zero. The IV-results yield a positive coefficient. Since I have instrumented for the incidence of clustering, I make the causal assertion that composers benefited from the positive externalities associated with the geographic cluster. The estimated IV-parameter is equal to around 0.25 (t-statistics 2.04): a composer who located in Paris was composing around one additional work every four years as a result of being located in the cluster. If one considers the average annual productivity of composers (i.e. 0.77 works per year), the size of the estimated impact of clustering on productivity is economically relevant and indicates that around one third of composers' output was a result of the positive externalities associated with a cluster.

Furthermore, I estimate the impact of geographic concentration rate on composers' productivity. This approach illuminates the extent of the productivity gains associated with the clustering intensity. In order to obtain a causal impact of the clustering rate (rather than simply a correlation) I use geographic distance as instrumental variables. The results are reported in columns (3) and (4) of table 2. I find that the OLS and IV returns from clustering intensity are positive and mostly significant. The IV-estimates are however larger in size and indicate that composers' productivity increases by approximately 0.2 works annually for every 10 more composers located in his location. This result provides support that composers' productivity increased due to the benefits associated with peer-effects and not as a result of, for example, large city-specific factors.

Table 2: *Clustering and artistic output of composers*

	Composer's Output			
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
Cluster (Paris)	-0.00209	0.252**		
	(0.0931)	(0.123)		
Clustering intensity			0.0123*	0.0203**
			(0.00639)	(0.00986)
composer-age controls	yes	yes	yes	yes
Composer controls	yes	yes	yes	yes
Decade controls	yes	yes	yes	yes
Observations	5213	5213	5213	5213
R-squared	0.445	0.443	0.445	0.445
See table 1				

One reason why higher IV-parameters have been obtained might be the fact that these parameters can be interpreted as a Local Average Treatment Effect as proposed by Imbens and Angrist (1994). It is possible that certain types of composers benefit to a different extent from clustering. For example, this could be the case if the best composers who cluster are able to benefit more from the location due to, for instance, better inter-personal skills. As a result the clustering effect for those composers might be greater. I investigate this possibility by dividing composers into top 10 composers (ranked by Murray's Index Score) and all remaining composers. I find that clustering returns to composers' productivity are considerably higher for the top 10 composers than for the full sample (not reported).³¹⁰

I further conduct a large number of tests that indicate that the findings are very robust. The tests control for music-related background of composers' parents, composers' music-related education times and account for potentially risky observations (e.g. short visits to Paris, years of war). Furthermore, I employ a broader measure of composers' lifetime accomplishments – an index provided by Murray (2003). I also conduct a placebo test that estimates the location benefit of large cities that were not a geographic cluster for classical composers. Detailed description and discussion of all robustness tests are provided in Borowiecki (2011).

6. Conclusion

This study addresses an important methodological problem that lies at the core of empirical literature on the positive externalities associated with geographic clusters. I overcome potential heterogeneity bias and endogeneity of clustering issues by using a historical dataset and a unique identification strategy. I find that composers who located in a geographic cluster benefited significantly in terms of written compositions.

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³¹⁰ This finding is consistent with Waldinger (2010) who studied peer effects among university scientists and found highest clustering externalities for students in the top 10 departments.

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Crisis? What crisis? New estimates of industrial value-added in Italy during the Great Depression

Ferdinando Giugliano, University of Oxford
(ferdinando.giugliano@economics.ox.ac.uk)
Supervisor: Dr Brian A'Hearn

This paper constructs a new series of industrial value added at constant (1938) prices for Italy, for the period between 1928 and 1938. The proxies I employ are shown to be better indicators of the dynamic of the depression than those used by Carreras and Felice (2010). In particular, they are an improvement on using the apparent consumption of raw materials, which is shown to be a poor proxy for production over the 1929 cycle. Although the data only have a limited sectoral coverage, they substantially revise the profile of the Great Depression. The contraction appears to be more pronounced and persistent, confirming the doubts of the pessimists and placing the Italian experience more in line with that of other industrialized countries. The presence of a second slowdown in 1936 is confirmed, though it appears to be caused by a fall in the construction industry rather than by a contraction in manufacturing.

Battleships and dividends: the development of private armaments companies in Great Britain and Italy, 1863-1914

Giulio Marchisio, University of Durham
(giulio.marchisio@dur.ac.uk)

Supervisors: Professor Ranald Michie & Dr Andrzej Olechnowicz

Introduction

This thesis explores the evolution of the private armaments sector in Great Britain and Italy from the middle of the nineteenth century to the First World War, focusing on the manufacture of naval vessels and ordnances. During this period, the armaments business underwent a historical revolution, moving from a public-based to a private-based model. Until the early 1880s, European governments were not only the dominant purchasers, but also the dominant suppliers of heavy military hardware, thanks to their arsenals and shipyards. The few private companies which operated in the field, such as Armstrong in Britain, focused on exporting equipment to countries without a significant heavy industry sector, such as Italy, Japan, and the South American republics.

In the course of the 1880s, however, two trends transformed this situation. On the one hand, the growing British military budget was used to buy from private firms (to which the more sophisticated production shifted) rather than to invest in the public establishments. On the other, a number of countries, such as Italy, which until then had been eager purchasers of British weaponry, decided to favour the creation of national industries or forced foreign manufacturers to create joint-ventures with local companies. The result was that, within a relatively short period, a number of private companies entered the market.

There are three justifications for this research. Firstly, in the decades before 1914 the private armament sector became a significant part of the economy in many European countries. The major arms companies (such as Armstrong and Vickers in Great Britain, Schneider in France, Krupp in Germany and Ansaldo in Italy) usually ranked amongst the biggest national companies in terms of revenues and workforce (Wardley 1999). Moreover, these companies played a crucial role in terms of technological evolution through their research and by purchasing advanced technology from other companies: the big steel-made vessels produced before 1914 were the most sophisticated and complex products ever made up to that time. Consequently it is important to study the evolution and the market organization of the arms sector *per se*.

Secondly, it was during this period that the contemporary procurement system, based on the government contracts awarded to private companies, has its roots. Whereas now this system is common practice, it originated only during the second half of the nineteenth century. This shift from a public-based to a private-based system of producing military hardware reversed the secular trend toward a greater role of governments in the broad sphere of 'military and security'. Since the sixteenth century European governments (and also some non-European ones such as Japan) had struggled to assert their primacy in military affairs. One of the ways they chose was to gain a quasi-monopoly in the manufacturing of the most relevant 'tools of violence', such as field guns and naval ordnances. The leading position of public establishments started to be eroded in the last decades of the nineteenth century by private firms. Such a crucial turning point deserves to be fully investigated.

Thirdly, several key features of the armaments sector, such as high barriers to entry, substantial learning costs for newcomers and the need for huge capital investments, could be found in other fields as well, such as petroleum and heavy chemicals. Consequently, this investigation contributes to a better understanding of the dynamics of other industrial sectors.

This research will cast light on these points through a comparative analysis of the Italian and British experiences. The rationale for such a comparison is twofold.

Firstly, both these countries experienced a similar trend despite very different economic, political, social and strategic conditions: at the beginning of the First World War private arms companies were well established in both countries, and they proved to be able to supply their governments during the conflict. So, this research will try to answer the crucial question of why both Britain and Italy experienced the same trend. An analysis of two such different countries will highlight the common pattern followed by their arms sectors.

Secondly, in the field of arms manufacturing, economic links between Britain and Italy existed throughout the period analysed here. Armstrong was a major supplier for the Italian government before it decided (under pressure from the government) to establish a plant in Italy. Vickers, the other great British military company, entered the Italian market too, thanks to an agreement with the Terni steel company.

The literature and the sources

The literature about armaments manufacturing has been deeply influenced by the peculiar nature of the trade. A body of research, popularized by the Engelbrecht and Hanighen's *Merchant of Death* (1934), adopted the view of armaments manufacturers as a close-knit group of greedy people enjoying a decisive influence upon governments for their own enrichment. A similar view was echoed in the famous speech by President Eisenhower about the 'military-industrial complex'. Marxists maintained that armaments companies were crucial players in the capitalistic economy because they absorbed, through being allocated contracts and orders, the economic surplus which was not taken by consumer spending (Sweezy & Baran 1968). These analyses, however, focus primarily on macroeconomic trends and issues, and do not account for the internal dynamics of the armaments sector.

Gerschenkron was the first scholar to maintain that armament companies could have played a positive role in the economic development of second comer countries; he maintained that governments' expenditure nurtured important industries which otherwise would not have been able to fully develop (Gerschenkron 1962). Trebilcock, in his numerous contributions, investigated armaments companies as business realities (Trebilcock 1973). He stressed the role played by armaments companies in the transfer of technology from Britain to Continental Europe. In general scholars have traced the development and history of single companies (Scott 1962; Doria 1989; Warren 1990; De Rosa 1994) while this thesis has a sector-wide focus.

This investigation is the result of extensive archival research in both public and business archives in Italy and Great Britain. Because only the archives of the major companies have been preserved, there is an unavoidable bias towards them. This bias, however, is not critical for this research because it was precisely this small group of companies which came to dominate the British and Italian armament market before 1914.

The rise of a new industry

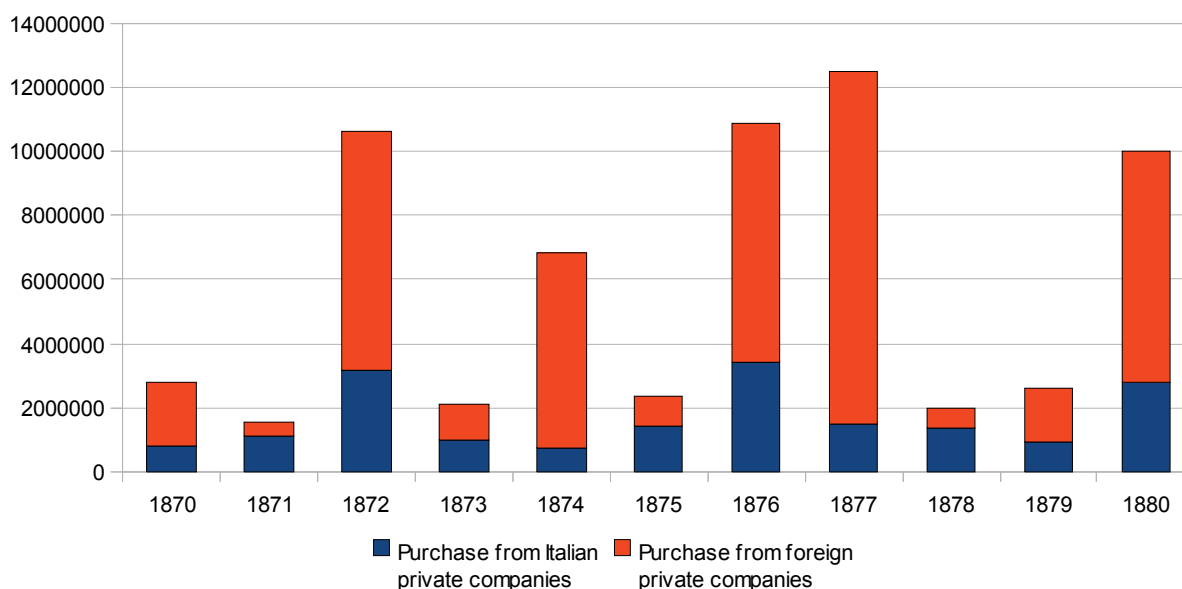
William Armstrong was already a successful mechanical engineer, with a burgeoning crane manufacturing business (Heald 2010), when he designed his first gun in 1855. The performance of the British ordnance during the Crimean War had been unimpressive and the War Office had decided to replace the old bronze smooth guns produced at the Royal Arsenal at Woolwich. Armstrong's design was revolutionary because, for the first time, it combined three known innovations in one piece. The gun was a breech-loading piece made in steel and its barrel was rifled. After a hot contest with the rival prototype of Joseph Whitworth, Armstrong's gun won the contest and in 1858 the Government decided to split the contract to manufacture the new gun between the Royal Arsenal, where Armstrong obtained the managerial position of Superintendent, and a new company, the Elswick Ordnance Company, established in Newcastle by friends of Armstrong. This arrangement proved to be only

temporary: in 1863 when a new process was discovered to modernize the old pre-Armstrong guns, the government decided to move all the production to Woolwich (Warren 1990). The Elswick Company, which merged with the civil engineering business of Armstrong to create the Sir W.G. Armstrong Company, faced a difficult challenge: it had lost its only client, the British government. New customers had to be found abroad.

The company was able to sell its products to several foreign countries, such as Japan, Russia, both the United States and the Confederation, and some South American Republics. For countries without their own armaments sector, it was natural to turn to the manufacturer regarded as the best in the field, and Armstrong enjoyed such a reputation. In the armaments sector, sales were (and still are) an important signal mechanism because its products were seldom employed in the field. Consequently, because every government was keen on buying the best hardware, the more a company sold, the better it was regarded. Moreover, both Armstrong himself and the managers he appointed (men like the Rendel brothers and Andrew Noble) focused on continuous technical improvements. The result was high quality products leading to growing sales.

Among the most eager purchasers of Armstrong's hardware was the newly created Kingdom of Italy. Several of the small states which were united to form the new polity, had their own small arsenals and dockyards. The Italian government found itself, as a result, with too many small establishments, none of them technologically advanced. At the same time, there were no national companies capable of manufacturing modern ordnances. The government was consequently forced to rely on foreign companies for more advanced equipment. The following table shows what proportion of total naval expenditure – the most capital-intensive part of military expenditures – was used to make foreign purchases.

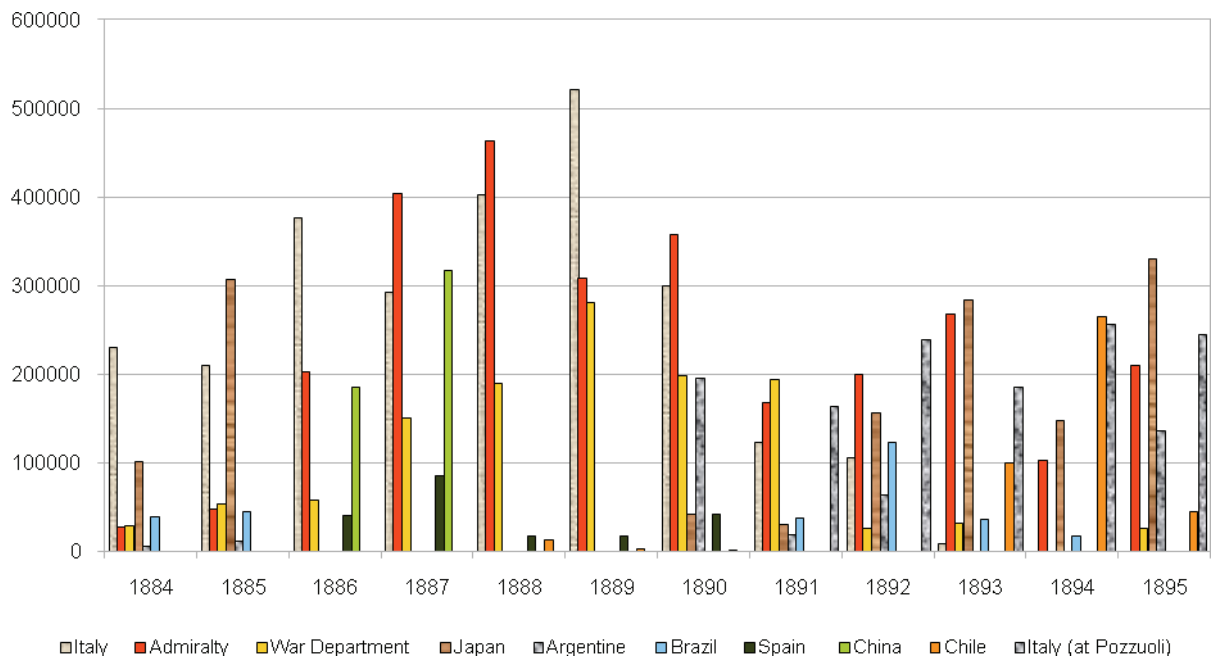
Table 1: *Italian naval purchase from Italian and foreigner private companies, 1870-80 (in Lire)*



Source: Inchiesta parlamentare sulla Marina, pp. 451-46.

It is evident from this data that Italy was heavily dependent on foreign producers. Armstrong was a key supplier especially for guns and mountings which usually were sent to Italy where they were fitted on vessels in public or, sometimes, private yards. Protective steel plates were imported as well. At the same time, however, Armstrong was itself highly dependent on exports, which dwarfed the amount of orders placed by the British government.

Table 2: *Instalments received by Armstrong on account of works in progress (in British pound)*

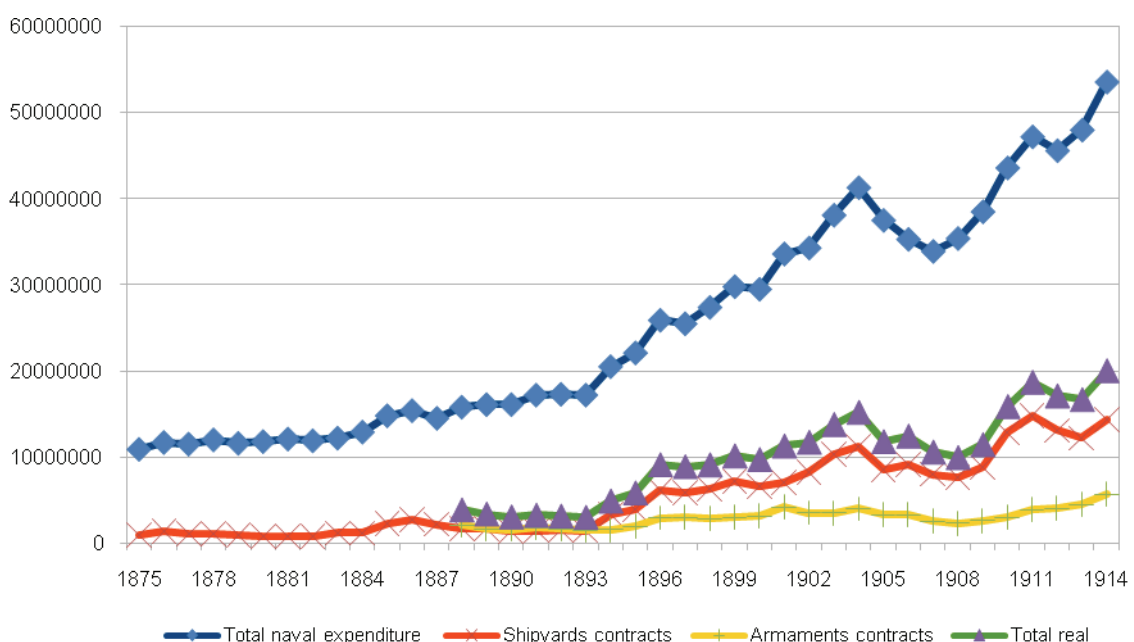


Source: Armstrong's balance books 1883-96

A new era unfolded (1880s and 1890s)

In the course of the 1880s, two trends changed the armaments sector in both Great Britain and Italy. In the United Kingdom, from 1885 on, the expenditure on the navy escalated, triggered by the first of a series of 'naval scares'. What is more, resources started to be spent in a different way: values of contracts and naval armaments bought from private suppliers increased from around 10 per cent of the total appropriation to 33 per cent in the fiscal year 1913-14.

Table 3: *Naval expenditures and private contracts, 1875-1914 (in British pounds of 1914)*



Source: Naval Estimates, various years.

The lion's share of these contracts went to Armstrong and Vickers. Vickers entered the armaments sector in 1888. The company, active in the steel industry, wanted to move to more profitable activities and the growing naval budget provided a significant incentive. Within a few years Armstrong had to face, for the first time, a serious competitor from the private sector. Both companies adopted a similar strategy of vertical integration, acquiring ship yards and steel mills, allowing them to manufacture a complete vessel, from the hull to the guns.

Italy, during the same decade, enjoyed a period of economic growth. The government, with less budget constraints, decided to push for the creation of a national defence industry. National production of ordnance and armour plates was required to free Italy from imports. Armstrong was arm-twisted to create a plant in Italy, being threatened with a loss of orders; at the same time a group of entrepreneurs, backed by the government, which provided generous financial incentives, created the first modern steel mill in Terni (Bonelli 1975). Both these developments were partially disrupted by an economic crisis in Italy during the first half of the 1890s: military expenditures were cut and both plants had to face the problem of over capacity. The seeds of a national armaments industry had, however, been planted, although at a significant cost to the Italian taxpayer.

National champions (1900-14)

In the last fifteen years before 1914 the trends already detectable in the previous period strengthened. Armstrong and Vickers, although they did not cease to export, obtained the majority of their revenues from contracts awarded by the British government. Abroad, moreover, they entered into numerous joint-ventures with local companies, as in Spain, Japan, and Italy, where in 1906 Vickers teamed up with Terni to establish the Vickers-Terni gun company in La Spezia (Segreto 1997). The two companies, moreover, struck deals to reduce competition and divide among themselves orders obtained overseas.

In Italy local companies were equally on the rise, although the Italian military budget was never as generous as the British one. Two industrial groups emerged: one was organized around the Terni Company and the Odero and Orlando shipyards, the other around Ansaldo, a company established in Genoa in 1853, which moved into the armaments business at the end of the 1890s. Both these groups adopted a similar strategy: they tried to integrate arms production, from steel manufacturing to gun forging, forming links with foreign companies in order to obtain technology and know-how. The result was a very precarious equilibrium with Armstrong and Vickers trying to avoid excessive commitments to the local partner, while these were asking for more. This situation could not be maintained for long: while Terni, a much more diversified conglomerate maintained its link with Vickers, Ansaldo, whose management focused more on the armament sector, decided to embrace a stand-alone strategy, becoming independent in both the ironworks and weapon-making areas, advertising itself as a truly national company (Doria 1989). Ansaldo would then be able to gain the most from the military expansion brought in by the Great War.

Conclusion

In the period considered in this thesis, the private heavy armaments business moved from being virtually non-existent to one of the more dynamic and important sector in the economy in both Great Britain and Italy. Technological development, which favoured bigger vessels and more powerful guns, pushed companies to integrate vertically in order to obtain scale economies from the huge investments required. British companies, moreover, enjoyed a worldwide reputation and primarily in international trade.

In the years before 1914 another trend is clearly detectable as well: Vickers and Armstrong lost ground abroad, not so much to rival companies from other powers such as France or Germany, but to new national companies which were propped up by governments eager to secure a more stable base for their military. In this process Italy was at the forefront. While before the 1880s, its government was one of the best purchasers of foreign-made

armaments, 30 years after national companies were able to cover the great majority of the demand.

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The impact of immigration upon family life: the case of Indian seafarers, c.1900-50

Ceri-Anne Fidler, Cardiff University
(FidlerCAE@cf.ac.uk)
Supervisor: Dr Padma Anagol

Historians' recent interest in Indian seafarers demonstrates that they are no longer the 'forgotten seamen' described by Conrad Dixon.³¹¹ But in contrast to an increasing interest in their public lives, the private lives of Indian seafarers remain unexplored. This paper investigates the family lives of Indian seafarers both in India and Britain. Historians' neglect of this topic may be due to the paucity of historical sources. The family lives of Indian seafarers rarely feature in official records. Instead, this paper uses records overlooked by historians such as oral histories, autobiographies and Second World War prisoner of war records. These sources are not without their difficulties. Oral history and autobiography share similar difficulties as they rely upon people's memory of events which may be selective or flawed. The prisoner of war records are similarly selective and subjective. For example, letters were written with censorship in Germany and Britain in mind. Nevertheless, the sources provide some insight into a previously unexplored topic.

The impact of migration on familial relationships in India

Works about Indian seafarers' family lives are few and limited in scope. Balachandran briefly touched upon the subject in his analysis of how British authorities used the Indian family in their attempts to shape the Indian maritime labour market.³¹² Historians of the Indian diaspora also neglected to study families and communities in India.³¹³ Katy Gardner's study specifically sought to address this lacuna. She did not, however, explore the families of Indian seafarers as she considered the changes experienced by their communities 'embryonic'.³¹⁴

In contrast, the impacts of migration upon family and gender roles have been explored by other migration historians. For example, Pedraza's case studies revealed that the marriage relationship became more of a partnership as women acquired more control over their lives.³¹⁵ Conversely, others pointed to the restrictions placed on women left behind by male dominated migration flows.³¹⁶ Informed by such approaches, this paper explores the impact of immigration upon family and gender roles.

An overview of gender relations in the area of my study needs to be set out before the impact of migration upon them can be evaluated. The evidence tends to come from men in Sylhet and Chittagong regions; areas which are in current day Bangladesh.³¹⁷ Bangladeshi society was both patrilineal and patrilocal.³¹⁸ Women's relationship with the world outside the family was mediated through male relatives, thus reducing women's ability to act as

³¹¹ Dixon, 'Lascars: The Forgotten Seamen', in R. Ommer and G. Panting, eds., *The Working Men who Got Wet*, St. Johns', Newfoundland, 1980, pp. 263-81.

³¹² Balachandran, 'Producing Coolies, (Un)making Workers: A (Post-)Colonial Parable for the Contemporary Present', Unpublished Paper:
http://hei.unige.ch/sections/hp/Documents/Balachandran_Producing%20Coolies.pdf, [Accessed 20/02/2010].

³¹³ Gardner, *Global Migrants, Local Lives: Travel and Transformation in Rural Bangladesh*, Oxford: Clarendon Press, 2000, p.9.

³¹⁴ Gardner, *Global Migrants*, p.43.

³¹⁵ Pedraza, 'Women and Migration: The Social Consequences of Gender', *Annual Review of Sociology*, Vol.17, 1991, p.311

³¹⁶ Sharpe, 'Introduction: Gender and the Experience of Migration', in Sharpe (Ed.), *Women, Gender and Labour Migration: Historical and Global Perspectives*, London: Routledge, 2001, p.10.

³¹⁷ Before the 1947 Partition they were in India and formed part of East Pakistan after Partition.

³¹⁸ Gardner, *Global Migrants*, p.29.

independent agents.³¹⁹ Their detachment from the outside world was symbolized and enforced by the practice of *purdah* (veiling or seclusion of women). *Purdah* prevented women working in the fields, supervising cultivation or interacting in the market.³²⁰ Consequently, work was divided into male and female spheres with men's territory being outside the homestead.³²¹ Women, meanwhile, performed the household's domestic tasks.³²² Thus, gender relations in rural Bangladesh appeared to circumscribe women's independence. The next section explores how far such relations were challenged or disrupted by migration.

Diane Frost noted Kru seafarers' wives in Freetown became influential and powerful within the family as they controlled their immigrant husband's remittances.³²³ Using prisoner of war records, this section explores whether a similar pattern can be discerned among the families of Indian seafarers. These records show wives received 55 per cent of the total monthly remittances. This was followed by mothers with 13 per cent, sons with 11 per cent, and then brothers with 8 per cent.³²⁴ But can we presume that the wives of Indian seafarers gained increased independence and power within the family as a result?

The wives' control over remittances is evident in the letters sent from families in India. For example, Jacoobullah complained that his wife had gone to live with her father, taking her monthly remittance with her.³²⁵ Similarly, Noaz Ullah's family complained that his wife had left their home following her alleged infidelity, thus depriving them of his remittance.³²⁶ Agarwal's theory of intra-family bargaining and negotiation is useful here. A member's bargaining power was influenced by the strength of the person's 'fall back' position.³²⁷ In the examples above, the remittances improved the women's bargaining power by strengthening their 'fall back' position. Controlling the remittances allowed Indian seafarers' wives the option of withdrawing support to their husbands' families. It therefore appears that controlling remittances allowed the wives of Indian seafarers more independence and economic power.

But the letters also reveal attempts by families to control the women who were in charge of the remittances. Women became the centre of power struggles between their natal families and their husband's families. The letters of complaint from the male migrant's families can be read as attempts to reassert control over the wives who had left their marital homes. Similarly, the wives did not always choose to return to their natal families. For example, Abdul Jabar's wife wanted to return to her stepchildren but her brother prevented her.³²⁸ Thus, while the wives appeared to control the remittances this may have been superficial.

The improvement in women's economic power within the household also depended on the success of the migration. But long distance migrations involved considerable risk and were not always successful. Women who were reliant upon remittances were thus exposed to these risks and the consequences of failure were dramatic. For example, the dependents of seafarers killed on the *S.S. Catania* were '*purdah* women' who following the deaths of their supporters were compelled to earn their livelihood by labour.³²⁹ Similarly, Arsodealle Malo

³¹⁹ Agarwal, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge University Press, 1998, pp.268-70.

³²⁰ Agarwal, *A Field of One's Own*, p.305.

³²¹ Gardner, *Global Migrants*, p.27.

³²² Gardner, *Global Migrants*, p.28.

³²³ Frost, *Work and Community among West African Migrant Workers since the Nineteenth Century*, Liverpool: Liverpool University Press, 1999, p.163.

³²⁴ Collated from letters and documents contained in Imperial War Museum [hereafter IWM], Records of Captain Herbert W. Jones, Box Number 67/325/1-2(1).

³²⁵ IWM 67/325/1-2(1): Jones to District Magistrate, Sylhet, 18th November 1944.

³²⁶ IWM 67/325/1-2(1): Jones to Principal Officer, Calcutta, 15th January 1944.

³²⁷ Agarwal, *A Field of One's Own*, p.54.

³²⁸ IWM 67/325/1-2(1): Jones to District Magistrate, Tippera, 7th February 1944.

³²⁹ India Office Records [hereafter IOR] P/11188: Letter from the collector of Kolaba, no MSR 1-74, 9th February 1922.

Hidger's widow was forced to support herself and her children through labour.³³⁰ Resorting to labour outside the home and breaking *purdah* entailed a significant loss of honour for women. It also brought shame upon their extended kin groups.³³¹ Therefore, the dramatic decline in their status affected their bargaining power with their in-laws, wider kin and the local community.

The lengthy absence of the male breadwinner resulted in an increased risk of land and property being seized by disgruntled family, kin and community members. This affected all of the family. For example, Rashid Ali protested when men he shared land with took his share away from his brother who was farming it on his behalf.³³² Similarly, Abdul Ahad complained that his neighbours had built a house and road on his property.³³³ Discontented family members caused similar problems. Bodiwan Juma complained that his brother had taken land 'by force'.³³⁴ Noor Ahmad's brother sold their joint property without consulting him and kept the proceeds.³³⁵ Female family members faced additional difficulties. There were several cases where wives were removed from their marital homes by their natal families. For example, the case of Abdul Jabar's wife illustrated above. Abdul Mahid's father-in-law also removed his wife from her marital home and intended to remarry her.³³⁶ Thus, migration could make families vulnerable to opportunistic kin and community.

Additionally, migration could lead to the breakdown of the immediate family. The wives of Sahzid Ali and Doodoo Meah allegedly left their marital homes to live with other men.³³⁷ Similarly, Noaz Ullah's wife supposedly had a relationship and child with another man.³³⁸ Relationships between stepmothers and children also broke down in the husband's absence. For example, Minat Ali's second wife refused to use his remittances to support his three children.³³⁹ In another case, Mufiz Ullah's 13-year-old daughter left the family home following a dispute with her stepmother.³⁴⁰ Thus, migration could result in a degree of disruption for the families left behind.

The role of the family in the decision to migrate or seek prolonged maritime employment reveals their internal power hierarchies; although some Indian seafarers made the decision individually and independently of their families. For example, Dada Amir Haider Khan ran away from his family home in the Punjab.³⁴¹ For other Indian seafarers, however, the decision to migrate or seek maritime work was a family decision. Chand Miah recalled his mother's role in preventing him from returning to sea by hiding his seaman's papers.³⁴² Meanwhile, Syed Rasul's father was instrumental in the timing of his return to maritime employment.³⁴³ Thus, we can see that parents employed some influence in the decision to migrate or seek prolonged employment at sea.

³³⁰ IOR L/E/7/1101: Department of Commerce, Government of India to Commerce and Revenue Department, India Office, 24th November 1921.

³³¹ Gardner, *Global Migrants, Local Lives*, p.71.

³³² IWM 67/325/1-2(1): Jones to District Magistrate, Sylhet, 15th December 1944.

³³³ IWM 67/325/1-2(1): Jones to Commissioner of Police, Chittagong, 3rd June 1944.

³³⁴ IWM 67/325/1-2(1): Jones to District Magistrate, Noakhali, 8th November 1944.

³³⁵ IWM 67/325/1-2(1): Jones to District Magistrate, Chittagong, 29th July 1944.

³³⁶ IWM 67/325/1-2(1): Jones to District Magistrate, Tippera, 26th July 1944.

³³⁷ IWM 67/325/1-2(1): Jones to India Office, 12th July 1944. Also Jones to High Commission for India, London, 22nd February 1944.

³³⁸ IWM 67/325/1-2(1): Jones to Principal Officer, Calcutta, 15th January 1944.

³³⁹ IWM 67/325/1-2(1): Jones to India Office, 13th July 1944.

³⁴⁰ IWM 67/325/1-2(1): Jones to Mercantile Marine Department, Calcutta, 24th March 1944.

³⁴¹ Khan, *Chains to lose: life and struggles of a revolutionary - memoirs of Dada Amir Haider Khan*, edited by Hasan N. Gardezi, New Delhi: Patriot Publishers, 1989, pp. 58-66.

³⁴² Choudhury, *Sons of the Empire: Oral history from the Bangladeshi seamen who served on British ships during the 1939-45 War*, Birmingham: Sylheti Social History Group, 1995, p.53.

³⁴³ Adams, *Across Seven Seas and Thirteen Rivers*, London: Tower Hamlets Arts Project, 1987, p.184.

While the opinions of parents were respected, those of wives did not always exert much influence. Describing how he returned to sea soon after the birth of his son, Haji Kona Miah stated that 'my wife complained maybe, but I didn't take any notice'.³⁴⁴ Similarly, Abdul Malik decided to stay in Britain without consulting his Indian wife.³⁴⁵ Thus, some Indian seafarers disregarded their wives' opinions or simply did not ask for their opinion before leaving. It could, therefore, be argued that migration did not lead to an equalization of gender roles within the marriage.

While the sources used in this section do not present us with an exhaustive account they do offer glimpses into the familial arrangements of seafarers in India. They revealed a complex picture of the impact of migration upon families in India. The migration of Indian seafarers seems to have disrupted the patriarchal structure of their communities slightly. Women saw an improvement in their economic power and bargaining position within the family through control of their husband's remittances although this led to attempts by their natal families and in-laws to control the women. Migration also involved considerable risk and women could experience a dramatic deterioration in their economic power and social standing when it was not successful. Furthermore, migration did not appear to lead to an equalization of gender roles within the marriage.

Indian seafarers' families in Britain

Historians of Indian seafarers have not explored their family lives in Britain. Historians of the South Asian diaspora in Britain also neglected to explore interracial families. Laura Tabili included Indian seafarers in her study of 'Black seamen' in Britain. She concluded that interracial relationships provided Black men with a vital support network that encouraged and even accelerated their assimilation to British society.³⁴⁶ Thus, they are portrayed as somewhat inevitable and sought after for their beneficial aspects. Indian seafarers' oral history testimonies challenge this assertion in several ways.

Oral histories reveal that not all men sought out or wanted interracial relationships regardless of their intentions concerning the length of their stay in Britain. For example, Anjob Ali's oral history testimony revealed his distress at being pursued by white women in British factories.³⁴⁷ Attar Ullah's account reflected a similar unease and recalled pleading with women not to 'bother' him.³⁴⁸ Both Ali and Ullah intended to stay in Britain permanently. Thus, it becomes clear that not all men sought out these relationships or saw them as beneficial.

British women were not simply agents of assimilation but also played a role in sustaining relations between families in Britain and India. For example, Haji Shirajul Islam's wife was determined to travel to India with him, despite his attempts to discourage her.³⁴⁹ He noted that she visited Sylhet three or four times. He related how 'she got on well in Sylhet – she could speak our language and she liked our people very much'.³⁵⁰ In addition, he claimed that she was instrumental in maintaining a close relationship with his Indian wife and family.³⁵¹

Furthermore, portraying these relationships in a functional manner depicts them as relationships of convenience but oral history testimonies challenge this. For example, Islam recalled his grief over his British wife's death. He stated 'I never knew that people could love

³⁴⁴ Adams, *Across Seven Seas*, p.134.

³⁴⁵ Adams, *Across Seven Seas*, pp. 188-9.

³⁴⁶ Tabili, *'We Ask for British Justice': Workers and Racial Difference in Late Imperial Britain*, London: Cornell University Press, 1994, p.144-5.

³⁴⁷ Choudhury, *Sons of the Empire*, p.110.

³⁴⁸ Adams, *Across Seven Seas*, p.198.

³⁴⁹ Adams, *Across Seven Seas*, p.105.

³⁵⁰ Adams, *Across Seven Seas*, p.105.

³⁵¹ Adams, *Across Seven Seas*, p.106.

each other so much, we were like one life ... my heart always wants her'.³⁵² His description of their marriage revealed a relationship based upon love and mutual respect. This suggests that the motivation for their relationship included love and companionship rather than just the practical help she could provide in easing his assimilation to British society.

Furthermore, interracial relationships involved considerable risk. The criticism interracial couples faced from the Indian diaspora community must be considered. Fazol Karim's oral history evidence revealed the risk of condemnation such relationships faced. Karim recalled how his cousin's disapproved of his intention to visit another seafarer because of their dislike of this seafarer's decision to marry a white girl.³⁵³ Anjob Ali's embarrassment at the attention shown to him by white British women in front of his uncle and brother could also be attributed to this.³⁵⁴ Consequently, while such relationships could be beneficial for expanding their support networks in Britain they also risked censure and a withdrawal of support from their own community.

When taken out of their functional framework, relationships and families in Britain present a multifaceted picture. They undeniably played an important role in supporting the men in Britain but they were not inevitable and they entailed risks as well as benefits. Furthermore, interracial relationships did not entail wholesale jettisoning of links to India. Rather, white British women could be instrumental in maintaining relationships between the men and their families and communities in India.

Conclusion

This paper set out to explore an uncharted area in the study of Indian seafarers and the South Asian diaspora. While the public lives of South Asian migrants in Britain are easily accessible in the historical record, their family and private lives are not. Informed by wider migration histories, this paper suggests new ways of approaching the topic. Furthermore, bringing the private or everyday lives of migrants into focus offers an expansive view of the migration experience.

³⁵² Adams, *Across Seven Seas*, p.106.

³⁵³ Choudhury, *Sons of the Empire*, p.25.

³⁵⁴ Choudhury, *Sons of the Empire*, p.110.

Marriage and mobility: the marriage patterns of British generals, 1701-1815

Andrew B Wood, London School of Economics
(a.b.wood@lse.ac.uk)
Supervisors: Dr Peter Howlett & Dr Patrick Wallis

Introduction

Social mobility has long been a subject of great interest to economic historians as it affects the efficient allocation of human capital resources. It is often argued nations which are able to put the 'right people in the right place' should be more competitive in the international marketplace (Landes 1960). One key avenue of achieving upward social mobility in eighteenth-century Britain was marriage (Miles 1999, p. 145; Macfarlane 1986, p. 257). This paper examines the role marriage played in the mobility of those who attained the highest professional rank in one of the leading eighteenth-century professions, the army. In order to do this we trace the first marriages of two different samples of generals representing the army at different stages of the eighteenth century. The 1747 data is based on the marriage status of 43 generals and 37 for the 1800 period out of initial random samples of 50 generals for each period. Studies of other professions, such as London businessman, have shown marriage mostly helped to consolidate, rather than increase social status (Rogers 1999, p. 22). However, this study finds that the role marriage played in social mobility depended on the social class of the father and that its impact depended on the period.

Marriage patterns among generals

Marriage in the eighteenth century was characterized by two distinctive features (Voigtlaender and Voth 2009, p. 251). Firstly, a relatively high proportion of adults never married. Particular social groups may have had even a greater propensity to remain unmarried than the wider population. Peers and businessmen seemed to have higher proportions remaining unmarried compared to the general population as table 1 shows. These proportions were even greater for generals.

Table 1: *Marriage status of different social groups*

Social groups	% Married	% Unmarried	N
Generals 1747	70	30	43
Generals 1800	78	22	37
Businessmen 1740-59	83	17	247
Peers 1725-49	80	20	535
Adults 1746 aged 40-44	90	10	

Sources: Rogers 1999, p. 21; Hollingsworth 1964, pp. 14, 20; Wrigley and Schofield 1981, p. 260; generals from own research.

Perhaps this is not surprising given the nature of army service. The army was a male dominated culture and it often required long absences from England. Generals also probably had plenty of opportunities for sexual activity outside of marriage as the sexual behaviour of unmarried generals shows. John Ligonier, for example, had a sexual relationship with Penelope Miller of Southwark which produced a daughter.³⁵⁵ Other generals also had children out of wedlock.³⁵⁶ Moreover, from a wife's perspective marrying an army officer could entail great personal risk. There was always the possibility a wife would be widowed and left to

³⁵⁵ ODNB, s.v Ligonier, John (1680-1770).

³⁵⁶ ODNB, s.v Hawley, Henry (*bap.* 1685, *d.* 1759), Craig, Sir James Henry (1748-1812).

bring up her family without adequate financial support. This is exactly what happened to Henry Hawley's family when his father, also an army officer, died in battle leaving his widow 'practically penniless'.³⁵⁷

Secondly, when people married they tended to marry late in life. It was fairly common for men to marry during their late 20s. As with the unmarried, the average male age at first marriage could vary greatly between different social groups (table 2).

Table 2: *Age at first marriage for different social groups (%)*

(Age	0-24	25-34	35+	Mean age	N
Generals 1747	15.8	26.3	57.9	37.7	19
Generals 1800	12.0	52.0	36.0	34.9	25
Business 1740-59	22.4	55.3	31.0	32.4	58
Peers 1725-49	34.0	46.3	19.7		356
Male Adults 1725-49				26.9	

Sources: Rogers 1999, pp. 22-23; Hollingsworth 1964, p. 14; Wrigley and Schofield 1981, p. 424; generals from own research

Most privileged social groups seemed to marry later than the average male. However, no group married as late as generals with an average first marriage age of mid- to late 30s for both periods. Again, this probably had to do with the nature of an army career compared to other occupations. The effect of the army on age of marriage was also seen in the careers of late eighteenth-century army surgeons. Like generals, army surgeons married later than most other social groups. Despite coming from different social backgrounds than generals, army surgeons married for the first time at an average age of 34 (Ackroyd et al 2006, p. 276).

One reason for this late marriage and high proportion of unmarried in early modern England was because newly wed couples were expected to set up an independent household. This required substantial economic resources so people delayed marriage until they had acquired the necessary funds for marriage (Wrigley and Schofield 1981, p. 421). Some social groups seemed to delay marriage even longer than necessary. These particular groups only married when they had reached the peak of their profession and were financially comfortable. London merchants married late because they waited to marry until they were economically well-established. Most businessmen only married after they became partners or were about to secure a partnership (Rogers 1999, p. 22). Generals seemed to follow a similar marriage pattern to London merchants. They only married once well established in senior positions. 68 per cent of 1747 generals whose first marriage dates are available married after becoming majors.

Perhaps career position was more important than age *per se* in timing of marriage. This certainly seemed the case for generals. The late eighteenth century saw a decline in the unmarried and marriage ages (Wrigley and Schofield 1981, p. 424). There were similar changes in marriage patterns of generals and other social groups. However, this did not affect the stage in the careers at which future generals married. If anything, seniority became more important as a prerequisite to marriage as 76 per cent of 1800 sample officers only married once they were major. Nor can this be explained by changes in the promotion structure; the time it took to become a major from entering the army was 15 years for both samples. The late marriage and high proportion of generals that remained unmarried has important implications for their social mobility. On the one hand, marriage may have been used to consolidate rather than enhance social position as generals only married when they were well established. On the other hand, marrying late or not at all could have helped to facilitate career progression and acquisition of economic resources.

³⁵⁷ ODNB, s.v Hawley, Henry (*bap.* 1685, *d.* 1759).

The role of marriage in generals' social mobility

Did generals, then, use marriage to consolidate social status, rather than to advance? The most common way to measure marriage mobility is to compare husband's social class with that of their wives represented by father's-in-law social status (Miles 1999, p. 146). Social class is a good way of measuring mobility in the eighteenth century as there was a strong relationship between class and income because class was defined in part by income and in part by social status. Upward mobility is considered to have occurred if a general married a member of a higher social class. For 1747 generals, marriage patterns tended to be different depending on the social class. The data we have on the social backgrounds of generals and their wives indicates that most aristocratic generals seemed to marry wives from the same social background. In contrast, every middle-class general appeared to use marriage to continue their advance. This phenomenon of middle-class generals using marriage to trade up also occurred for other social groups in the army. It has been suggested that army surgeons chose their wives in order to seek social advancement by establishing themselves in 'respectable professional families' (Ackroyd et al 2006, p. 275).

Table 3: *Marriage mobility of 1747 generals by first marriage*

Wife	MC	Gentry	Arist.	Unknown	N
General					
Arist.	3	1	9	1	14
Gentry	1		1	3	5
MC		2	3	3	8
N	4	3	13	7	27

Sources: own research

Apart from marrying someone from higher social classes, many 1747 middle-class generals were also able to gain in the marriage market through marrying heiresses. When James Oglethorpe, for instance, married the only surviving daughter of the wealthy Sir Nathan Wright he settled at her family home, Cranham Hall in Essex, and lived in some style on the £1500 yearly income she possessed.³⁵⁸ Charles Cadogan's marriage may have been one of the most important factors in his rise. At the time of his marriage he was described by one contemporary as '... a loose person, and of no great income ...'.³⁵⁹ He married the co-heir of Sir Hans Sloan, Bt, who was probably the leading medical practitioner of his day and left a fortune estimated to be in the region of £200,000.³⁶⁰ Cadogan purchased a regimental colonelcy merely two years after his marriage, the timing of which is suggestive that his marriage may have assisted him in raising funds for this transaction. The proportions of businessmen using marriage to advance were less than for generals, although it is necessary to exercise some caution with these comparisons due to the small sample size of generals. Rogers' research indicates 60 per cent of London businessman married first wives, whose background he managed to trace, from the same social background; whereas, only 25 per cent of businessmen seemed to advance by marrying wives from gentry or peerage backgrounds (Rogers 1999, p. 23).

Do we see similar patterns in the marriages of 1800 generals compared to their 1747 counterparts? There appeared to be notable differences between the periods. During the late eighteenth century fewer middle-class generals continued their advance through marriage and aristocrats more frequently married those from lower social classes.

³⁵⁸ ODNB, s.v Oglethorpe, James Edward (1696-1785).

³⁵⁹ Sedgwick 1970, p. 512, Cadogan, Charles (1685-1776).

³⁶⁰ ODNB, s.v Sloane, Sir Hans (1660-1753).

Table 4: *Marriage mobility of 1800 generals by first marriage*

Wife	MC	Gentry	Arist.	Unknown	N
General					
Arist.	4	4	4	1	13
Gentry			1	3	4
MC	4	1	1	4	10
N	8	5	6	8	27

Sources: own research

There was also qualitative support for this decline in marriage mobility as the romantic activities of later aristocrat generals demonstrates. Lord Herbert originally wanted to marry Caroline, relation of Lord Charles Spencer, but was rejected because:

... she has not that *kind of liking* for you, without which she is determined not to marry any man; she has made no resolution not to marry, but does not think marrying at all necessary to her happiness, unless some man should offer, for whom she feels herself inclined to have the sort of attachment which she thinks essential to make her happy. She has no feelings of this kind towards you and is sure she never shall have, though she likes you very well, but not as a Lover ...³⁶¹

In a not dissimilar fashion, Charles Cornwallis, eldest son of fifth Baron and first Earl Cornwallis, married Jemima Jones, who had no dowry and was the daughter of an army captain, for love.³⁶² This downward mobility of aristocratic general's marriages seemed to be a common feature of aristocratic marriage during the late eighteenth century. Aristocrats were marrying far less people from the same class and declining numbers of heiresses. 'In-marriages' of the peerage dropped from 30.5 per cent for those born in 1700-19 to 22.6 per cent for 1720-39 (Thomas 1972, p. 102). A possible explanation for this is that individual choice played a greater role in marriage decisions than previously (Stone 1979, p. 183).

Conclusion

The role marriage played in the social mobility of generals depended on the social class of the father and time period. In the early eighteenth century the aristocracy and gentry used marriage as a means to consolidate their existing social status with few marriages outside of their peer groups, whereas the majority of middle-class generals used marriage to continue their advance by marrying women from a higher social class. The role marriage played in mobility may have been greatest for the middle-class as they could use successful careers as a means to continue their social rise through advantageous marriages. However, the late eighteenth century saw a decline in the mobility of generals as fewer middle-class officers married the upper classes and aristocrats married more commoners. This seemed to be a consequence of generals marrying later in their careers and the rise of individual choice in the marriage market.

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³⁶¹ Lord Charles Spencer to Lord Herbert, 10 October 1786 in Herbert 1950, p. 316.

³⁶² ODNB, s.v Cornwallis, Charles (1738-1805).

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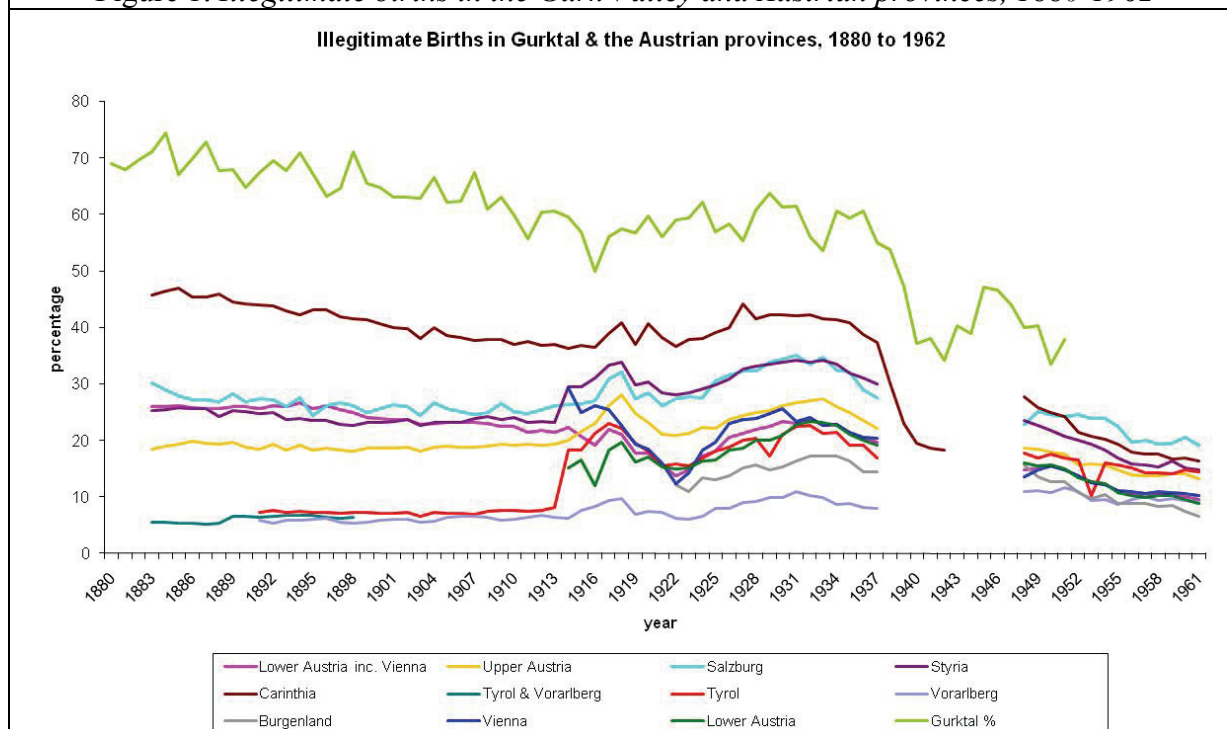
Playing a waiting game? A reassessment of the relationship between late marriage, economic well-being and extra-marital fertility in the Gurk Valley, Austria, at the turn of the twentieth century

Catherine Sumnall, University of Cambridge
(cs364@cam.ac.uk)

Supervisor: Professor Richard M Smith

That marriage was delayed in pre-industrial Europe because of a partnership of wants – the scarcity of resources which would enable a new household to be established, and the advanced age at which an heir could hope to inherit his due – is enshrined in literature from across the continent.³⁶³ Historians have sought to explain the prevalence and persistence of illegitimate births in Austrian farming communities with reference to the lateness of marriage caused by delayed inheritance and straitened economic circumstances, most acute for those in life-long agricultural service.³⁶⁴ In the Gurk valley in the 1890s, illegitimate births made up an astonishing 90 per cent of all births recorded in some parishes.³⁶⁵ Figure 1 illustrates the degree to which illegitimacy in the 15 parishes of the Gurk Valley exceeds those levels of extra-marital births found elsewhere in Austria.

Figure 1: *Illegitimate births in the Gurk Valley and Austrian provinces, 1880-1962*



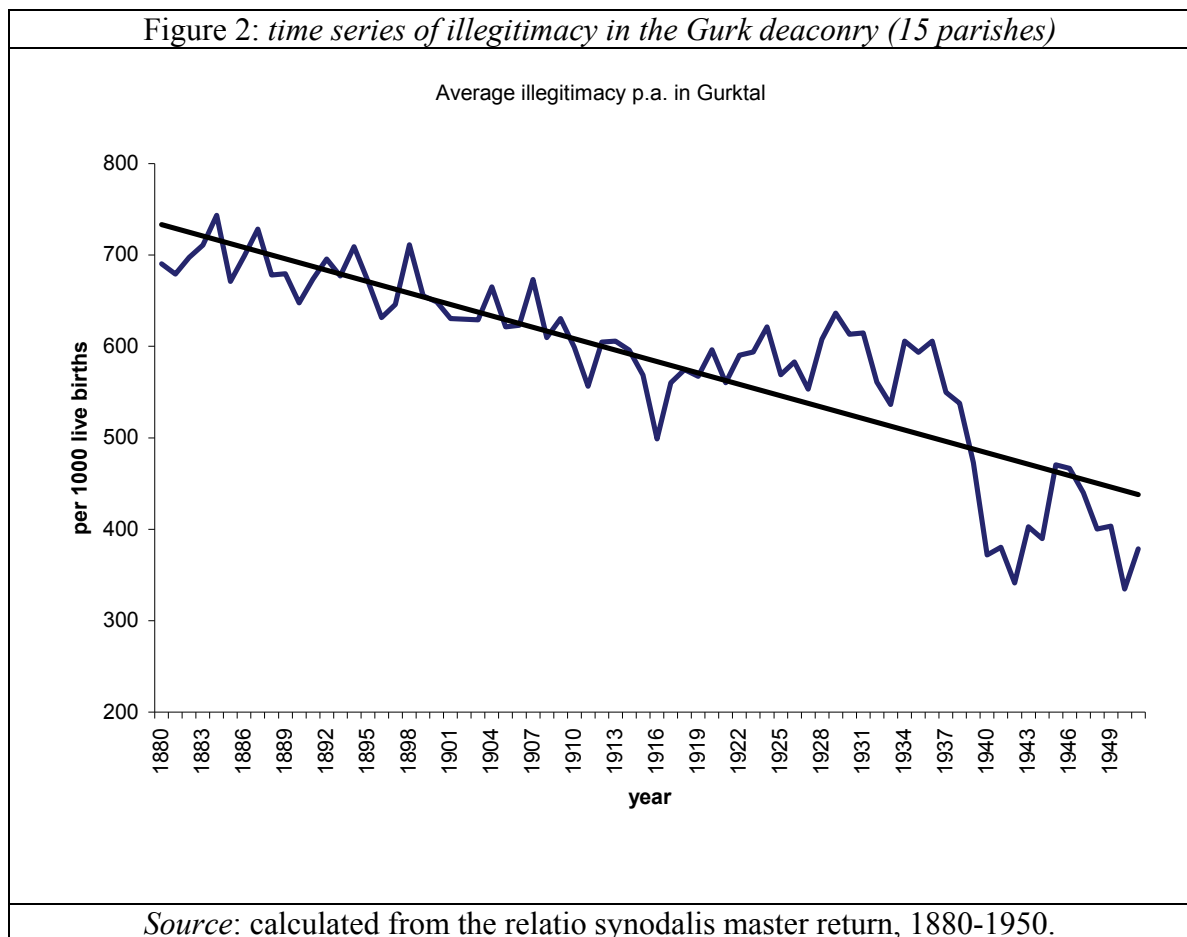
Source: calculated from the relatio synodalis master return 1880-1950, and Demografisches Jahrbuch Oesterreich, 1883-1961.

³⁶³ E.A. Wrigley & R.S. Schofield (1981), *The Population History of England, 1541-1871: a reconstruction*, Cambridge: CUP.

³⁶⁴ M. Mitterauer (1983) *Ledige Muetter*, Munich: Beck.

³⁶⁵ C. Sumnall (2009). 'There's no such thing as sin in the Alps: some reflections on the historical geography of illegitimacy in Carinthia.', *Transylvanian Review* 28 (Supplement: Demographic Changes in the Habsburg Empire in the Time of Industrialisation), pp195-224.

However, my research indicates that there must remain a question mark over the responsiveness of extra-marital fertility to alterations in economic fortunes; illegitimacy remains embedded in the ‘sticky’ and path-dependent world of cultural practices, experienced most intensely at the scale of the household. As figure 2 shows, illegitimacy in the Gurk Valley was certainly in decline over this period, but the slowness of its course and the persistence of bastard births in farming households well into the twentieth century suggest that there is a closer link between illegitimacy, the household and its structure and resources than might be supposed by the correlation of its decline with economic modernization. Using data from parish records and testamentary evidence from the local court, this paper argues that the economic status of households can be observed at the point of their dissolution upon the death of an owner, and because of the partial nature of inheritance and of the historical record, that, when economic circumstances worsened in Austria at the turn of the twentieth century, those increasingly excluded from inheritance were unmarried mothers and their illegitimate children. Illegitimacy’s decline over this period seems linked to the gradual erosion of an older system of mutual benefit to mother, child and household of relatively high levels of illegitimate births in this rural area of Carinthia.



The largest section of the unmarried adult population of the Gurk valley was engaged in agricultural service. The proportion of women (and indeed men) for whom this was a state from which they never emerged should caution against an easy association of this occupation as one exclusively undertaken by young people.³⁶⁶ Life cycle service became, for a substantial portion of the population, lifelong service. Indeed, it is questionable whether, for this largely illegitimate underclass with illegitimate children of its own, there was ever any other option

³⁶⁶ That is, people under the age of 25, the age used by Kussmaul and others to assess the prevalence of service as a life cycle phase elsewhere in Europe. A. Kussmaul (1981) *Servants in Husbandry in early modern England*, Cambridge: CUP.

but a life in agricultural service, not just a span of a few youthful years prior to marriage. Where marriage was difficult, access to land and capital restricted, and farming households large enough to require considerable input of labour for production, it seems that a bastardy-prone sub-society should almost inevitably emerge. When this was exacerbated by late age at marriage for those who are able to marry, and very high incidence of lifelong celibacy, we are reminded not only that illegitimacy was far from the preserve of the landless, but as widespread a life cycle phase for mother and child as service might be deemed elsewhere in early modern Europe.

However, the maid incorporated into larger farming households for her own labour and the future service of her child was not the only picture of unmarried motherhood present in the Gurk valley. Around 15 per cent of illegitimate births were retrospectively legitimized by the marriage of their parents (see table 1). There was, one might assume, a role for fertility testing in rural communities where the future viability of the farmstead retained immense significance, even in a period of restricted opportunity that led to substantial rural emigration. Indeed, such fertility testing was compounded by the continued necessity of property to underpin a marriage; without imminent inheritance and the ability to establish an independent household, marriage had to be delayed. The birth of children needed to sustain that future household, though, could not suffer such waiting. As a consequence, it was common for more than one birth to be legitimized per marriage that took place, and women who did one day have the prospect of becoming farmers' wives therefore risked multiple illegitimate births not simply as proof of fertility, but as the best reproductive course open to them, in the shaky knowledge that a marriage would someday follow and the pressure to produce children at that later stage in life would thus have been lessened.³⁶⁷

Table 1: *Children legitimized by retrospective marriage, 1869 to 1904*³⁶⁸

	Bastard births	Legitimized bastards	Percentage legitimized	Legitimized per marriage	Mean age at legitimization in years
Gloednitz	1220	178	14.6	1.54	10.76
Gurk	680	106	15.6	1.24	6.43

Unmarried mothers whose offspring were not subsequently legitimized had markedly fewer children outside wedlock than those whose children were legitimized. This indication that some relationships were always intended to end in a marriage while others did not enjoy such security is interesting for two reasons. Firstly it reaffirms that illegitimacy as a category concealed more than one kind of fertility behaviour, and that completed family size could almost be regarded as a touchstone of the destiny of a relationship in this context, particularly for those couples where marriage was, by necessity, delayed. Secondly, it suggests that, even where marriage was only a vague hope, not all women remained childless. There might, then, be some suspicion that both the benefits of having an illegitimate child outweighed the costs, and that again, we might distinguish between unmarried mothers on the basis of their relationship with property.

The real position of those born outside wedlock is difficult to assess from records such as wills, where often relations between kin and entitled persons were fraught with tension rather than 'in superficial harmony implied by the pattern of bequests, before money and inheritance entered the fray'.³⁶⁹ As such, those cases that came into the purview of the

³⁶⁷ The mean age at first marriage for women in Gloednitz was nearly 33 years.

³⁶⁸ My own calculations from the parish register of births for Gloednitz (1869-1904) and Gurk (1871-1901) parishes, held at the Archiv der Dioezese Gurk, Klagenfurt.

³⁶⁹ D. Sabean (1976) 'Aspects of kinship behaviour and property in rural western Europe before 1800', J. Goody, J. Thirsk & E.P. Thompson (eds) *Family and Inheritance*, Cambridge: CUP.

*Bezirksgericht*³⁷⁰ are likely to be those where some form of contestation occurred. Illegitimate children were largely absent from the majority of the cases where farmers in possession of property came to bestow the farm on a fortunate child. Florian Tamegger, a young farmer who died at the age of 26 in 1891, was exceptional in this regard, because of the acknowledgement of his two bastard sons in the disestablishment of his estate. His mother, married sister and unmarried sister were the greatest beneficiaries of the K.4,400. Florian left behind him after debt, receiving K.1,000, K.800 and K.1,600 respectively. His two sons, Andreas and Johann, received K.500 each, but apparently did not get a sniff of the property in Gurk of which Florian was the tenant, but their entitlement given their youth would likely have been small anyway, regardless of their legitimacy. However, the slightness of their inheritance given the substantial benefits accrued by Genovefa, the unmarried sister, in particular is suggestive of an unwillingness on the part of either Florian or the authorities to prefer illegitimate children, and a bias in favour of the older generation, whose ability to marry may have depended on such acts of kindness from a sibling or the court. Indeed, that the single women should be accorded double the inheritance of the married woman,³⁷¹ indicates that a desire to create an independent future, perhaps based on marriage, was uppermost in the minds of the testator in this case, and often in the authorities in their adjudication of others like it.

On the whole, though, the illegitimate children that must have been fathered by farmers and their sons did not appear to gain much from the estate of their deceased father unless they had been subsequently legitimized. Even those acknowledged, such as Florian Tamegger's sons, were entitled to very little by virtue of their out-of-wedlock status, received considerably less than other kin, whereas, had they been legitimate or legitimized, one might have expected them to be the major beneficiaries. While this might reveal more about the marital intentions of Florian than it does about the institutionalized penalties facing illegitimates, it nonetheless emphasizes the relative disadvantage of those who were not legitimized, either through decision or death, even though the law was clear in its position that such children were at least legally entitled to inherit. Only those who benefited from recognition, and for whom provision was made by the testator in his oral or written will, seemed to enjoy favourable decisions in the *Bezirksgericht*. Anton Pachler, who died in 1897, made provisions for the inheritance of his illegitimate daughter, Rosa Gäminger. She was not to get the property, called *Ossacher*, only the money left from the sale after the debts had been cleared. Those debts included the wages of her mother, Rosa, who presumably had worked as a maid and lived as a partner with Anton prior to his death, and thus not taken the 20.F wages per year she was owed by him from 1875, and had even loaned him 100.F of her own savings, which again, the will made sure to return to her. Even without marriage, then, there were some fathers who did their best by their partners and children, just as there must have been many who were married who did not. Why Anton and Elisabeth never married, though they cohabited for 20 years, through which the owner became indebted to his concubine, remains a mystery. The desire not to enter into formalized wedlock may well run deeper in the Gurktal than mere economic pragmatism might suggest.

The absence, or quasi-absence, of single mothers even in the generous will of Cassian Ebner is worthy of note. While illegitimate children receive case by case attention, depending on the ability and willingness of their fathers to acknowledge paternity and make provision in their will, their mothers are more rarely beneficiaries, except as concubines, or as holders of any inheritance in trust until the intended beneficiary comes of age. The best a single mother could hope for was to live off the usufruct and hope that her illegitimate child would survive long enough to reach majority, and thus be able to inherit and make secure her station. Precisely such a fate awaited the illegitimate children of Peter Gantschacher, a cottager in Gloednitz parish, who died in 1897. His situation is unusual in the files of the *Bezirksgericht*

³⁷⁰ The records of the local court are held at the Kaerntner Landesarchiv, Klagenfurt.

³⁷¹ In practically all similar cases, the same rule of thumb applied.

in that two illegitimate children, born of different women, were acknowledged and had some claim on his estate. One, also named Peter Winkler, was a soldier in distant Luggau, while the other Theresia Ebner, was in service in Torf, a hamlet also in Gloednitz parish. Peter Gantschacher, it transpired, was one a creditor of a number of similarly placed individuals in the parish, loaning no fewer than seven tenant farmers sums of several hundred Gulden, at interest of 5 per cent. Once these loans had been called in, the cottage and the cow sold to Jakob Sgaga, himself a father of illegitimate children despite hailing from Bohemia where altogether different family forms prevailed, it was his son Peter whose fortune was made: he received K.2,001 as his inheritance portion. Theresia, on the other hand, did not do so well, receiving only K.100, and even then only upon the death of her mother, who had the usufruct of K.500 for the rest of her lifetime, with the expectation that this be divided between her five illegitimate children on her death. As Peter Gantschacher was (acknowledged) father to only one of them, this seems a considerable act of kindness on his part, although the mother of his child, and indeed Theresia herself, may have thought themselves hard done by this widely spread charity.

As the early years of the twentieth century passed, more and more of the cases dealt with by the court either end with very large sums of money being passed on amongst relatively large legitimate families, or else it is stated that ‘nothing else remains’, and the outstanding debts of the testator with nothing left to give as inheritance were either cancelled or taken on by a relative. Such a fate was not only encountered by the poorest; indeed, lodgers seem to have at least retained some savings to pay for their care or pass onto their children. Most vulnerable in 1908, the final year for which accessible data exist, seem to be the craft or administrative occupations, with the master blacksmith and the post master both dying early, leaving large marital families in some difficulty as they strove to repay the debts without any of the financial cushion they would likely have expected upon the death of a spouse.

Upward social mobility in the parishes of the Gurk valley was limited indeed, with only a handful of fortuitous marriages offering an opportunity to become a farmer’s wife, or with inheritance from a parent who had hitherto managed to stave off indebtedness. Doubly excluded were those born outside wedlock. They had little opportunity to be anything more than servants bearing illegitimate children themselves. Wages were low, with work often paid for in kind or not at all, as farmers’ circumstances worsened, and saving was limited to just a handful of Gulden per year. Such amounts were insufficient, without an inheritance portion, to ever hope to obtain one’s own tenancy, let alone property, when the going rate for buying holdings ran into the thousands. And with the apparent unwillingness, indicated by their relative absence in the records of the *Bezirksgericht*, of fathers with resources to acknowledge illegitimate children whose mothers they had not married or intended to marry, the hope of inheritance must have seemed a distant one. The majority of people, then, for the majority of their lives, lived outside the light of property ownership or cottage tenancy. They were protected from the vagaries of the market by involvement in *das ganze Haus*, but this did not make them equal partners in its fortunes. However, it also did not leave them so exposed to its risks, especially early in the life cycle, when an untimely death could turn the fortunes of a married couple on their head. Access to property, then, was a double-edged sword. With it, one could marry, pass on resources to future generations, and buy into the *Blut und Boden* ideology of Austrian farming, and the entire social importance such status of ownership of life-tenancy endowed. Without it, on the other hand, such a position was likely to be hard to achieve. Late marriage, after having born multiple children outside wedlock, may not simply have been a strategy of risk-avoidance for the powerful farmer’s son, but also for the socially-aware maid.

ABSTRACTS OF ACADEMIC PAPERS

I/A Taxation and Medieval State Formation

Chair: **Peter Spufford** (Cambridge)

Martin Allen (Cambridge)

The contribution of the English mints to government revenue, 1158-1544

The contribution of the English mints to the king's revenue is a relatively neglected aspect of government finance in medieval England. When the mints are included in discussions of the revenue of particular periods the data used are often incomplete or misinterpreted. A recent survey of all of the available English mint accounts for a forthcoming book on *Mints and money in medieval England* has provided an almost complete series of data for the profits of the royal mints from 1220 and 1544, which, together with data of various kinds before 1220, supply the means to assess the English coinage's contribution to the king's revenue between 1158 and 1544. In addition to mint profit data, this assessment also requires a review of the secondary literature on total revenue at various periods. Estimates of total revenue are generally much more problematic than data for one element of royal finance, such as the mints, but it will be shown that the overall trends in the contribution of the production of coinage to total revenue are clear enough.

The king's revenue from the mints rose from probably less than £100 per annum in 1158-80 to about £200-£300 in 1190-1205, at the beginning of a substantial growth in mint output and the size of the English currency, which were to peak around 1300. The activity and profitability of the English mints also rose substantially at times of recoinage, when all or part of the English currency was recycled into new coinage. Annual profits increased from £200-£300 in 1190-1205 to about £2,000-£3,000 in the first year of King John's recoinage in 1205-6, falling back to about £900 in 1210-12 and a low point of only £150-£300 in the 1220s. Mint revenues grew again to £1,618 per annum in the recoinage of 1247-50, and remained above £1,000 per annum until 1264, falling back to less than £200 in 1270-6, during a period of disruption in the wool trade with Flanders, which was a major source of bullion for the mints between recoinages. In Edward I's recoinage of 1279-81 profits reached an all-time peak of £15,180 per annum in 1280, dropping to less than £100 in the second half of the 1290s. A revival in profits to nearly £4,000 per annum in 1299-1301, caused by a recoinage of foreign coins circulating in England, and about £1,800-£3,500 in 1304-9, during a period of exceptionally large imports of bullion to the mints, was followed by a steep decline, and in 1321-35 the mints made a loss every year. Profits rose to nearly £5,000 per annum in 1344, after the introduction of a gold coinage, and new peaks of more than £5,600 in 1351-2 and £5,000 in 1353-5, before falling to a few hundred pounds per annum at most or a loss at the worst in most years between 1362 and 1544, the exceptions to this rule being the recoinages begun in 1411/12, 1421 and 1464.

The figures presented indicate that mint profits usually supplied less than 10 per cent of total revenue, and often less than 1 per cent, although the percentage could briefly go higher than 10 per cent at times of recoinage. The exceptionally high recoinage profit in 1280 is equivalent to nearly half of estimated total revenue, but in 1411-13 the recoinage percentage is less than 2 per cent, and the percentages for other recoinage profits between 1158 and the 1460s range from about 3 per cent to some 11 per cent. Other periods of high mint output between the mid-thirteenth century and the early fourteenth century could generate profits equivalent to between about three and 7 per cent of total revenue, but at various times from the 1320s to the 1540s there were periods of low output when the mints did not make a significant contribution to total revenue. Until the debasement of the coinage by Henry VIII in the 1540s the English government never resorted to the manipulation of the currency as a means to provide a large element of total revenue, in contrast to governments in other parts of Europe such as France. There was considerable resistance to changes in the currency from

Parliament, which cooperated in the development of a highly effective system of direct and indirect taxation as a principal source of revenue.

Guillaume Sarrat de Tramezaigues (Institut d'Etudes Politiques, Paris)

The battle of Patay (18 June 1429): some financial considerations

The Hundred Years War saw major evolutions in the financing of war efforts and sharp modifications over time in the economic governance of France, England and French-occupied territories. The battle of Patay that happened on 18 June 1429 remains poorly studied in its financial aspects but represents an important example of the then ongoing evolution of the French economic superiority against the English, no matter the French military successes under the lead of Joan of Arc.

This paper aims at raising key economic and financial issues in a comparative approach of the English-French conflict to show their relevance in explaining the ultimate defeat of English troops in France. It is developed in three axes: the economic and financial situation in 1427-29, the financing of the campaign that culminated at Patay and its immediate economic consequences, and the economic evolution of the conflict in 1430-31.

The increasing tax burden over England and French-occupied territories to finance the war effort and the heavy debasements performed by Charles VII seemed to have created an unsustainable English economic policy where the Oresme-Greesham law added monetary instability to depressing taxation. While England had increasing difficulties in raising money to finance war, occupation and military expansion, France seemed to have had better economic governance where French permanent debasements and high taxation proved more efficient in the long run than English low debasements and crushing taxation. Such an observation leads us to consider that good management of extraordinary royal income had been a major reason for the French victory that ended the war. This good management would not only be valued as least economic damageable, but as the most compatible with popular support.

Patay also accelerated another trend where the Duke of Burgundy finally allied to the King of France at the Peace of Arras in 1435, because of his unbearable economic difficulties generated by the French victory at Patay and the increasing English difficulties in securing their French conquests, as the taxation riots in Normandy tend to show.

In such a context, the French victory at Patay, even if somehow militarily undeserved, would show in its financing and financial consequences a then already existing important trend in comparative political economy that ultimately buried English pretensions over France. In light of the consequences of Patay, a conclusion could be drawn that England lost the war because of its lack of good economic governance of French-occupied territories.

This comparative study in economic history at the end of the middle ages is performed through a methodology made of the gathering, comparison and interpretation of selected English and French financial data from rolls, cities accounting and already published sources.

Here the author proposes through the comparison of data, a new interpretation of the causes of the Hundred Years War French victory.

Andrew Wareham (Roehampton)

The parameters of a tax state in late Anglo-Saxon England

The significance of land taxation in late Anglo-Saxon England, in paying tribute and warriors' stipendiary payments, has been widely discussed by early medieval historians in recent decades (see Campbell, Gillingham, Lavelle, Lawson, Stafford et al.). Central to this paper's analysis of these issues is a distinction between the domain and the tax state, with these concepts being defined as a type rather than associated with a particular chronological period (i.e. medieval as opposed to early modern).

This paper begins by setting out a theoretical model for understanding the parameters of a tax state in late Anglo-Saxon England, and its connections with military and political

systems. On the basis of this template comparisons can be made with other tax states in the pre-modern and modern worlds, as well as connections with the issues raised by other disciplines, including political science and economics. The quantitative aspect of the paper considers the degree to which the late Anglo-Saxon tax state can be regarded as a strong or weak state, in terms of its share of national wealth. The paper then considers connections between the fiscal and political arenas from a qualitative perspective. In a society without parliamentary government is there any evidence for consensual politics as a result of the creation of a tax state during the reign of Æthelred II (d. 1016)? What was the role of these dialogues as opposed to the use of violence and intimidation in order to accrue revenues for the state? In taking account of these issues we need to consider contributions of (1) the royal court and public assemblies; (2) local government institutions, principally shires, hundreds and wapentakes; and (3) the role of royal, secular, and ecclesiastical lordship.

The paper aims to contribute firstly to a greater understanding of the organization of the late Anglo-Saxon tax state, and connects with a recent debate in the *Journal of Historical Sociology* (1994, 2003) on the state in medieval societies. The latter discussion has focused upon the importance of law (Wormald) and lordship (Davies) without much consideration of the fiscal dimension. This paper addresses this gap, and thereby engages with the views of American historians from Bisson to Strayer on the medieval origins of modern European government. It also has a longer-run application. Early modern historians have suggested that the political centralization of the English (feudal) monarchy during the middle ages provided a key condition for the successful establishment of a tax state in the early modern period. The observations of Brewer and others, though, have stopped short of investigating the early medieval fiscal precedents for the formation of a tax state in England. This paper is an early staging post for such a framework.

Tony Moore (Reading)

The transition from a 'domain state' to a 'tax state' in thirteenth-century England: the example of Essex

The proposed paper will investigate the English fiscal revolution of the thirteenth century, which has been interpreted as an early example of the transition from a 'domain state' to a 'tax state'. In essence, the twelfth and early thirteenth-century English state relied on income from the monarch's personal estates (usually managed indirectly) and his feudal, regalian and jurisdictional rights (monetized through fines for grants of rights/access to justice and amercements for transgressions), occasionally supplemented by taxation in the form of scutage or aids (collected by the feudal lords). This model of state finance therefore comprised a relatively small number of large, lump-sum payments from a restricted social group closely-connected to the king. By the end of the thirteenth century, however, the basis of Crown finance had been transformed. Royal properties and rights were managed directly by royal custodians, while the expansion of the royal courts brought the gentry and the free peasantry into direct contact with the Crown. Moreover, taxation was regularized, in the form of both permanent indirect taxes (most notably on wool exports) and frequent grants of direct taxation (assessed as a proportion of surplus production). These changes had the effect of spreading the burden of state finance over a wider section of the English population.

The general outlines of this transition are well-known, but previous studies have offered either detailed studies of royal finance on a national level during a short period of time or surveys of royal finance that cover a longer timeframe but rely on a narrower evidential base. This paper adopts a composite approach, studying one English county in detail, in this case Essex (with Hertfordshire), over the whole of the thirteenth century. It is based on a comprehensive analysis of the Pipe Roll accounts from the reigns of John, Henry III and Edward I, supplemented by other sources, such as the records of direct and indirect, lay and clerical taxation in the foreign accounts.

This dataset will then be used to chart the changes over time in total royal income, the composition of that income and the efficiency of the local administration. These will be used to assess the changing impact of royal governance on the county as a whole, and on specific social groups. Finally, it will examine the implications of the changing model of royal finance for political relationships within local society and between the localities and the royal government. For instance, John's attempts to maximize his feudal and jurisdictional income bore directly on the greatest landowners and consequently it was the magnates that took the leading part in the Magna Carta civil war, 1215-17. By contrast, Henry III, partly in an attempt to avoid his father's mistakes, transferred much of the burden of state finance from the magnates onto the gentry, whose grievances came to the fore during the period of reform and rebellion, 1258-67.

I/B Long-run Economic Change in Asia

Chair: **tba**

Stephen Broadberry (London School of Economics) & **Bishnupriya Gupta** (Warwick)

Indian GDP before 1870: some preliminary estimates and a comparison with Britain

This paper provides estimates of Indian GDP constructed from the output side for the pre-1871 period, and combines them with population estimates to track changes in living standards. Indian per capita GDP declined steadily between 1600 and 1871. As British living standards increased from the mid-seventeenth-century, India fell increasingly behind. Whereas in 1650, Indian per capita GDP was more than 80 per cent of the British level, by 1871 it had fallen to less than 15 per cent. As well as placing the origins of the Great Divergence firmly in the early modern period, the estimates suggest a relatively prosperous India at the height of the Mughal Empire, with living standards well above bare bones subsistence.

Tirthankar Roy (London School of Economics)

Rethinking the origins of British India: state formation and military-fiscal undertakings in an eighteenth-century world region

The paper discusses the rise of the East India Company in the contested political world of eighteenth-century India, with reference to the manner in which economic power was deployed to enhance military power.

The paper was motivated by a puzzling and unexplained difference between early modern Europe and South Asia. Historians of seventeenth- and eighteenth-century Europe suggest a link between military contest on the one hand, and the size and fiscal capacity of the states on the other. Their argument is that military competition drove some of the major western European states to take increasing control of the economic means of financing wars. The phrase, ‘military-fiscalism’, coined by Martin Wolfe in the context of Renaissance France, is used to suggest an interdependent growth in fiscal capacity and military capacity. Eighteenth-century India witnessed political fragmentation, military competition, and much warfare. How did state capacity change in response to this contest? Curiously, the outcome here was a highly uneven one. The end result was not, as one might expect, a cluster of competing states growing more powerful both as governments and as armies. Rather the outcome was that one contestant overwhelmed all the others. The strongest among the Indian states shrank in size and capacity in the course of fighting battles. Why was the outcome of military-fiscal contests so one-sided in India?

The introductory section of the paper discusses the process of state formation after 1707. It is argued that the core political process saw two pathways of state formation becoming entangled. First, in a cluster of former provinces of the empire, noblemen close to the imperial court established nominally loyal but effectively independent regimes. Second, a cluster of new states ruled by warlords displayed a propensity towards territorial expansion. Their principal targets were the nobility-ruled states, located in the wealthier tracts of land, who dealt with the threat by paying tributes to the predators. The emergence of new militarily strong regimes in the backdrop of a market for protection gave rise to two parallel modes of governance, ‘statism’ or attempts to strengthen land revenue administration, and ‘militarism’ or collection of protection money by superimposing a centralized military outpost over a decentralized land revenue administration. Early in the second half of the eighteenth century, several events combined to add a new player in the game, the East India Company. The Company, however, continued to play the dual strategy – statism in Bengal and militarism in dependent regimes such as Awadh – for a considerable time just as the other Indian regimes did. Thereafter, and especially during the conflicts between the two paramount powers,

Marathas and the English at the turn of the nineteenth century, it was apparent that the outcome of military conflicts had become dependent on the efficiency of statist policies.

Historians have tried to explain why the Company succeeded. The explanations include such factors as disunity among the Indian princes, the collaboration between Indian merchants and European merchants, the backing of home country to the Company's imperialist designs in India, and technological superiority of the Europeans in the battlefield. None of these factors explains the outcome well enough. At their peak strength, the principal rivals of the Company were united enough; disunity was a symptom of their growing weakness. Indian merchants and European merchants collaborated at times, and quarrelled and distrusted each other at other times. The Parliament and the Crown tried to stop the Company from building an empire. When the decisive battles were fought the Indians were technologically equal to the Europeans, partly because they routinely hired the French, the Dutch, and even a few renegade Britons, as mercenaries.

Does fiscal strength or weakness answer the question then? With fiscal data so far unutilized in the literature, this paper will show that there was only one successful model of 'military-fiscalism' in this time, represented by the Company. The Company could raise more funds within India. Being merchants, they commanded better credit. Their early successes in Bengal and Awadh gave them access to the treasury of two regions that yielded four times more land-revenue-per-acre than the dry-land states such as the Marathas and Mysore. Being in control of three ports, the Company could open up supply routes by sea. But it was not luck alone that brought them success. The Company used money to raise a standing army, whereas the princes relied upon irregulars and soldiers contributed by supposedly loyal chiefs. This factor introduced differential capacity to command armies, and differential incentives for the soldiers. In short, a specifically European strategic outlook was also present behind the success of the Company.

Debin Ma (London School of Economics)

Rock, scissors: the problem of incentives and information in the traditional China state and the origin of the Great Divergence

Using a newly reconstructed data series of two and a half millennia on Chinese warfare and durations of political unification and fragmentation, this article provides a re-interpretation of the traditional Chinese political regime from the perspective of institutional economics. Structured within a principal-agent model with three major actors – the emperor, the bureaucracy and the people – the article demonstrates that monopoly rule, a long time-horizon and the large size of the empire could lead an absolutist regime like imperial China towards a path of low-taxation, dynastic stability and extensive growth. Fundamental incentive misalignment and information asymmetry problems embedded in its centralized and hierarchical political structure – analogous to a game of rock, scissors, paper – also significantly weakened the regime's fiscal and financial capacity to support institutions and institutional change conducive to modern economic growth. Using comparable series of fiscal revenue, the paper makes some comparisons between Imperial Qing (1644-1911) and contemporaneous Western Europe.

I/C Inequality

Chair: **Tommy Murphy** (Bocconi)

Dave Postles (Leicester)

Inequality of wealth in the early sixteenth century

Amongst the conventional ways of assessing the distribution of wealth in the early sixteenth century is analysis of the lay subsidies of 1524-5, through which assessment for taxation on individuals was reintroduced. Much discussion has been concerned with the appropriateness of these data for this purpose. Perhaps there is an alternative methodology: the examination of total valuations of personal estate in probate inventories. The methodology for analysing the inventory data is also different, since the emphasis will be on the Lorenz curve and the Gini coefficient, as represented below. These indicators will be compared with the curve and coefficient at other and more recent times to make comparative statements about inequalities of wealth.

1. Urban data

Such data are perhaps more appropriate in the case of urban inhabitants – in county boroughs or cities, for example – where capital accumulation was more likely to be concentrated in personalty – moveable goods and coin – rather than real estate (land), since probate inventories enumerate only personal estate. One possible difficulty of these data concerns the personal estate of the poorest urban inhabitants, since inventories were required to be produced only when the personal estate exceeded £5 (*bona notabilia*) in total value (under the 1529 Probate and Mortuaries Act). In the urban places under consideration here, however, inventories were indeed compiled for urban inhabitants with less than £5 of personal estate. We have then the potential for an alternative approach to the distribution of wealth in the early sixteenth century. Indeed, the inventory data has positive advantages for, whereas the subsidies were collected within tax bands, in the case of the inventories we have actual values of estates.

Data are presented for three county boroughs and one city in the Midlands: Coventry (city), Derby, Leicester and Shrewsbury. The data consist of 220 probate inventories for these four urban places between 1522 and 1546, 126 of which for Coventry, 24 Derby, 28 Leicester, and 42 Shrewsbury. It may be possible, before the conference, to expand the dataset.

2. All data

Employing the same methodology for rural as well as urban inhabitants perhaps runs a risk of not accurately reflecting total wealth. Rural inhabitants are more likely to have wealth consisting of both personal and real estate (land). There are two potentially mitigating influences, however: first, although transformation in consumption had not yet occurred, personal estate is still likely to reflect (to a certain extent) aggregate wealth, subject to the acknowledged issues with probate inventories (seasonality and so on); and (b) those with minimal personal estate, who represent a substantial proportion of the valuations, are less likely to have held real estate (and leaseholds were included in valuations as personal estate) (the caveat here is perhaps those elderly who had retained their land, but whose agrarian activities have declined). About one-fifth of the testators had personal estate appraised below £5, the level of *bona notabilia*, whilst 47 per cent did not exceed £10. With those ambiguities in mind, the probate valuations of 2,789 testators in the diocese of Lichfield have been analysed.

3. Preliminary Conclusions

With the exception of Leicester, the Gini coefficient for the urban places reflects a very wide differential in the distribution of wealth. By comparison, the Gini coefficient for the combination of urban and rural values is lower, but still exhibiting a fairly wide differential.

For comparative purposes, the coefficient for combined urban and rural values still exceeds by some distance the Gini coefficient in most OECD countries (for the working population aged 18-65), with the exception of Portugal and Italy (both 0.49) and Poland (0.54) in the mid-2000s (as reported in 2008). In the UK, the Gini rose from 0.31 in the mid-1970s, to 0.39 in the mid-80s, 0.41 c.1990, 0.42 in the mid-90s, 0.43 c.2000, and fell back to 0.41 in the mid-2000s (as reported in 2008). The difference in the early sixteenth century was thus more exaggerated than the wide differential which has occurred in the UK in the last 30 years.

NB: More data will be presented at the conference.

Jordi Domenech (Carlos III, Madrid)

Land ownership, inequality and rural unrest: evidence from the Latifundia regions of Spain before the Civil War

This paper looks at the determinants of the phenomenal wave of rural unrest that swept the southern regions of Spain during the Second Republic (1931-36), which has generally been considered one of the causes of the Spanish Civil War (1936-39). In the literature, one of the main explanations for this wave of unrest was the programme of land redistribution designed by the Republican authorities, which inflamed the hopes of landless labourers and produced a wave of land invasions and attacks on large landowners in the south of Spain. In this paper I use a database of conflicts at the municipal level constructed from contemporary newspapers and official sources for the provinces in Andalucía to test several hypotheses regarding the emergence of violent conflict.

Firstly, following André and Platteau (1998), Miguel, Satyanath, Sergenti (2004), and Hidalgo, Naidu, Nichter, Richardson (2010), I examine hypotheses positing that the deterioration of living standards explains the rise in violent conflict. I examine the trends for the region in area sown for the main crops and the evolution of population to study the extent of rural unemployment and changes in the volatility of agricultural output to see whether the 1930s saw a greater incidence of those problems. Secondly, I examine the hypothesis that diffuse property rights could have been a trigger of social conflict. In my database, despite the hyperbole coming from generally reactionary landowners, I find very little bottom up support for land invasions in Andalucía, which was probably related to severe restrictions in capital markets and to the risks associated with volatile output in some of the main crops (most especially, olives). Moreover, there is no statistical connection between the number of conflicts (and types) and various measures of land ownership inequality at the municipal level.

The paper then moves on to consider conflict in Andalucía in light of structural characteristics of Andalusian labour markets (Simpson, 2000; Simpson and Carmona, 2003). The specialization on wheat, olives and vines meant seasonal unemployment was a perennial characteristic of Andalusian labour markets, with peak demand concentrating in the summer for wheat and winter for olives and vines. Given these differences in peak labour demand, temporary migrations were the rule in Andalucía and the clash of interests between local and temporary workers remained a structural limitation of unions in the area. However, as unions in the main cereal- and olive-growing provinces became more powerful, local workers sought to restrict temporary migrations. As Republican legislation restricting the freedom of employers to contract temporary migration came into force, conflicts between local workers and employers and between local and temporary workers became the norm, generalizing violence. Moreover, workers in regions where emigration in harvest time was the norm lost their traditional source of income supporting them in the winter months. As a result, rural unrest grew in some of these towns. Although at the aggregate level, there were no apparent reasons to cause an increase in unrest, the distributional impact of Republican legislation was such that it extended and generalized rural conflict.

Guido Alfani (Bocconi)

Economic inequality in North Italy, c.1450-1750

Economic inequality in pre-industrial societies is still a clearly understudied field. Historical data preceding 1750 is particularly slim. The only area of Europe which has been the object of specific studies involving large areas over many centuries is the Low Countries, particularly Holland; for other parts of the continent we only have sporadic data. For the case of Holland, Jan Van Zanden suggested the existence of a ‘Super-Kuznets Curve’; spanning four centuries, connecting ‘modern’ and ‘pre-modern’ growth, and associated with a long-term period of rising inequality, only followed by a downward turn in inequality as late as the twentieth century. Van Zanden thus suggested the relevance of studying long-term trends in economic inequality in the pre-industrial period, while most of the research in the field has been traditionally devoted to the Age of Industrialization and after. In fact, according to Simon Kuznet’s original hypothesis, inequality would be relatively low in pre-industrial societies, then would increase in the first stages of industrialization, before later inverting the trend and starting to decrease, assuming a characteristic inverted-U profile.

During the early modern period Italy was, from many points of view, a case opposite to that of Holland. While the latter, from the late sixteenth century, entered its Golden Age, Italian economies began to decline. Although some recent studies suggest more moderate opinions compared to older scholarship, it is clear that the Italian states lost their core position in the European economy and became increasingly peripheral. How did this (relative) decline impact upon the distribution of wealth and income? Do we find a kind of ‘inverted Super-Kuznets curve’; in seventeenth- and eighteenth-century Italy?

This paper will make use of new archival research, coming from a variety of research initiatives that were completed in the years 2006-10, and particularly the projects *Distribution and Concentration of Wealth in Historical Perspective* and *Economic inequality and concentration of wealth in the early modern period: the case of Lombardy*. The data resulting from the latter project will be used here for the first time. The database of information about inequality has been built with the data coming from ancient ‘estimi’ (property tax registers), informative of different components of wealth. These always include taxable real estate, to which often capitals invested in economic activities were added, and more sporadically other components of wealth.

The paper aims to provide a picture as complete as possible of the distribution of wealth in North Italy in the late medieval and early modern period. It will also attempt to roughly estimate general levels of inequality, within cities, rural communities, and larger territorial aggregates (regional and supra-regional). Lastly, the paper will provide first impressions about the long-term development of economic inequality in North Italy, comparing this case with that of Holland and with the other information available for the European continent.

I/D Business Cycles in the Nineteenth and Twentieth Centuries

Chair: **Helen Paul** (Southampton)

Vincent Bignon (Geneva)

The vanishing impact of financial crises: fluctuations of the bankruptcy rate in France, 1820-1913

The nineteenth century was one of the most striving fields of experimentation for the variety of policies implemented to cope with financial crisis. The main innovation is usually credited to Bagehot (1873) for having set up the classical doctrine of the central bank as a lender of last resort but this innovation was not the unique try. During the first half of the century, French debates over the appropriate reaction of the central bank were lively, passionate and as imaginative as they are today.

This paper proposes to assess the varying impact of financial crisis on the French economy between 1820 and 1913. To this end, we construct an original – century long – series of the bankruptcy rate and look at its variation as a criterion to judge the severity of each financial and monetary crisis on the real economy. The choice of this measure of business fluctuations seems natural, as financial shocks are likely to hit firms' financing and therefore to endanger the most fragile. Moreover, because its construction uses figures compiled at that time, it allows avoiding the criticisms made to ex-post data reconstruction.

Three contributions are made. First a new data series of yearly bankruptcy rates is proposed. Second, using various standard statistical and filtering methods, it compares the cyclical pattern of this series with the occurrence of crisis. Third, the explanation of this pattern is linked with the changes experienced by the monetary regime, to those occurring in crisis management by the central bank and to the transformations experienced by the banking sector.

Two main results are shown. First, in a context of increasing firms' failures, the variations of the bankruptcy rate during crises became much smoother over the course of the century. Before the 1860s, any financial turmoil drove the business failures rate to fairly high levels, while their impact is much smaller after the 1870s. A second result emerges from the comparison of the pattern of the de-trended bankruptcy rate when various filtering methods are used. It is shown that, from the 1830s up to the end of the 1850s, the rate of business failures increased at least a couple of years before the crisis hit the economy. Hence, everything happened as if the central bank disregarded the increases of the bankruptcy rate in setting up its monetary policy. Interestingly the growth rate of this period is characterized by historians as one of the fastest of the nineteenth century. This suggests that, during this period, the central bank accommodated the striving economy up to the point at which the stability of the monetary system was endangered by a low liquidity of the central bank (measured by the banknotes to metallic reserves ratio). Indeed qualitative accounts of the policy of monetary authorities show that the Banque de France: 1) was then committed to a stable interest rate policy, and 2) chose to alter it only if the metallic reserves hit the floor, thus endangering gold and silver parity.

Matthias Morys (York) & **Martin Ivanov** (Bulgarian Academy of Sciences)

Business cycles in south-east Europe, 1870-2000

This paper constructs business cycle indices for the South-East European (SEE) countries from 1870 to 2000 in order to address two questions: to what extent has there been a common SEE business cycle, and to what extent has there been synchronization of business cycles with England, France and Germany? We first explain why a construction of business cycle indices based on Common Dynamic Factor Analysis (CDFA) is preferable to one based on historical national accounts. We find that business cycle integration, both within SEE and vis-à-vis the core economies, did not occur pre-First World War but did happen in the interwar period.

Business cycle integration continued during the Cold War period even though the SEE countries found themselves on opposite sides of the iron curtain.

Despite recent contributions for Austria-Hungary (Schulze 2000, Schulze 2008) and Bulgaria (Ivanov & Tooze 2007), our knowledge of GDP for the SEE countries remains poor. This paper takes a different approach in order to construct GDP and, in turn, business cycle indices for five SEE countries which combined accounts for approximately 90 per cent of SEE GDP: Austria-Hungary, Bulgaria, Greece, Romania and Serbia/Yugoslavia. 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 (22 time series in our case) 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. also Ritschl & Sarferaz & Uebele 2008).

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? We find that business cycle integration, both within SEE and vis-à-vis the core economies, did not occur pre-First World War but did happen in the interwar period. Business cycle integration continued during the Cold War period even though the SEE countries found themselves on opposite sides of the iron curtain.

Martin Uebele (Münster)

Identification of international business cycles in disaggregated data: Germany, France and Great Britain, 1862-1913

Introduction

In order to correctly understand the causes of crises one has to know if downturns are of national or international nature, and which institutions are likely to foster or prevent common business cycles. History can be a good test for this. In particular, the classical gold standard (1880-1914) may provide valuable insights, because according to theory business cycles should have been quite closely correlated then. Economies were characterized by stable prices, flexible labour markets, innovative corporations and little government spending. Furthermore, stable exchange rates, high factor mobility and well-developed commodity market integration were features of that period. However, empirical evidence shows mostly the opposite (Backus and Kehoe 1992, Mumtaz, Simonelli and Surico 2009). So what is wrong, theory or evidence?

The evidence on international business cycles for the nineteenth century stems usually from historical national accounting. (An exception is A'Hearn and Woitek (2001), which is somewhat comparable to this study.) Historical output estimates have been criticized for lack of accuracy, and are rather ill-suited to reconcile theory and evidence (Uebele and Ritschl 2009). This paper uses instead a dynamic factor model. It demonstrates that cyclical fluctuations before the First World War had an international character and therefore confirms the theoretical considerations stated above about the classical gold standard.

Model and data

The basic idea of dynamic factor model (DFM) is to use all available time series at annual frequency even if they are allegedly only distantly related to the business cycle. Each series is decomposed in a general and a specific component.

$$y_{it} = \lambda_i f_t + u_{it}, \quad (1)$$

where y_{it} reflects the observation of the series i at point of time t ; f_t reflects the general component, u_{it} is the residual, and λ_i is a series-specific weight that describes how strong the factor and series i are connected.

The model assumes autoregressive processes both for the common factor and the idiosyncratic components. The estimation of this class of models can be done with maximum likelihood or with a Bayesian setup. I follow the latter approach, since it is very flexible and robust (see Uebele 2010).

The data are 15 real and nominal time series from 1862 to 1913 for France, Britain and Germany, respectively. They cover different sectors of the economy. For comparison purposes, real and nominal GDP are used as well.

Results

Table 1 shows correlation coefficients between different estimates of aggregates output and the price level. International correlation is lowest for real GDP, which reflects the results in the literature. Apparently, much of this is owed to the combination of faulty price data with volumes, as sections II and III of table 1 demonstrate, because the correlation of price indices alone is not higher than that of output in current prices. Since normally historical national accounting series are constructed in current prices first and then deflated, the deflation procedure can easily be blamed for artificially worsening international aggregate correlation. Finally, when calculating correlation with a dynamic factor model, more than 50 per cent of cyclical variation is shared internationally (section IV). This hints strongly at measurement error in HNA aggregates as the main source for low international business cycle correlation.

For the second step of analysis a factor common to all 45 series was estimated. Table 2 shows which series comove most with this international index. It confirms that mining and manufacturing prices and output, typically known as good cyclical indicators, are also best internationally correlated. Agriculture, in contrast, is featured much less, however (not shown).

Table 1: *Correlation Coefficients*

	I. Real GDP			II. Nominal GDP			III. Price Indices			IV. Diff. Indices		
	GB	F	G	GB	F	G	GB	F	G	GB	F	G
GB	1	-	-	1	-	-	1	-	-	1	-	-
F	0.15	1	-	0.45	1	-	0.35	1	-	0.54	1	-
G	0.32	0.33	1	0.55	0.65	1	0.42	0.44	1	0.59	0.69	-
<i>Note:</i> All variables in deviations from HP-trend ($\lambda = 6.25$).												

Table 2: *Degree of explanation of series by international factor*

	Country	Description	R ²
1	Germany	Wholesale Prices Industrial Raw Materials	0.65
2	Germany	Import Prices Pig Iron	0.61
3	France	Coal Production	0.55
4	Germany	Coal Production	0.52
5	France	Railroad Freight (ton-kilometers)	0.47
6	Germany	Bills of Exchange (value)	0.44
7	Germany	Pig Iron Production	0.40
8	Britain	Ocean Shipping (volume)	0.32
9	Britain	Bankruptcies (number)	0.30
10	Germany	Marriages (number)	0.29
<i>Note:</i> Coefficient of determination between each series and international factor in decreasing order. For series 11-45 see Uebele (2010).			

Conclusion

The tentative results in this paper show that empirical research on international business cycle correlation during the classical gold standard is still in its infancy. We should take the mounting scepticism about historical national accounts seriously, especially about business cycle dates, and try to rethink one of the major puzzles in historical business cycles from scratch, namely the virtually non-existing empirical evidence for international business cycle correlation before the First World War. The approach presented here exploits the business cycle information of single time series and aggregates them with a statistical device, dynamic factor models. The evidence for a restricted sample covering three European countries shows that a reconciliation of theory and empirics may be possible and encourage more research in that field.

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I/E British Economic Thought and Policy

Chair: **Roger Middleton** (Bristol)

Neil Rollings (Glasgow)

Business and the rise of Neoliberalism in postwar Britain

Typified by David Harvey's account in *A Brief History of Neoliberalism*, there is a conventional account of the rise of neoliberalism in Britain. Its common starting point is traced back to Hayek and the creation of the Mont Pelerin Society in the late 1940s. There Hayek emphasized the importance of the battle of ideas that had to be waged against planning and Keynesianism to save capitalism. In Britain, the conventional account suggests, these ideas were supported by a small group of individuals outside of the mainstream who coalesced around the Institute of Economic Affairs from the late 1950s. It and other think tanks gradually spread the neoliberal message with growing success in the 1970s as Keynesian policies were increasingly viewed as having failed and people began to be more open to alternative ideas. It was on this basis that Margaret Thatcher was elected to power in 1979 and began her 'revolution'. In this conventional account the role of business is muted – it is an intellectual revolution, a battle of ideas, where only maverick businessmen like Antony Fisher, the founder of the IEA, are mentioned and the only significant function of these individual businessmen is the provision of finance.

This paper questions this conventional account by highlighting the links between big business and those involved in the Mont Pelerin Society and the IEA. In particular, it focuses on three individuals as cases of those links. The first is Arthur Shenfield, the Economics Director of the Federation of British Industries (FBI) and then of the Confederation of British Industry (CBI) and later Director of the Industrial Policy Group, a group of about 20 leading businessmen who wished to promote a pro-business agenda. Shenfield was also an active and regular contributor to the Mont Pelerin Society from the early 1950s. The second case is Barry Bracewell-Milnes, who was a successor in Shenfield's position at the CBI and later became an active publisher with the IEA and other think tanks. The third case is John Jewkes, like Shenfield very active in the Mont Pelerin Society, and who, on his retirement from Oxford, replaced Shenfield at the Industrial Policy Group. These individuals were appointed by leading businessmen, worked closely with them and advised them, suggesting that sections of British business remained unconvinced by the Keynesian postwar settlement throughout the postwar period and that the neoliberal message which became prominent in the 1970s was not divorced from the mainstream in the way it has been common to suggest.

Jim Tomlinson (Dundee)

Popular understanding of the economy: British government and inflation in the 1970s

Managing popular understanding of the economy has been integral to the managed economy of the post-1945 years.³⁷² Alongside manipulating the 'levers' of economic management to achieve desired economic outcomes, governments have sought to instil an understanding of economic issues in order that popular responses are compatible with governmental designs, and that the electorate responds well to government approaches and policies. The political necessity to shape how the electorate understand economic events is especially acute in times of crisis, and in the 1970s this imperative meant focusing a great deal on inflation, which reached its peace-time peak in 1975 at over 25 per cent. To try and shape popular understanding the Labour Government of the time set up a Counter Inflation Publicity Unit (CIPU), which sought to publicise in a variety of ways a narrative about the causes and effects of inflation, as well as try to gain support for the government's counter inflation policy (the

³⁷² J. Tomlinson, 'Managing the economy, managing the people: Britain c.1931-70' *Economic History Review*, 58 (2005), pp555-585; idem., 'Re-inventing the 'moral economy' in postwar Britain' *Historical Research*, forthcoming 2010.

Social Contract). Importantly, in seeking the better to shape opinion, the CIPU also did a great deal of analysis of the actual opinions of the population on inflation, using both its own resources and material from the work of other organizations. Hence, the records of the CIPU and other documents of the time allow us to examine not only how government sought to shape understanding on a key economic (and political) issue, but also offer some assessment of the actual character of that understanding as it developed in the crisis period of the mid-1970s. As well as being a compelling example of the process of ‘managing the economy, managing the people’, this case study also allows us to address broad issues about how popular understanding of the economy is shaped, and the role of government in that shaping.

Christopher Godden (Manchester)

Popular understanding of the economy: media, dependency theory and economic history, Britain 1919-39

While the intellectual history surrounding the development of British interwar economic theory has been well documented – e.g. Laidler (1999) – very little has been done to examine the wider public understanding of economic activity during this period. By focusing on this little explored subject of popular economic opinion, this paper seeks to apply media dependency theory to the study of British economic history.

In *History of Economic Analysis* (1954), Joseph Schumpeter raised the possibility of writing a history of ‘popular views of economic subjects’. This idea was related to Schumpeter’s own definition of economic thought as ‘the sum total of all the opinions and desires concerning economic subjects ... that, at any given time and place, float in the public mind’. In this definition, Schumpeter was drawing attention to the role of economic discussion and decisions which, although taking place at varying levels of sophistication, form a key element of the fabric of everyday life. Research related to the study of popular economic opinion is comparatively limited, and is chiefly associated with the work of Katona (1957), Blinder and Holtz-Eakin (1984), Walstad (1997), and Rubin (2003).

As it is clearly impossible to reconstruct interpersonal discussions relating to early twentieth-century popular economic opinion, the historian is led to consider the possible role of the media as an archive of popular economic opinions. When applied to the study of the interwar period, this draws the historian towards the study of national and local newspapers.

The use of such media sources in studying economic opinion is dependent, however, on an understanding of the relationship between the media source and its audience. Research suggests that such a relationship cannot be explained by the commonly held, direct behavioural view (the so-called ‘hypodermic needle theory’) that identifies the media as exerting a constant, direct, and powerful impact on people’s behaviour. Such arguments were popular from the early twentieth century through to the outbreak of the Second World War, but have long since been abandoned on the grounds that they significantly overstated the power relationship between the media and its audience. In contrast, Ball-Rokeach and DeFleur theory of media dependency (1976, 1989) argues that the inter-relationship between the audience, the media, and society is reflected in the extent to which the audience is dependent on media information resources at any given moment in time. Such dependency is taken to signal the degree to which the audience relies on such media information resources for support and guidance during periods of uncertainty. A heightened degree of dependency would emerge when a society is experiencing relatively high degrees of change, conflict, and uncertainty. It is assumed that, during such periods, people’s ability to understand events is undermined, thereby leading them to place a greater degree of dependency on media sources as they search for information, reassurance, and new methods of interpretation. Developing from this, Ball-Rokeach and DeFleur theory of media dependency argues that, during such periods of relative economic and social instability, material supplied by the media has the potential to influence both opinion formation and, more importantly, human behaviour. The

conditions under which Ball-Rokeach and DeFleur theory would operate can readily be located in Britain during the interwar period.

This paper will consider the possibility that the economic characteristics of the interwar period (i.e. a high degree of instability and uncertainty) enabled the media to influence economic opinion and economic behaviour. Its aim is to examine a largely unexplored part of British interwar history, as well as drawing closer connections between the disciplines of economic history and cultural history.

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I/F Big Society

Chair: **Bernard Harris** (Southampton)

Nigel Goose (Hertfordshire)

Historical geography of philanthropy

The Reports of the Charity Commissioners compiled between 1819 and 1837 (the Brougham Commission reports) are well-known historical sources. Widely used by local historians, there is to date no comprehensive quantitative analysis of the information they contain. This is probably because they are far from systematic – indeed, even disorganized – and thus are difficult to use. Less well known are the Digests of Endowed Charities, also produced by the Charity Commissioners, between 1867-8 and 1912-13, though heavily concentrated on evidence drawn from the years between 1861 and 1875. These are far more systematic, more comprehensive than the Brougham Commission reports, and give breakdowns of the amount of endowed charity dedicated to different uses. Hence it is possible to determine, for every locality in England and Wales (usually the parish or township, sometimes a chapelry, hamlet or other locale), the total gross income of all endowed charities, the former income as determined by the Brougham Commission, and the amount devoted to each of the following uses: education; apprenticeship and advancement; endowments of clergy, lecturers and for sermons; church purposes; maintenance of dissenting places of worship and their ministers; education of dissenters; public uses; support of almshouses, their inmates and pensioners; distribution of articles in kind; distribution of money; and general uses of the poor. Occasionally the income of medical charities is listed too.

Even though by the early Victorian period endowed charity may have been giving way to ‘associational’ or ‘subscription’ charity, the sums involved remained significant, and also reflect the historical development of charitable giving over several centuries. Martin Gorsky, in his study of voluntarism in nineteenth-century Bristol, notes that ‘endowed charity has been largely ignored in the historiography of philanthropy’ (*Patterns of Philanthropy*, Woodbridge, 1999, p. 39). While W.K. Jordan might take issue with this assertion for the period 1480-1660 – given his monumental study of endowment for 10 counties across these years (*Philanthropy in England 1480-1660*, New York, 1959) it is quite true that very little systematic analysis has been conducted.

This paper will begin to put that right by offering a preliminary analysis of these data for England and Wales. Inter alia, it will highlight the considerable geographical disparity that existed from county to county, using proximate census data to calculate the amount of endowed charity available per capita, both in general and for selected charitable uses. In particular it will highlight the poverty of philanthropy over much of northern England, as well as in Wales and the county of Cornwall. While a full explanation of these results is as yet unattainable, this paper will also begin to consider what factors might have been responsible. In particular, the geographical distribution of charitable giving by endowment found here will be compared with regional variations in payments under the old poor law, as far as these are known.

Daniel Weinbren (Open)

Mutual aid and the state

For ‘a fantastic description of our values and political approach’ one of the promoters of the Conservatives’ Big Society cited a Hollywood film made on the eve of the implementation of much of the Beveridge Report and thus immediately prior to the resultant creation of the ‘corrosive habits of half a century’.³⁷³ This recourse to a 1946 cinematic version of the story

³⁷³ On the film and Republican values see David Brooks, ‘The Long Voyage Home’ *New York Times*, 4 May, 2009 http://www.nytimes.com/2009/05/05/opinion/05brooks.html?_r=3&th&emc=th accessed 10th December 2010; For the views of Steve Hilton, the then Conservative leader’s Director of Strategy,

of the shoot-out at the OK Corral suggests how the notion of a Big Society is being conceptualized in terms of a civilizing force pushing the boundaries, in this case the border between the separate spheres of the state and society. This dichotomous taxonomy, whereby the state was responsible for crowding out voluntary and charity groups, relies upon a notion of a zero sum game between the market or the economy on the one hand, and the state or government on the other. It informs Cameron's desire to shift 'from state power to people power' and the emphasis on central control and struggles that lies behind the recent government proposal to appoint 5,000 community organizers, a 'neighbourhood army' of full-time professionals who will 'identify local community leaders, bring communities together ... give communities the help they need'.³⁷⁴

However, to focus on the sniping across what has been termed a 'moving frontier' between the state and the mutual sector marginalizes the role of partnerships, reciprocity and fusion.³⁷⁵ The historiography on which this version of the Big Society is built is one which has been employed across the political parties. The Royal Arsenal Co-operative Society helped to found the Labour Party and there is considerable evidence of Labour's links to bodies based within self-help and mutual aid, notably trade unions and yet in 1999 the Labour Party leader argued that Labour 'at times forgot its own roots in self-help, friendly societies, co-operatives and voluntary organizations'. Within a few weeks a libertarian commentator described the 'long tradition of socialist opposition to voluntarism'.³⁷⁶ In office at local and at national level the Labour Party has frequently encouraged participation by those outside Whitehall and Town Halls. By the 1980s the Greater London Council was being described as 'a giant coordinating body for the voluntary sector' while a party publication in 1992 welcomed the 'interdependence of government and the voluntary sector'.³⁷⁷ By contrast, and to be highly selective, although the Conservative Party might now wish to concentrate on the reduction of public expenditure and the expansion of the non-profit sector, during the interwar years Conservatives governments maintained a system of complexity, commodification and formalization whereby friendly societies administered national insurance and worked as an adjunct of the state. These mutuals became unpopular with the civil service and many doctors and found that their members complained of being burdened by onerous paperwork. Although when in power neither the Labour Party nor the Conservatives have been uncritically supportive of mutual aid, both have engaged in building or maintaining forms of partnership between the state and mutuals. To suggest that the decline of the form is due to one party alone or to the rise of an over mighty state is to misunderstand the nature of the sector.

While legislation has had an impact on mutuals (for example tax relief on mortgage payments aided building societies, Finance Acts affected friendly societies and the 1979 Credit Union Act which permitted these bodies to be formed) a monocausal explanation of the waning of mutuals suggests that the associations themselves had little role in determining the

including his 'corrosive' comment see <http://blogs.ft.com/westminster/2010/01/the-steve-hilton-strategy-bulletins/> Bulletin No 1, 16 October. Both accessed 10 December, 2010.

³⁷⁴ Conservative Party (2010) 'Cameron unveils "Big Society" plan', press release, 31 March. Available at: http://www.conservatives.com/News/News_stories/2010/03/Plans_announced_to_help_build_a_Big_Society.aspx accessed 10 December, 2010.

³⁷⁵ The term moving frontier was popularized in 1990. See Geoffrey Finlayson, 'A Moving Frontier: Voluntarism and the State in British Social Welfare, 1911-1949', *Twentieth Century British History*, 1 2 1990, pp. 183-206. Lewis suggested that the voluntary sector 'always sought a partnership with the state' Jane Lewis, 'Reviewing the relationship between the voluntary sector and the state in the 1990s', *Voluntas*, 10, 3 pp. 255-70, p. 256' while Ware suggested that 'it is often not so much partnership between public and private institutions that has been practised but fusion' Alan Ware, 'On scale and scope and the history of the non-profit sector in the United Kingdom', *Voluntas*, 7, 1, 1996, pp.17-28, p.21.

³⁷⁶ Tony Blair, Speech at the Active Community Unit Convention, reported in *The Guardian* 22 January, 1999, <http://www.guardian.co.uk/uk/1999/jan/22/tonyblair> accessed 10 December, 2010; Robert Whelan, *Involuntary Action: how voluntary is the 'voluntary sector'?*, IEA, London 1999, p. 14.

³⁷⁷ N. Fielding 'Feeling charitable', *New Society*, 10 April, 1987; The Labour Party, *Building Bridges: Labour and the voluntary sector*, The Labour Party, London, 1992.

scale and scope of provision. Many mutual benefit societies valued social and fraternal purposes, sometimes at the expense of financial ones. Their sense of legitimacy derived from membership structures which reflect an engagement with locally-constructed, small-scale and convivial activities. Their desire to retain their traditions affected their development. For example the co-operative movement found it difficult to adjust to new ideas about consumers and other mutuals failed to develop modern management procedures.

Governments have never been the only source for the resources that can empower and enable people to have sufficient capacity and time to sustain associational culture. Indeed they have played a variety of roles. This paper aims to delineate some of the complexity of the relationship between the state and mutual aid over time and thus to illuminate the notion of the Big Society.

Kate Bradley (Kent)

The 'big society' and the National Citizen Service: young people, volunteering and engagement with charities in the twentieth century

The National Citizen Service (NCS) is central to David Cameron's 'Big Society': from 2011, young people will be engaged in a period of structured outdoor activity and volunteering over a six-week period. It aims to promote: 'a more cohesive society by mixing participants of different backgrounds; a more responsible society by supporting the transition into adulthood for young people; [and] a more engaged society by enabling young people to work together to create social action projects in their local communities'.³⁷⁸

The NCS proposal overlooks a number of historical trends in volunteering and social engagement by young people, namely that young people have long been enthusiastic volunteers. It does not take into account the historic reasons for the successes and failures of various initiatives with young people, and it is overly optimistic about the positive benefits of its predecessor and namesake, National Service. The NCS, like the 'Big Society', is based on the erroneous assumption that there was a 'golden age' of volunteering and personal service that can be re-created. This notion derives from a New Rightist interpretation of welfare in the nineteenth century, in which a decentralized state is equated with encouraging social innovation and participation. This overlooks how voluntary action in this period was often used as a means of demanding state action after frustration with charities' capacity and organization, and how Victorian social action was driven by historically specific factors, such as the exclusion of women from public life. The NCS proposal draws on this assumption but it implies that young people *need* to be empowered to undertake voluntary work, based on the further belief that 'anti-social behaviour' correlates with a decline in young people's volunteering, as opposed to broader structural issues.

This paper will explore a predecessor of the NCS concept through a case study of the London settlement movement boys' and girls' clubs, which until the 1950s was seen as a powerful means of engaging working-class youth with their citizenly duties. The settlements were founded from the 1880s as a means of bringing middle- and upper-middle class young people to the poorer areas of towns and cities to live and to undertake voluntary work. The settlements intended to broaden the outlooks and experiences of these more privileged young people, but they certainly also aimed to engage their working-class neighbours in their work. A major area of settlement work concerned children and young people, from infant welfare services and support for disabled children, through country holidays for the young poor to the running of youth clubs. Young people were very important to settlers – and indeed many other varieties of social reformers – because they were the parents, workers and citizens of the future and needed to be educated for these future roles.³⁷⁹

³⁷⁸ Cabinet Office, *National Citizen Service* Press Release, [Internet site] Available <http://www.cabinetoffice.gov.uk/newsroom/news_releases/2010/100722-citizenservice/national-citizen-service.aspx>. (2010). Accessed 26 July 2010.

³⁷⁹ A typical example of this view can be seen in Basil L.Q. Henriques, *Club Leadership* (London: Humphrey

Whilst the main emphasis in much of the literature on settlements has focused on the settlers themselves,³⁸⁰ we should not overlook this question of the settlements' desire to impact positively on the lives of working-class children and young people, and how this can act as an historical comparison to the NCS project. Settlement youth work provides a compelling example of how youth work activities have fared over time. This paper will use settlements as a means of accessing a number of dimensions of youth work. It will look at the reasons why working-class teenagers used these clubs, the extent to which young people of different backgrounds mixed with each other, the encouragement of local youth volunteering within or beyond the club, success in the building of 'character' and techniques for dealing with the 'unclubbable'. The settlements chime with many elements of the Conservatives' policy around the 'Big Society', and certainly around ideas of building social cohesion through bringing young people of different backgrounds together. However, as this paper will demonstrate, much settlement youth work succeeded not because it necessarily brought people together, but because it appealed to a sense of locality and community, and created space for the young people to be themselves.

This paper will consider the ways in which this case study and other grounded historical examples can be used to form an effective counter-argument to policies rooted in a particular understanding of the history of welfare.

Andrew Morris (Union College)

From the voluntary sector to the nonprofit sector: charities confront public contracting in the United States

The manifesto of the 'Big Society' places the outsourcing of public sector services at the heart of its programme, and identifies charities and voluntary agencies as key alternatives for the delivery of public services.³⁸¹ Since the 'Big Society' is based in part on evidence drawn from the United States, it is not inappropriate to point out that these are policy proposals that echo strongly the rhetoric of Ronald Reagan's attacks on public services in the United States in the 1980s, as well as George H.W. Bush's celebration of the virtues of charities in his 'Thousand Points of Light' programme.³⁸² Missing from Reagan and Bush's proposals, and seemingly now from advocates of the 'Big Society', is a sense of the impact of these proposals on the institutions meant to carry the weight of social policy. Scholars in the US in the 1980s demonstrated that, rather than encouraging voluntary action, scaling back on public programmes would undermine and stress charities, since many depended directly or indirectly on public subsidy or contracts.³⁸³ But that episode came in the context of a broadening involvement of the voluntary and nonprofit sector in the provision of public social services that had been accelerating since the 1960s, and that was initiated with a similar lack of reflection of the impact of such policies on the voluntary sector. This paper explores the calculations made by voluntary agencies in choosing whether or not to participate in an array of contracting possibilities offered by the federal government in the 1960s.

Milford, 1933). Passim. Also Anna Davin, 'Imperialism and Motherhood,' *History Workshop Journal* 5, no. 1 (1978).

³⁸⁰ See, for example, Seth Koven, *Slumming: Sexual and Social Politics in Victorian London* (Princeton: Princeton University Press, 2005); Martha Vicinus, *Independent Women: Work and Community for Single Women, 1850 - 1920* (London: Virago, 1985); Nigel Scotland, *Squires in the Slums: Settlements and Mission Settlements in Late Victorian Britain* (London: I.B. Tauris, 2007).

³⁸¹ *Big Society, Not Big Government: Building a Big Society*, p. 1, http://www.conservatives.com/News/News_stories/2010/05/~media/Files/Downloadable%20Files/Building-a-Big-Society.ashx

³⁸² Howell Raines, 'President is Firm on Welfare Cuts,' *New York Times*, Oct. 6, 1981; George H. W. Bush, 'Inaugural Address,' Jan. 20, 1989, <http://www.presidency.ucsb.edu/ws/index.php?pid=16610>

³⁸³ Lester M. Salamon with Alan J. Abramson, 'The Federal Government and the Nonprofit Sector: Implications of the Reagan Budget Proposals: a Study for Independent Sector, the 501(c)(3) Group, and the National Society of Fund Raising Executives' (Washington, D.C. : The Institute, 1981).

In the midst of an acrimonious debate over welfare policy changes in 1967, the United States Congress modified the Social Security Act to allow public assistance agencies to pay voluntary agencies to provide services to welfare recipients. For social welfare activists whose career and memory stretched back to the 1930s, this was an unwelcome change. Prior to the Great Depression and the New Deal, the contracting out of welfare services to private agencies had been a common practice in many American cities and an impediment to the development of comprehensive welfare programmes. The 1960s proposals for purchase of services by the government from voluntary agencies, some feared, would undermine the legitimacy and proper function of both private and public social welfare institutions and spell the end of the New Deal achievement of the primacy of the public sector for meeting broad social needs.

These policy shifts of the late 1960s, and the response from the voluntary sector, were foundational moments in the creation of the late twentieth-century American nonprofit sector. While the consequences of the intermingling of public funds and voluntary institutions have been widely examined,³⁸⁴ there has been less attention to the ways in which the voluntary sector – and especially those agencies whose work drew them near welfare clients and the poor – approached the prospect of re-ordering its relationship with the public sector. Many voluntary agencies had become deeply invested, since the 1940s, in maintaining the distinction between their work and the responsibilities of public assistance agencies. How was it that, by the 1970s, they had come to see that distinction as less critical than three decades before?

Several dynamics unfolding in the 1960s help explain this. First and foremost was the relatively slow growth of funds raised by the voluntary sector, and increased competition among charities for those funds. In order to grow, or even to maintain current programmes in light of rising costs, voluntary agencies began to look elsewhere for support. At the same time, they faced increased competition for clients and legitimacy from the expansion of publicly supported, nonprofit institutions such as community action agencies and community mental health clinics. Seeking out public money themselves was one strategy that leaders among voluntary agencies saw as a way of holding on to their area of service, and they were encouraged, and at times forced, by fundraising institutions in the voluntary sector to avail themselves of these resources. And finally, federal officials signalled that they no longer valued a strict separation of public and private so dearly; moreover, many of the services to be financed (such as vocational training) were seen to be adding to the overall scope of welfare, rather than as a reduction of the public footprint. While those who ran and worked in voluntary agencies often viewed the re-engagement with public welfare with some trepidation, by the early 1970s they believed it was unavoidable. Moreover, their forays into contracting with public agencies suggested that it would not come at the cost of their voluntary character. However, the increasingly blurred boundaries would later make it possible for conservative politicians such as Reagan and Bush to overstate the capacity of the nonprofit sector to meet social needs on its own.

³⁸⁴ Michael Lipsky and Steven Rathgeb Smith, 'Nonprofit Organizations, Government, and the Welfare State,' *Political Science Quarterly* 104 (Winter 1988-89): 625-48.

II/A Medieval Trade and Agriculture

Chair: **Margaret Yates** (Reading)

Philip Slavin (McGill)

Fodder and fodder resources in late medieval English economy, c.1250-1450

The proposed paper looks at the role and place of fodder and fodder resources in late medieval England. To a large degree, it may be argued, that fodder was one of the most important backbones of late medieval economy, which was much dependant on healthy animals, to ensure steady supply of diet for humans. Notwithstanding its obvious importance, however, the topic has not attracted much scholarly attention, with a sole exception of John Langdon's work on oxen and horses.

The paper will address the following issues and questions: How important were fodder resources in the dynamic agrarian (organic) economy of the late middle ages? What were the (estimated) required quantities of fodder supplies, to maintain the animal population on both the demesne and the tenancy? What was the structure of animal diet, and what kinds of fodder were available to different animal groups? What was a relative contribution of each kind of feed (namely, oats, legumes, straw, hay and pasturage)? Where did all the fodder come from? What do we know about the trade in fodder? Did fodder prices fluctuate similarly to those of grains, or did they march at their own pace? Were there any changes in annual fodder consumption patterns?

The last question is obviously related to a wider economic and bio-ecological context of the shifting late medieval environment. The fourteenth and fifteenth centuries were a period of profound socio-economic and environmental changes. In particular, two developments are relevant for the discussion. First, climate cooling, starting around c.1290 and perhaps marking the commencement of the so-called 'Little Ice Age', meant the reduction of the grazing season by about one month (with, approximately, half of April and half of September, gone), chiefly in the northern counties and beyond. Also, some years exhibited extreme weather, being especially cold or wet (such as the notorious years of 1314-6, 1348-51 and 1437-41). How profound was the impact of these long- and short-term climatic changes on the fodder resources, and, consequently, on animal diet and health? Second, the period under study marks a gradual (but relative) shift from agro-pastoralism to pastoralism, chiefly in the post-Black Death decades. According to the Postan Thesis (now somewhat outdated), the demographic growth of the pre-Black Death period, meant the augmentation of the arable acreage, at the expense of the available pasturage, leading to the reduction of the grazing resources. The post-1350 period, on the other hand, is characterized by the relative conversion to the pastoral form of husbandry, with the grazing sector expanding. But was it indeed the case? This assertion will also be tested.

The research is based on a vast corpus of primary archival material, consisting of over 10,000 manorial accounts and Inquisitions Post Mortem (=IPMs), collected, digitized and tabulated by me over the last six years. The accounts and the IPMs cover all of England and parts of Wales (esp. Monmouthshire). This broad geographic and chronological coverage shall allow a firm and comprehensive reconstruction of the picture.

Jeremy Edwards & Sheilagh Ogilvie (Cambridge)

What lessons can we draw from the Champagne Fairs?

The Champagne fairs were a cycle of periodic trade fairs held annually from the twelfth century onwards in four towns in the county of Champagne, which was effectively a sovereign polity until its annexation to France in 1285. Each fair lasted for about six weeks, followed by a break for merchants to move on to the next fair, so the Champagne fair-cycle constituted an almost permanent market throughout the year, a notable advantage over most other medieval fairs. Although merchants from many countries traded many goods at the

Champagne fairs, the core business was the exchange of cloth and wool brought by Flemish and French traders for spices and luxuries brought by Italian and Provençal merchants. The Italian presence also fostered financial sophistication, and the fairs increasingly attracted international payment and exchange services. The Champagne fairs operated as the undisputed fulcrum of international exchange in Europe for much of the thirteenth century.

Their early success and international importance have made the Champagne fairs a standard-bearer of the medieval Commercial Revolution, from which scholars draw lessons about the institutional basis for impersonal exchange and long-distance trade. Historians view the Champagne fairs as central to debates about the role in medieval trade of geography, industry, monetary factors, shipping, business organization, warfare, and taxation. Economists draw lessons from the Champagne fairs for modern developing economies, some using the example of these fairs to urge the merits of private-order contract-enforcement and the unimportance of public legal mechanisms, others claiming that the fairs show that collective reprisals among corporative communities of businessmen can sustain impersonal exchange.

This paper offers a renewed examination of the historical evidence on these fairs and a critical assessment of their lessons for economic development. We begin by investigating the causes for the outstanding success of the Champagne fairs in attracting and mediating international trade in the century or so after 1180: the provision of commercial security, contract enforcement, infrastructure, loan guarantees, and constraints on the privileges of special interest-groups. We then explore the decline of the fairs: the debates over its timing, the evidence on its nature and degree, and the rival explanations for its causes. We use these findings to scrutinize the argument, advanced by some economists, that the Champagne fairs demonstrate that private-order contract enforcement is sufficient to support international trade and that a public legal system is not required. We also examine a second economic lesson sometimes derived from the fairs, the idea that collective reprisals between corporative groups of businessmen can support impersonal exchange in a developing economy.

We find that the medieval Champagne fairs do hold lessons for the institutional foundations of long-distance trade and impersonal exchange, but not those for which they have often been mobilized. For one thing, they provide no support for the view that international trade developed on the basis of private-order legal provision. There were no 'private judges' at the Champagne fairs. Rather, the Champagne fairs offered an effective combination of state, ecclesiastical, and municipal courts, among which foreign merchants could (and did) shop around. This system was supplemented by a dedicated fair-court, but its judges, the fair-wardens, were also princely officials. The existence of the fair-wardens' court did not prevent foreign merchants from enforcing contracts at other levels of the princely justice-system, in front of courts operated by local abbeyes, and in municipal tribunals.

Nor do the Champagne fairs support the idea that long-distance trade could develop on the basis of contract enforcement offered by collective reprisals among corporative communities of businessmen, in the absence of impartial public contract-enforcement. The role of merchant 'communities' (merchant guilds and merchant consuls) at the Champagne fairs was minimal. There is no record of merchant guilds or merchant tribunals at the Champagne fairs for the first 60 years of the fairs' operation as the major international trading centre for western Europe: the first merchant consuls (for Italian and Provençal towns) only appeared after 1245. Many important groups of merchants trading in Champagne, including key groups such as the Flemings, never had merchant guilds or merchant consuls at the fairs. And even the few groups that did have merchant consuls in later phases of the fairs' existence could only use them for internal enforcement and relied on the public legal system to enforce contracts between merchants of different communities. Collective reprisals, in the form of the 'fair-ban' imposed by the Champagne fair-wardens for violation of safe-conducts or non-enforcement of debt payments, were used in a limited way in the final phase of the fairs' ascendancy, after c.1260. But fair-bans were fully integrated into the formal legal system,

their enforcement relied on state coercion, and the few merchant ‘communities’ at the fairs played no role in initiating or implementing them.

What the Champagne fairs do show is that the policies and actions undertaken by the public authorities were crucial for impersonal exchange and international trade in medieval Europe. Between the 1180s and the 1290s, the rulers of Champagne provided security and contract enforcement to all merchants regardless of community affiliation: long-distance trade flourished and the Champagne fairs became the fulcrum of European trade. From the 1290s, as the French crown ceased to provide generalized security and contract enforcement at the fairs, and instead began to tax and constrain particular groups of merchants to serve its fiscal, military and political ends, long-distance trade deserted Champagne and moved to centres such as Bruges where public goods were more impartially provided. The Champagne fairs succeeded because the public authorities provided generalized institutional services open to all traders; the fairs declined when the regime switched to particularized institutional provision which discriminated in favour of (and against) specific groups of merchants.

Victoria Bateman (Cambridge)

Market integration and trade in the Mediterranean, 1500-1900

During the early modern period, economic leadership shifted decisively away from the Mediterranean and towards North Western Europe. Italy and Spain were in decline, and the Netherlands and England were on the rise: the level of urbanization and agricultural productivity stagnated and real wages fell in Spain and Italy, whilst in North Western Europe agricultural productivity was transformed, real wages held their ground and the level of urbanization in England rose spectacularly from 7 per cent to 29 per cent of population (Allen, 2001, 2003).

In attempting to explain this shift, economic historians have pointed towards a process of increasing trade and market integration in North Western Europe. By contrast, we are implicitly left assuming that markets and trade in the Mediterranean region simultaneously deteriorated, in part accounting for its relative economic decline. The region had supposedly lost its integrative force, being reduced to little more than a ‘mill pond’ (Tabak, 2008, p.2, 8). However, Mediterranean integration is still in need of formal investigation; the region has been relatively neglected by the literature. Using price data for Spain, Italy, France and the Ottoman region, this paper therefore uses econometric techniques to investigate Mediterranean markets in the period of changing fortunes, 1500-1900. Coefficients of variation, price gaps and speeds of adjustment are estimated using price series on a variety of products, including wheat, candles, soap and olive oil.

The findings suggest that there was little change in long-range Mediterranean market integration over the years 1500-1800; markets did not in general deteriorate in any sustained way. In addition, we find that price convergence took place between the Western Mediterranean and the North West of Europe. Furthermore, some shorter-range integration did take place in the region, including in the wheat markets of France and Italy. By the time we reach the nineteenth century, a period of dramatic improvement in market integration was taking place – akin to that seen elsewhere in the world. All of this suggests that market deterioration cannot have been responsible for the Mediterranean relative decline. The findings are consistent with the long-range European results of Özmucur and Pamuk (2007) and Bateman (2007), whilst also being consistent with the shorter-range Mediterranean results of works including Epstein (2000) and Bateman (2007).

Clearly, it could still be argued that trade – or who controls trade – had a role to play in the shifting regional fortunes. The Mediterranean region saw declining export growth of certain types of goods – grain, sugar and cloth. The shipping industry itself suffered rising timber costs and relative productivity deterioration. Northern manufactured goods, together with Baltic grain, were increasingly visible in the region – being exchanged for primary products such as currants, olive oil, salt and wine. It is, therefore, possible to make the

argument that the loss of a trading function, or increasing specialization in primary goods, precipitated decline in parts of the Mediterranean. What is arguably more important is the failed supply-side and state response to the challenge coming from the North West – seen most notably in Venice (Rapp, 1975, pp.508, 517). However, even Mediterranean cities that did see an expansion of trade – including new free port cities such as Livorno – did not experience the kind of take-off seen in the North West.

In conclusion, neither declining trade nor deteriorating markets seem sufficient to explain why the Mediterranean did not experience the kind of take-off seen in the North West of Europe. Furthermore, if deteriorating markets and trade cannot explain the decline of the Mediterranean, we may naturally wonder about the extent to which improvements in markets and trade can explain the success of North-Western Europe.

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Alexandra Sapoznik (Cambridge)

Driving factors behind medieval peasant agriculture

Agriculture was the largest and most important sector of the medieval English economy. Yet although peasants comprised the majority of the population and were responsible for the greater part of land use, surprisingly little is known about peasant cropping patterns and production strategies. Consequently, there has been an almost universal tendency to equate demesne, or landlord, agriculture, with medieval agriculture as a whole. Taking the tithes collected at Oakington, Cambridgeshire as a case study, this paper examines peasant agricultural productivity in relation to the demesne, and suggests that peasants used their lands in substantially different ways than the demesne, casting doubt on claims that the rich knowledge we have of demesne agriculture can be applied without alteration to the peasant sector. Using total output per acre of grains and legumes as the means by which the productivity of peasant and demesne lands can be measured, it is argued that peasant output per acre was significantly higher than that of the demesne, and that this was due not to higher yields per acre but to very different patterns of land use on peasant and demesne lands.

The evidence from Oakington indicates that, although it is unlikely that peasant yields per acre, were significantly higher than those of the demesne, total peasant output per acre, inclusive of fallow, was very much higher. However, when fallow land is excluded from consideration, peasant output per acre falls against that of the demesne, and this, plus the lack of evidence to suggest peasant yields per acre were higher than demesne yields, suggests that patterns of peasant land use were significantly different than those of the demesne. Furthermore, the margin by which peasant output per acre exceeded that of the demesne

fluctuated annually, suggesting that the factors encouraging high peasant output were not constant. These results can be understood in terms of the field system at Oakington and peasant fodder requirements. The three open fields at Oakington were unequal in size, one field being very much larger than the others. This had an important effect on peasant and demesne output, and both the tithe and demesne receipts decreased dramatically when this large field was left fallow. Yet although the total receipt of the tithe decreased in these years, the receipt of tithed black peas does not demonstrate the same relationship with field use. Black peas were an extremely important fodder and fertilizing crop, made all the more important by the regional scarcity of pastoral resources. In fact, further analysis demonstrates that the receipt of black peas was the single most important crop in determining level of output per acre on peasant land, and that the same is not true of the demesne. It is therefore argued from these results that peasants at Oakington used their land both more ‘intensively’ than the demesne, in that they used more of their land more of the time, and more ‘extensively’ than the demesne, preferring low-yielding crops sown expansively over large portions of their land. This was driven by the need to produce enough fodder to support the livestock needed to maintain their holdings, and was due to the very different nature of peasant and demesne resource requirements.

II/B Economic and Social Life in London's Eastern Suburb, c.1580-c.1700

Chair: **Richard M Smith** (Cambridge)

Gill Newton (Cambridge)

Trades and handy labour: occupations in London's growing eastern suburb to 1650

London's population is estimated to have doubled between 1550 and 1600, and doubled again from 1600 to 1650, a growth that was fuelled almost entirely by in-migration to the suburbs. Long before the industrial revolution was fully underway, London's suburbs, initially attractive because of their ready accessibility and lack of guild restrictions, were gearing up to become industrial powerhouses of manufacture and trade. Alongside this, we may suppose that the food- and fuel-selling, construction and the apparel trades continued to supply Londoners with the necessities for everyday life. Nonetheless, we know relatively little about what suburban Londoners *en masse* were actually doing to earn a living in this important period of intense growth, and how this may have affected their propensity to marry or bear children. This paper aims to redress that using parish records from St Botolph without Aldgate and its environs. To the east of the walled city, the parish of St Botolph Aldgate (and its enclave, Holy Trinity Minories) extended into East Smithfield, the original East End. With river frontage and docks, this was a favoured settling place of international migrants as well as the native born English immigrant, adding to the pooling of human capital.

The portion of St Botolph Aldgate closest to the city saw a doubling in the number of its households between 1602 and 1618, and there was rapid growth throughout the parish thereafter, the number of baptisms per year rising from 300 to 525 in the following 25 years. The tensions that growth and the emergence of new industry created were expressed anecdotally by the parish clerk, Francis Parke, following a 1618 survey of inhabitants. He noted the arrival of a large new and potentially burdensome class of inhabitants, who had 'neither trades nor meanes to live on, but by their handy labour', and large families to support besides.³⁸⁵ Parke goes on to list occupations typical of this group, contrasting them with a second group of incomers with more stable employment (but still troublesome because they could not or would not pay the poor rate). The employees and owner of a silk mill recently established in the parish are among his targets. In these perceived threats to the established order of parish affairs a transition from skilled trades to wage labour is clearly implied.

From 1586 to 1644, most baptisms in the parish registers give the father's occupation, and occupations are also given intermittently in the burial register. A family reconstitution of the parish will allow the investigation of not only the occupational makeup of the area, but also the demographic characteristics of its inhabitants by occupation.

Mark Latham (Institute of Historical Research)

Landlords, leases and living conditions: property management and the development of St Botolph Aldgate

The rapid and apparently unregulated growth of the capital's eastern suburbs in the early modern period was accompanied by the increased density of dwellings in such areas and a raft of related social ills. The parish of St Botolph Aldgate exemplified this process. Covering an area of almost 80 acres to the east of the city, its remarkable population growth fuelled tremendous physical changes to the area over the early modern period. In 1540, the parish was characterized by its gardens and wasteland, and housed less than 2,000 people. By 1700, however, it was densely built up and with a population approaching 20,000 people, comprised mainly of the young, poor and single, who sought cheap accommodation.

³⁸⁵ Bodleian Library, Oxford, MS Rawlinson D796b, fol. 86.

Given this rapid demographic growth, it is perhaps logical to assume that the basic model underpinning this process of increasing dwelling density is one where expanding demand for accommodation inevitably led to rising land values and encouraged rent-seeking landlords to cram ever greater numbers of dwellings on to their lands.³⁸⁶ Historians have undertaken some analysis into this link between land values and housing density in early modern London, and the numerous factors that influenced these variables.³⁸⁷ However, one glaring omission from the current corpus of work is the potential role that individual landlords and their approach to property management played in influencing the value of land and determining the number of dwellings located therein. It is the purpose of this paper to begin to address this lacuna in our current scholarship, and explore the possible influence of landlords in shaping the topographical development of St Botolph Aldgate.

In order to achieve this, the paper will firstly map land values (rack rent) and household density within the six administrative sub-districts of the parish.³⁸⁸ It will utilize existing surveys contained in Spence's research, which employed data derived from the four shillings in the pound assessments of 1693-4. Where possible, it will augment Spence's research by generating similar maps utilizing earlier assessments such as the 1678 and 1689 poll taxes.

The paper will go on to demonstrate that one of the defining topographical features of St Botolph's compared to other suburban areas – such as the West End, Southwark or the river parishes of London – is that the land within the parish was held by an unusually wide variety of owners. These included private individuals, but also institutions such as livery companies, Christ's Hospital, the parish itself, the London Bridge House and the Corporation of London. Unfortunately, private landlords left little in terms of historical documentation. However, the large institutional landowners present in the parish generated significant property records. It is through the use of such records, allied to Ogilby and Morgan's map of 1681-82, that this paper will attempt to map as extensively as possible the topography of institutional property holding within St Botolph's.

By adopting the methodology of mapping land values, dwelling density and land ownership within the parish, it is hoped that this paper will identify any significant geographical variations in these two variables and whether there exists any notable concordance between the variables and institutional landowners.

In order to fully explore the relevance of any instances of concordance that do arise, the paper will turn to more qualitative evidence generated by institutional landlords such as lease terms, lease covenants, viewing reports, and parish and committee minutes relating to their estates within the parish. From this documentation, it will be possible to ascertain the particular approach of these institutions towards the exploitation of their property assets. It will also allow the paper to elucidate whether their approach was driven solely by the profit motive, or whether a far more complex set of considerations was dictating their agenda.

Such quantitative and qualitative approaches will allow this paper to offer some suggestions as to the impact the property management policies of individual landlords could have on the value of land, the level of dwelling density and therefore, ultimately, the living standards of the residents of St Botolph Aldgate.

³⁸⁶ The development of a 'shadow market' for housing in early seventeenth-century London displays many of these features: see W. Baer, 'Housing for the lesser sort in Stuart London', *London Journal*, 33 (2008), 61-88.

³⁸⁷ In relation to St Botolph Aldgate, see for example D. Keene, 'Social and economic study of medieval London', unpublished final project report to the ESRC on the Aldgate project (1987), available in typescript from the Centre for Metropolitan History.

³⁸⁸ In the absence of reliable figures for housing for this period, Spence adopts 'housefuls' as a proxy for dwellings. This paper will adopt the same methodology. C. Spence, *London in the 1690s: a social atlas* (London, 2000).

Philip Baker (Institute of Historical Research)

Parish nurses and their clients: the state of welfare provision in St Botolph Aldgate

This paper seeks to contribute to the recent interest in the role of parish nurses in the welfare system of early modern London. Although the significance of their activities is now generally acknowledged, research to date has largely concentrated on the part played by female (and possibly even male) health-care workers in the capital's wealthier areas, such as the intramural city parishes and Westminster and the West End. This paper, by contrast, will focus on nursing provision in the extramural parish of St Botolph Aldgate in the altogether different region of London's eastern suburb, an area that has been strongly identified with amongst the poorest members of metropolitan society from at least the sixteenth century until the present day.

St Botolph's was a substantially sized London parish that experienced a rapid ten-fold increase in its population between the mid-sixteenth and late seventeenth century, by when it housed approximately 20,000 people. Taxation returns indicate that many, if not most, of its inhabitants were of little wealth and it was consistently rated among the poorest of the city's parishes. Unsurprisingly, it raised only small amounts through the local poor rate and was heavily reliant upon the rates-in-aid that the capital's wealthier parishes gave to their poorer neighbours as poor relief assistance. Against this backdrop of demographic and social transformation, St Botolph's authorities found themselves charged with the care of ever-increasing numbers of the poor, the sick, the young and the elderly, and the paper will consider the institutional response to the need for greater local welfare provision and the development of a small but nonetheless identifiable network of parish nurses. These women were clearly paid by the local authorities to offer rather more than simple food and lodging. However, the paper will also consider the evidence for the existence of 'private' nursing establishments within St Botolph's, which seemingly operated outside the parish network and whose patients, with a variety of ailments, were drawn from across the city.

There exists an abundantly rich series of source material for St Botolph's from which it is possible to investigate the role performed by its parish nurses and even, in some instances, to reconstruct in some detail the biographies of both the nurses and those they cared for. This includes detailed parish registers; parish clerks' memoranda books; churchwardens' accounts; and a separate and highly informative volume of churchwardens' poor accounts. Drawing on these and other sources, the paper will investigate the type of women who became parish nurses, exploring factors such as their age (where possible), marital status, social standing and, occasionally, even the properties in which they lived. It was here, presumably, that they undertook at least some of their caring, though there is also evidence of nurses tending clients in their own homes and even of them being paid for passing on patients to neighbouring parishes. The paper will also consider the reasons why, and at what point in the life-cycle, women first became health-care workers. As would be expected, widows and the aged figure prominently amongst those involved, but there is some evidence for the involvement of younger married women too. Other important factors to be addressed include the actual scale of individual's nursing enterprises, if they were indeed working on their own, and the amount of income their care-work generated.

Some of St Botolph's nurses were long-time residents of the parish, whose 'caring careers' can be traced over a number of decades, and many of these women, like the individuals they looked after, were poor and in receipt of pensions. This also raises the important question of whether local women took on the role of health-carer on an entirely voluntary basis, or whether it was part of a reciprocal relationship with the parish authorities which also saw them receive other forms of financial relief. The paper will also examine the types of people St Botolph's nurses cared for (which clearly included adults as well as children), and the range of illnesses they attempted to treat; again, these women were not simply (or, at least, not only) acting as midwives or wet-nurses. The richness of the available evidence also provides an invaluable insight into what local parishioners thought about the

nurses and their operations, and how they reacted to their activities, which might often bring undesirable individuals into the midst of their community. Finally, the paper will compare and contrast its findings with those from other areas of the capital in order to evaluate the importance of the parish nurse to local welfare provision within early modern London.

II/C Work and Authority in Eighteenth- and Nineteenth-Century Britain

Chair: **Francesca Carnevali** (Birmingham)

The papers proposed for this session consider different aspects of the power relationships between employers and the employed during the late eighteenth and nineteenth centuries in Britain. The speakers draw on a range of sources to explore a variety of forms of employment and methods of supervision. The chief aims of the panel are to discuss the exercise of control over those under the pay of their masters and consider how employees either accepted, renegotiated or circumvented that control.

Anne Murphy (Hertfordshire)

Time and work at the Bank of England

In 1783 the Bank of England appointed a Committee of Inspection to examine the working practices of its departments and identify any failings in procedures. The Committee spent a year interviewing a wide range of servants about the nature of their work and the working environment in which they operated. Their report provides us with a comprehensive record of the various aspects of the Bank's business. It details the management of the national debt, records procedures for the discounting of bills of exchange, printing and issuance of notes, and the management of the cash and customer accounts. The report also details the Bank's security measures, staffing and management problems and outlines the measures recommended by the Committee to improve efficiency.

One striking factor that emerges from the Committee's report is the extent to which the Bank's clerks were governed by the clock. A time was appointed for their arrival and departure from work and attendance books were kept to ensure compliance. Breaks taken during the day were strictly regulated by time and required coordination with the other members of each office. Deadlines for the achievement of certain tasks were appointed within the working day, week and year and note was frequently taken of the problems that resulted when clerks could not complete tasks by the allotted time. Moreover, one of the rewards for experience and the gaining of a superior position in the Bank was the ability to quit one's place before the end of the working day, generally by three or three-thirty in the afternoon.

The Bank of England also imposed its time discipline on its customers and the investing public who went there to buy, sell and transfer shares or debt and to collect their dividends. Symbolic of this were the large clocks dominating the banking hall and positioned over the entrance to the transfer offices. In addition, specific times were allotted to the formal registration of transactions concerning the national debt and many were the complaints that occurred when clerks, because of the high levels of business, could not accommodate all customers in a timely fashion.

Historians have long debated the significance of the clock in the lives of early modern workers. Notably, E.P Thompson's famous argument that industrialization resulted in the quantification of work by time which led to a significant change in workers' relationship with the clock has been challenged on a number of counts. Yet, for the most part, debate has focused on the lives of industrial workers or other manual labourers. Working time in Britain's growing financial and service sector has been considered only incidentally with historians, such as Henry Roseveare (*The Treasury, 1660-1870*) and Barry Supple (*The Royal Exchange Assurance*), suggesting that working hours were not especially long nor the work particularly demanding. This paper will seek to challenge this view by demonstrating the length of the working day and the number of hours per week worked by clerks at an institution which was at the heart of eighteenth-century financial capitalism in Britain. It will go on to consider how the directors and senior management of the Bank used the clock to control and regulate the working day and will show that time-keeping and hours worked

played an important role in motivating instances of both praise and censure of staff. It will also show how the clerks themselves used the clock to negotiate better conditions of work, particularly couching pleas for increased pay or the employment of additional hands in terms of length of working day or inability to complete a task by the specified deadline.

Margaret Makepeace (The British Library)

The relationship between the East India Company and its London warehouse labourers, 1800-58

At the peak of its commercial activities in the early nineteenth century, the East India Company employed more than 3,000 labourers in its London warehouses, the largest single body of civilian manual workers in the metropolis at that time. Faced with the need to recruit and control such an extensive workforce, the Company developed a number of management strategies in which incentives, rewards, and benevolence were blended with disciplinary measures backed by detailed written regulations. Selection procedures filtered out any unsuitable men unwittingly put forward for labourer posts by directors exercising their patronage. A strict hierarchical management structure was put in place with closely defined rules for conduct which affected the labourers' lives outside the warehouses as well as during working hours. Discipline was reinforced by careful documentation of daily routines and by the obligation of the fit and able labourers to serve as soldiers in the Royal East India Volunteers in regiments officered by their managers. Direct employment of the labourers meant that the Company had the power to dismiss any man who was inefficient or dishonest, although a general policy of 'tempered' management ensured that miscreants were often given a second chance. The warehouse labourers were given many incentives to remain in Company service: fair cash wages distributed regularly and reliably each week; a short standard working day allowing the men to seek sources of supplementary earnings; overtime payments; and promotion opportunities for 'deserving' employees. The men also enjoyed an enlightened scheme of welfare benefits which tied them to the Company, with a contributory welfare fund, free medical care, a subsidized savings bank, and pensions for those unable to continue in work.

The 1833 Charter Act put an end to the commercial operations of the East India Company and forced the introduction of a rolling programme of redundancy for the warehouse labourers. The men lost the security and stability which they had enjoyed in their working life and were deprived of the cushion against adversity which had been provided for them by the Company. Many labourers had fully expected to hold a job with the Company until retirement or death, and the closure of the warehouses threw into sharp relief just how favourable the labourers' situation had been, with daily existence becoming much more precarious for many of the men and their families. However the Company directors believed that the Company's duty of care persisted not only with respect to the small body of labourers retained in the Military Store Department, but also to the newly expanded group of warehouse pensioners. The former Company labourers did not become merely faceless names on a pension list. Labourers' pensions were paid quarterly at the Pay Office at East India House and since those residing within 30 miles of London were expected to collect and sign for their money in person on specified days, a large group of warehouse pensioners did maintain regular personal contact with Company officials and with each other. Snippets of personal information about the men were entered as annotations in the pension registers.

By encouraging good working relationships at all levels of the warehouse hierarchy, the East India Company managers sought to create a loyal workforce in the midst of the insecure world of early nineteenth-century London. The Company chose not to rely on a fluctuating group of labourers plucked as 'anonymous labour power' from a large pool of casual workers,³⁸⁹ but instead strove to nurture a stable body of trusted employees. Yet pilfering by

³⁸⁹ Trevor Lummis, *The Labour Aristocracy, 1851-1914* (Aldershot, 1994), p. 27.

warehouse labourers was a perennial problem and prosecutions were brought at the Old Bailey by the Company to make an example of miscreants and to show the limits of the directors' tolerance towards their servants.

Although the social and managerial distance between the directors and the workforce would have been maintained at all times, the labourers and their families do not appear to have been unduly intimidated in their relations with their superiors in the Company hierarchy. They tried to exploit for their own ends the paternalistic relationship encouraged by the Company directors, using the lines of communication available to them as groups or as individuals to express grievances, to ask for pay increases or promotion, or to plead for help in distressed circumstances. Hundreds of petitions for assistance submitted by the men and their families have been preserved in the Company archives. The labourers were not afraid to appeal to the Company directors and senior officers such as the Secretary as well as to their immediate managers in the warehouses, sometimes harking back to the patronage links with the directors who had nominated them for a post.

Political economist and reformer Patrick Colquhoun believed that a careful blend of benevolence and coercion could be used to create an authoritarian, but not repressive, framework for social order.³⁹⁰ The regime established in the microcosm of the East India Company London warehouses was proof that such a concept could be successful. An intermingling of incentives and constraints was used to maintain the organizational hierarchy and to try to create a stable and committed work force. The Company succeeded in forging a largely non-confrontational relationship with its warehouse labourers, whereby the men were to a degree controlled but certainly not overawed by their managers.

Helen Doe (Exeter)

Power, authority and communications: the role of the master and the managing owner in nineteenth-century merchant shipping

The role of the shipmaster is rightly seen as one of considerable responsibility and authority. Before telegraphic communications he was in sole charge of the ship, the crew, passengers and cargo. He acted as the eyes and ears of the ship-owner, acted as agent for them and under maritime law he had considerable power, even to sell the ship and/or the cargo should circumstances dictate. But such focus on the master ignores the reality of the role of the economic owners and their representative the managing owner. Ralph Davis was one of the few historians to explore the complex relationship between the managing owner and the master of the ship. His well known summing up of the key task of the owner was 'the purchase of the right ship, the determination of what to do with it, the choice of master'. Yet this summary does not do justice to a role that increased in complexity and associated paperwork during the nineteenth century. The role of the managing owner on shore and that of the master at sea was fluid with a complicated balance between them and the various agents and authorities, all of which contributed to the success or failure of the ship-owner's investment. The roles of the managing owner and the master are considered in relation to Jeffrey Pfeffer's theory of power in relation to dependency and the strategies they adopted in order to cope with distance and the uncertainty of communications. (Jeffrey Pfeffer, *Power in Organizations*, (Massachusetts; Pitman, 1981).

³⁹⁰ A.P. Donajgradzki, 'Social Police' and the Bureaucratic Elite: A Vision of Order in the Age of Reform', in Donajgradzki, *Social Control*, pp. 51-76.

II/D Italian Economic Development Since 1861

Chair: tba

Alberto Rinaldi & Barbara Pistoresi (Modena and Reggio Emilia)

Exports, growth and causality: new evidence on Italy, 1863-2004

The role of exports as a determinant of economic growth has been widely debated in economic literature (McKinnon 1964; Kaldor 1970; Krueger 1980; Grossman and Helpman 1991). There are a number of reasons why export growth should prompt economic growth: i) It increases the aggregate demand and then real output; ii) By loosening the foreign exchange constraint, it makes easier to import inputs to meet domestic demand, and so enables output expansion; iii) It may promote the reallocation of resources from a relatively low productivity non-export sector to a high productivity export sector; higher productivity may in turn prompt output growth; iv) It may promote the diffusion of technical knowledge and enhance efficiency through international competition.

However, support for the *export-led growth* (ELG) hypothesis is not universal and some literature advocates for *growth-led exports* (GLE) or *feedback relationship* between exports and output. Thus, neoclassical trade theory states that economic growth leads to enhancement of skills and technology, with this increased efficiency creating a comparative advantage for the country that facilitates exports (Lancaster 1980; Krugman 1984). Moreover, exports may rise from the realization of economies of scale thereby enabling further cost reductions, which may foster output increase (Helpman and Krugman 1985).

Some authors (Michaelis 1977; Tyler 1981; Kavoussi 1984; Ram 1987; Greenaway and Sapsford 1994; Burney 1996) advocate for the existence of the ‘threshold effect’, that is a difference in the effect of exports on economic growth between countries above some critical level of development, usually proxied by per-capita income. The idea is that a country needs a minimum level of industrialization to trigger ELG. It is only after having gained the competitive edge and cost advantage in certain products that the more competitive firms in developing countries enter the world market in search of demand for their products. In this scenario, ELG is preceded by economic development and structural change in the economy.

The early empirical studies on the ELG hypothesis consisted mostly of OLS linear models in which a growth variable was regressed on an export variable. Given the possible simultaneity involved in such models the positive association is as compatible with the reverse causation in which growth promotes export (GLE hypothesis) as with ELG or feedback effects.

A more recent strand of literature applies various time series techniques as cointegration analysis, tests for causation and stability of the estimated relationships to avoid these potential problems with the cross-section methods (Giles and Williams, 2000). However, most of these works deal with developing nations. Studies on Western industrialized countries are scant and only a few of them deal with Italy. In particular, there are no long run interpretations or econometric tests of the relationship between Italy’s exports and economic growth.

This paper contributes to fill this gap by investigating the causal relationship between export and economic growth in Italy from 1863 to 2004 by using cointegration analysis (Johansen, and causality tests). In so doing, for the period from 1863 to 1939 we use the series of new comprehensive statistics of the Bank of Italy that is based on the very detailed official sources of Italy’s foreign trade (*Movimento commerciale del Regno d’Italia*). This series constitutes the new official statistics of Italy’s foreign trade for the period prior to the Second World War. For the period after the Second World War we instead rely on OEEC, *Foreign trade series*, and from United Nations, *UN Comtrade*.

The results suggest that in the period prior to the First World War there is evidence for GLE. For the years from 1914 and 1939 we found no cointegration between export and economic growth, while the ELG hypothesis is confirmed only for the period 1951-2004.

Thus, this paper discards the Bonelli-Cafagna (1978, 1989) view that the growth of the Italian economy in the years from Unification to the First World War was led by a long wave of growth and accumulation stimulated by an expansion of exports, particularly of agricultural goods and raw silk. We argue instead that in the 50 years prior to the First World War the weight of the exporting sector on the Italian economy was too small and did not grow fast enough to trigger ELG. Moreover, exports consisted largely of primary products that could not generate those technological spillovers capable of prompting a higher rate of innovation and more rapid growth of the whole economy. Conversely, our results are consistent with Fenoaltea's (1988) thesis that links Italy's economic growth to international capital inflows: these boosted investments in construction, infrastructure, industry, and public utilities which induced economic growth. More modern plants and higher production capacity in turn prompted Italy's capacity to export.

The 1951-2004 years saw an impressive and long-lasting growth of Italian real exports and on their weight on national output which enabled to set in motion ELG. The opening-up of European markets as a consequence of the creation of the EEC and, since the 1970s, the possibility of resorting to recursive devaluations of the Italian lira were among the major factors that fostered the expansion of Italian exports. These became increasingly specialized in the durables of the 'Made in Italy' and in the machinery to make them. In some way, the ELG of the 'Made in Italy' sector led the growth of the machinery sector that at a certain point in time also became an exporting sector. As the latter was a capital goods industry it could more easily generate those technological spillovers that spread throughout the economy and translated in a higher overall economic growth.

Lastly, our results are coherent with the 'threshold effect' thesis. In the period 1863-1913 Italy was still a mainly agricultural country that had not achieved a stage of development – or level of industrialization – high enough to engender ELG. Conversely, the situation had reversed in the 1951-2004 period. A structural change had occurred: the manufacturing sector accounted for a much larger share of the working population and GDP than before the First World War and was now able to trigger ELG.

Paolo di Martino (Birmingham) & **Michelangelo Vasta** (University of Siena)

Law, firms' governance and economic performance in post-1945 Italy

The relationship between legal institutions, firms' governance, and their development and growth is at the centre of a lively debate in economics and economic history.

The aim of this paper is to analyse these aspects in post-Second World War Italy. Italy was a country in which the use of informal mechanisms in the organization of economic activity seems to have been the rule rather than the exception, including in the area of bankruptcy and insolvency. On the other hand Italy was characterized by relatively small-sized limited-liability companies, very high turnover in the firms' populations, inability to implement innovative technologies and managerial techniques, and strong specialization in traditional sectors.

The aim of the paper is to analyse whether or not (and to what extent) these two general aspects are linked. In particular we investigate whether firms' small size and high turnover can be seen as the result of the exploitation of insolvency laws and practices by majority creditors, specifically industrial families.

As our previous study shows (Di Martino-Vasta, EHR, 2010), in Italy the use of formal procedures was very rare and informal friendly liquidation was most of the time the alternative solution. This paper thus investigates the hypothesis that such procedures were used disproportionately and earlier than needed in the attempt to liquidate old concerns and re-forming new ones formally different but, de facto, owned and managed by the same group of people. By doing so majority creditors retained power and avoided dealing with the rights of workers and minority creditors, but failed to support the growth and development of firms. Also we analyse the way in which formal procedures were managed, testing the hypothesis

that official receivers, who were chosen among members of a highly-selected group of business consultants known as *dottori commercialisti*, might have operated in the interests of main creditors, and at the detriment of firms, by allowing asset-stripping operations before or during insolvency procedures.

The paper is based on records of decisions made by various *corti di cassazione* (the highest court in Italy, with both penal and civil jurisdiction) between 1945 and 1980.

Although conclusions are still provisional, evidence has emerged that the use and misuse of insolvency law and procedures was a key element in the strategy of majority creditors to keep a solid hold on firms even when this meant a cost in terms of lack of their development.

Carlo Ciccarelli & Tommaso Proietti (Rome 'Tor Vergata')

Provincial aspects of industrial growth in post-unification Italy: a sectoral analysis

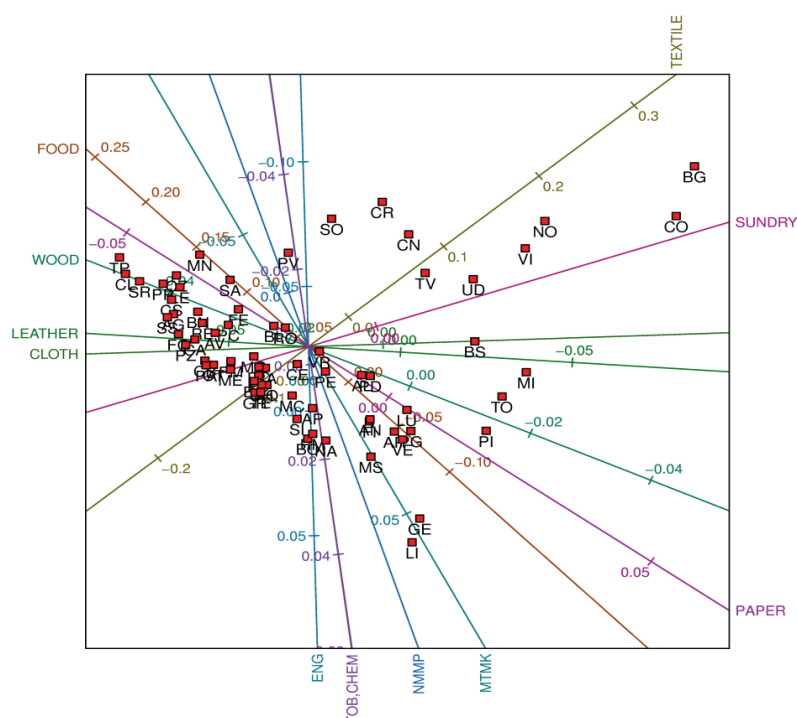
A first set of homogeneous diachronic valued added estimates for the 69 Italian provinces have been recently presented.³⁹¹

The estimates, for the census years (1871, 1881, 1901, 1911), refer to value added at 1911 prices for the extractive, the construction, the utilities industries and the 12 manufacturing sectors (foodstuffs, tobacco, textiles, clothing, leather, wood, metalmaking, engineering, non-metallic mineral products, chemicals, paper and printing, and manufacturing n.e.c.).

This work uses the above estimates to take a closer look at industrial specialization at the provincial level. The structure of provincial specialization within manufacturing is investigated by means of standard *static biplots*, graphical tools that can be thought as the multivariate analogue of ordinary scatter plot.

Figure 1 provides an example for the year 1911. The 12 manufacturing sectors are represented along the sides of the box; their labels give the direction of specialization; the closer the labels to each other the higher the correlation between sectors.

Figure 1: *Static specialization biplot, 1911*



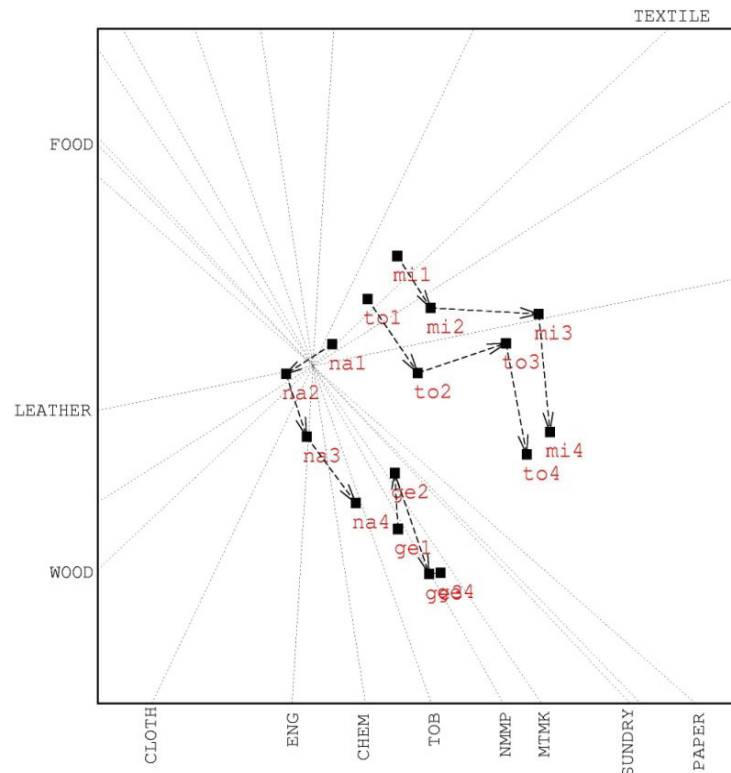
Note: Axes represent sectors, labelled squares the provinces.

³⁹¹ C. Ciccarelli and S. Fenoaltea, 'Through the Magnifying Glass: Provincial Aspects of Industrial Growth in Post-Unification Italy', *Economic History Working Papers*, no. 4, 2010, Bank of Italy.

Provinces close to the left side of the biplot are typically specialized in the traditional sectors (foodstuffs, wood, leather, and clothing), tied to consumption; those close to the bottom side of the biplot are specialized in the “high-tech” sectors (from engineering and chemical, to metalmaking), tied to investment. The textile sector is separately identified. Overall, provinces emerging from the mass are typically located in the North: they range from the rural area of the Po valley – Mantua (MN), Pavia (PV), Cremona (CR) – to some subalpine provinces – Bergamo (BG) and Como (CO) – with the exact position depending on the relative weight of the foodstuffs and textile sectors. Going clockwise one finds, as expected, the provinces forming the core of the “industrial triangle” – Milan (MI), Turin (TO), and Genoa (GE) – with the exact position depending on the relative weight of the textile and metalmaking-to-engineering sectors. Southern provinces tend to cluster on the left side of the biplot and are aligned along the foodstuffs axis, ranging from Trapani (TP) and Caltanissetta (CL) to Naples (NA), the leading industrial city of the South.

The evolution of provincial specialization over time is also considered by means of *dynamic biplots*, considering the evolution of provincial specialization from 1871 to 1911. Figure 2 gives an insight for selected provinces: Milan, Turin, and Genoa, and Naples.

Figure 2: *Dynamic specialization biplot, 1871-1911*



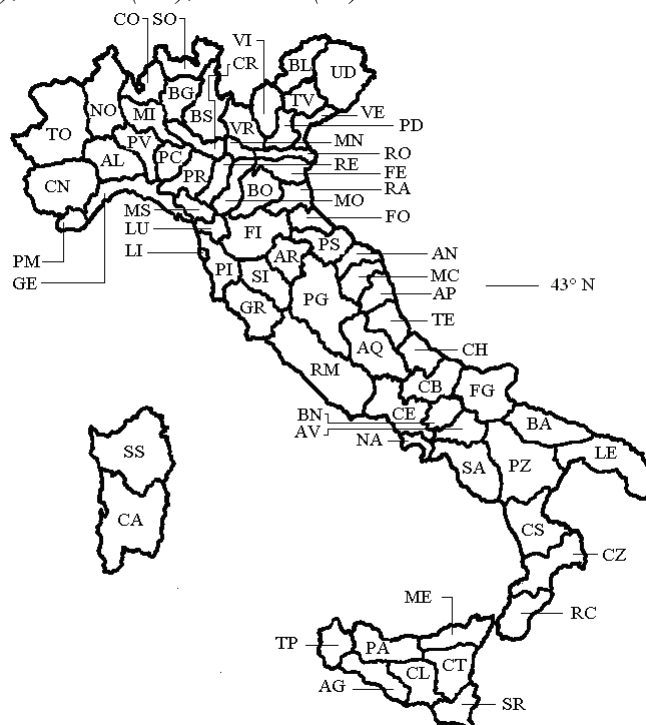
Notes: The label “mi1” denotes the province of Milan (mi) in 1871, “mi2” in 1881, “mi3” in 1901, “mi4” in 1911. Similarly for Turin (to), Genoa (ge), and Naples (na).

The high-tech vocation of Genoa dates back at least to 1871; its non-monotonic path, is largely due to the ship-building crises of the 1870s.³⁹² Turin and Milan share a similar specialization trajectory: they both appear attracted by the (protected) textile sector during the 1880s and part of the engineering boom of the pre-War decade.

³⁹² C. Ciccarelli and S. Fenoaltea, ‘Shipbuilding in Italy, 1861-1913: the Burden of the Evidence.’ *Historical Social Research* 34 (2009), pp. 333-73.

Appendix: Italy's provinces

PIEDMONT: *Alessandria (AL), Cuneo (CN), Novara (NO), Turin (TO)*
LIGURIA: *Genoa (GE), Porto Maurizio (PM)*
LOMBARDY: *Bergamo (BG), Brescia (BS), Como (CO), Cremona (CR), Mantua (MN), Milan (MI), Pavia (PV), Sondrio (SO)*
VENETIA: *Belluno (BL), Padua (PD), Rovigo (RO), Treviso (TV), Udine (UD), Venice (VE), Verona (VR), Vicenza (VI)*



EMILIA: *Bologna (BO), Ferrara (FE), Forlì (FO), Modena (MO), Parma (PR), Piacenza (PC), Ravenna (RA), Reggio Emilia (RE)*
TUSCANY: *Arezzo (AR), Florence (FI), Grosseto (GR), Leghorn (LI), Lucca (LU), Massa Carrara (MS), Pisa (PI), Siena (SI)*
MARCHES: *Ancona (AN), Ascoli Piceno (AP), Macerata (MC), Pesaro (PE)*
UMBRIA: *Perugia (PG)*
LATIUM: *Roma (RM)*
ABRUZZI: *Aquila (AQ), Campobasso (CB), Chieti (CH), Teramo (TE)*
CAMPANIA: *Avellino (AV), Benevento (BN), Caserta (CE), Naples (NA), Salerno (SA)*
APULIA: *Bari (BA), Foggia (FG), Lecce (LE)*
BASILICATA: *Potenza (PZ)*
CALABRIA: *Catanzaro (CZ), Cosenza (CS), Reggio Calabria (RC)*
SICILY: *Caltanissetta (CL), Catania (CT), Girgenti (AG), Messina (ME), Palermo (PA), Syracuse (SR), Trapani (TP)*
SARDINIA: *Cagliari (CA), Sassari (SS)*

Note: The name of each region, in bold, is followed by the name (and tag) of its provinces.

Fabio Lavista (Bocconi) & **Giandomenico Piluso** (Siena)

Sectoral specialization and firm size in Italy before and after stagflation: IRI, 1962-91

The sectoral specialization and average size of Italian firms evolved significantly after stagflation. From the early 1980s on, in fact, the average firm size decreased and industrial sectors started to drift ever more away from the technological frontier, reversing a catching up process experienced in the previous decades. Firms' downsizing and the shift to less technological-intensive sectors appear largely associated to the early decline of the state-owned enterprise. In particular, from the late 1970s the major state-owned conglomerate, IRI, entered a long phase of turmoil up to the privatization wave in the 1990s. In the 1950s-70s the IRI group had operated in all the capital-intensive sectors – such as steel, ship-building, automotive, telecommunications, and electronics – fostering significant productivity improvements via large investments. In the 1970s IRI bailed out a number of failing private firms by enlarging abnormally its perimeter as a share of total assets over the private component. At the same time, as a consequence of these bail-outs, IRI began performing poorly. Given the relative weight of IRI over the Italian manufacturing system its falling performance had a relevant impact on the whole industrial sector.

Centring upon a sample of the top 200 industrial firms (ranked by total assets), the paper provides a quantitative assessment of the IRI group by sectors over the Italian manufacturing system as a whole, from the early 1960s to the late 1980s, measuring how much, and explaining why, its weight changed over time. Thus, relying on archival sources, the paper presents empirical evidence of the widening process of IRI during the stagflation juncture, when bail-outs became rampant. Although it had intervened quite successfully in reorganizing firms in the past, since the 1970s IRI appeared increasingly unable to restructure firms coping effectively with organizational inefficiencies and obsolete technologies. We argue that such a poor-performance depended on a financial structure abnormally deteriorated that entailed a tough liquidity constraint. Indeed, high debts and low equity capital restrained its very ability to invest and reorganize firms by reducing efficiency and technology gaps. The liquidity constraint was even stronger as macroeconomic policies forced IRI to preserve employment levels by investing in unrelated sectors or localizing in unfitting areas. High debts and falling profitability led to the crisis of IRI. As the IRI group overlapped largely with the highest size brackets and the more capital- and technology-intensive sectors, such a crisis had a wider impact on the Italian industrial system. As a result, we argue that the decline of the largest state-owned conglomerate coincided with a major shift within the whole manufacturing sector, which adjusted to a changing environment by giving room to small and medium sized enterprises operating in less capital- and technology-intensive areas.

II/E Living Standards

Chair: **Peter Kirby** (Manchester)

Stephen Thompson (Cambridge)

Measuring the national wealth in late eighteenth-century Britain

Early modern economic historians continue to be fascinated and perplexed in equal measure by the national income and social structural estimates of late seventeenth-century political arithmetic (for two recent discussions see Slack 2004; Arkell 2006). For Richard Stone, William Petty's pioneering national accounts – which implied a national income of £40 million in 1665 – represent a 'landmark in economic history' (Stone 1997:30). By contrast, the income estimates of a century later, generated in connection with William Pitt the Younger's income tax proposal, no longer command significant scholarly interest.

Having been superseded by Deane and Cole (1962), whose estimates have in turn been challenged and revised by Crafts (1985) and Broadberry *et al* (2010), the national income estimates of William Pitt (£125 million), Henry Beeke (£209-£217 million), Benjamin Bell (£236-£243 million), and Patrick Colquhoun (£222 million) are now largely redundant from the point of view of historical national accounting, and indeed economic history more generally. It is arguably only Colquhoun's updated version of Gregory King's social table that has attracted any sustained analysis in the last three decades (Lindert and Williamson, 1983). The aim of this paper is not to rehabilitate these commentators' calculations, but rather to assess the extent to which their estimates stemmed from similar methodological and theoretical assumptions concerning the measurement of national income. I aim to shed new light on how contemporaries conceptualized the national economy.

Whereas Slack (2004:625) has argued that in the late seventeenth century '[William] Petty set the numerical parameters as well as the methodology for his successor [Gregory King]', I find that the late eighteenth and early nineteenth-century heirs to the Petty-King tradition displayed a much greater degree of numerical and methodological autonomy. To account for this I examine the contrasting policy objectives of the commentators under consideration, drawing attention to the significance of Pitt's decision to exempt labourers' incomes from his new income tax. Although Pitt shared with Petty and King a desire to mobilize a greater share of national income for military ends, he differed on the means. Rather than increase excise duties, as Petty and King had consistently advocated, Pitt sought to make the tax burden fall more heavily on the wealth of landed, mercantile and professional classes in order to make the distribution of taxes more equal. Pitt's decision to exempt wages from his new tax provoked a flurry of other, more comprehensive, national income estimates, one purpose of which was to cast doubt on the reliability of Pitt's revenue forecasts.

At one level, then, the alternative estimates of national income produced by Benjamin Bell and Henry Beeke in particular can be understood as deliberate interventions designed to influence (and change) fiscal policy. At another level, however, Bell and Beeke made profoundly different assumptions about the size of the British economy's land and labour inputs to arrive at their estimates. I explore these differences and show how sensitive estimates of national income were to what were little more than conjectures about Britain's recent demographic history. Thus while in some respects political arithmetic – or the art of expressing oneself 'in Terms of *Number, Weight, or Measure*' (Petty 1690) – had shed some of its methodological uniformity by the late eighteenth century, in other respects, it remained severely hampered by the failure of central government to provide better data on the basic parameters of economic activity. Seen in this light, late eighteenth-century efforts to measure national wealth thus provide one important, and hitherto neglected, context for understanding the origins of the first British census of 1801.

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John Hatcher (Cambridge)

Unreal wages: problems with long-run standards of living and the 'golden age' of the fifteenth century

This paper challenges the centuries-old and disciplines-wide consensus that the living standards of ordinary Englishmen and women in the late middle ages were stupendously high. It also argues that across the preindustrial centuries as a whole conventional methods of calculating real wages, using day wage rates and the prices of baskets of consumables, are an inadequate means of measuring the living standards of the landless and a misleading guide to those of the population at large.

While there can be no doubt that the real wages of the lower strata of society rose very substantially between the crowded and crisis-torn early fourteenth century and the spacious later fifteenth century, the towering late medieval peak that dominates all long-term representations is a gross exaggeration and does not represent the course that the living standards of either the landless or the landholding majority actually followed. Discontinuity of employment and lower average wage levels outside of peak times meant that the real wages of the landless and near landless did not soar nearly as high as it has long been accustomed to believe. It is also misguided to take the rate of improvement of the real incomes of these strata as representative of the experience of the great majority, whose fortunes improved far less dramatically. Preliminary modelling indicates that the real incomes of the substantial body of middling peasant households, with holdings of roughly subsistence size, remained relatively stable in the face of dramatic changes in the prices of labour and farm produce, while those with large farms declined. The golden age of the fifteenth century is in need of a severe dose of debasement.

From a broader perspective, it is evident that the long-term course of the real incomes of whole societies cannot be represented by measuring those of any particular group, since shifts in key indices such as population, prices and wages affected different groups in markedly different and often contrary ways. It is equally true that the huge shifts that took place over time in the distribution of land and in occupational structure could be at least as important as fluctuations in wage rates and the cost of subsistence. As the population plunged in the later middle ages the average number of acres per head rose sharply, the proportion of landless and near landless fell steeply and the proportion that farming holdings of subsistence-size and somewhat higher increased significantly. Thus, if reliable national estimates are to be provided not only do the rising real incomes of labourers and smallholders have to be set against the relatively inflexible incomes of subsistence farmers and the falling incomes of large farmers, the changing proportions in each category have to be taken into account.

Such divergent movements in real incomes were not, of course, restricted to the later middle ages. Thus, whereas all the conventional indices signal that real wages plunged precipitously for most of the sixteenth and early seventeenth centuries, rising agricultural prices and the falling real cost of labour meant that very many farmers and husbandmen were far better off than their predecessors had been despite the substantially higher rents that they paid. William Harrison explained these conflicting movements with great clarity in the mid-1570s, and he also helpfully related the rising incomes of the middling and greater sort directly to the increased consumption of the sorts of goods that feature in the progressively richer and more varied household inventories that have so perplexed historians who would only follow the rapidly deteriorating fortunes of landless adult males.

As the English economy subsequently became progressively more developed and differentiated, so the occupational structure was decisively altered and along with it the levels of incomes enjoyed by its constituent parts. The provision of robust genuinely national measures of long-term changes in real incomes will therefore necessitate estimating not only the household budgets of all significant occupational groups but the relative size of these groups. This will be a far more complex and less precise undertaking than the simple recording of wage rates and the prices of subsistence goods, but however tentative the findings they are certain to provide a more accurate measure of changes in average living standards than the crude real wages on which we have for so long placed so much reliance.

Although most of this work remains to be done, it can be predicted with some confidence that the vertiginous oscillations displayed in the conventional series based solely on estimates of the fortunes of the landless will be substantially moderated by the inclusion of the incomes of other social and occupational sectors. And, contrary to enduring notions that a cyclical Malthusian stagnation prevailed until the industrial revolution, it is also likely that across the centuries a rising trend in average real incomes will emerge.

Tommy E Murphy (Bocconi), **Robert C Allen & Eric Schneider** (Oxford)

Latin American standards of living in global perspective: a first look at some cities from colonial times to the early nineteenth century

The fact that GDP per head presents many practical problems for historical research has motivated many economic historians to explore alternative measures of welfare, most notably real wages. For more than a decade now several researchers have devoted considerable amounts of time to construct a detailed picture of the long-run evolution of real wages in Europe (e.g. van Zanden, 1999; Allen, 2001; Clark, 2005), an effort that has expanded in recent years to Asia as well (e.g. Saito, 2005; Allen et al., 2007), feeding a growing literature on well-being in comparative perspective. Latin America, however, is still largely absent in that debate. There is no lack of price histories for different cities on the continent (e.g. Garner, 1985; Macera, 1992; Johnson and Tandeter, 1999; Barba, 1999) but, more often than not, they remain isolated exercises: only rarely have these pieces of research been combined to address the evolution of the standard of living, and even less frequently have they done so in a way to make comparisons with other places in the world meaningful.

Part of a long-run project to put together a systematic database of prices and wages for the American continents, this paper takes a first look at standards of living in a series of North American and Latin American cities. From secondary sources we collected price data that – with diverse degrees of quality – covers various years between colonization and independence, and, following the methodology now familiar in the literature, we built estimations of price indexes for Buenos Aires, Bogota, Lima, Mexico, Rio de Janeiro, and Santiago de Chile exploring alternative assumptions on the characteristics of the reference basket. We use these indexes to deflate the (relatively more scarce) figures on wages for a subset of these cities, and compare the results with each other, and with the now widely known series for various European and Asian cities. We also present some new series for a few North American cities, Philadelphia and Boston, that allow us to study the different

patterns of development of Anglo-Saxon and Hispanic America. In this way, we contribute to the growing discussion on standards of living in the long-run, proposing a first benchmark for the international comparison of North American and Latin American series in the colonial period. This exercise will also help determine areas in need of further primary research and other cities in the Americas where similar series could be reconstructed.

Peter Wardley (West of England)

Arrested development? The welfare experience of British city dwellers in the century after 1840

The impact of industrialization on the standard of living of the British working class has long been a subject of keen debate (Hobsbawm: 1957; Hartwell: 1961; Williamson: 1981 and 1982; Mokyr: 1988; Feinstein: 1998). More recently, scholars have demonstrated that anthropological methods provide an additional lens through which life chances and experiences can be assessed (Tanner: 1962). Manuscript evidence, including the recorded height and weight of individuals, has been used as an index of nutritional status to shed light on human well-being and welfare over specific historical periods (Fogel: 1982; Komlos: 1985; Steckel: 1987). A number of studies have sought to illuminate the British experience in the late eighteenth and early nineteenth century (Floud and Wachter: 1982; Floud, Wachter and Gregory: 1990; Mokyr and O Grada: 1988; Nicholas and Oxley: 1993; Riggs: 1994) and Harris (1994) has investigated the experience of the interwar period as revealed by the heights of school children in a number of English urban areas.

This paper analyses a number of sources, including the records recorded by institutions, including prisons, hospitals and reform school located predominately in the Bristol region, that speak to both local and national developmental patterns and allow a comparative assessment of the experience of men and women. By taking a long-run perspective that stretches over the century after 1840 that encompasses both genders, while capturing many immigrants to the city, this paper not only reaffirms the findings of some recent scholarship but it also provides additional insights that illuminate some of the varied aspects of the fruits of industrialization as enjoyed by the British.

II/F Economic History and Business History

Chair: **David Higgins** (York)

Steven Toms (York) & **John Wilson** (Liverpool)

Mutual contributions and future prospects

In the very first edition of *Business History* T.S. Ashton described economic history as ‘the parent study’, arguing that business history’s principal role was to highlight micro-economic perspectives. Much has happened in the intervening 52 years to undermine this view. Indeed, business history would now claim to be a discipline in its own right, with flourishing academic journals, several textbooks, and a plethora of literature of both a generalist and case-study form. At the same time, it is vital not to overlook the enormous complementarities that link economic and business history, specifically for example in terms of better understanding such concepts as entrepreneurship, industrial structure, industrial relations, the impact of government policies, and the roles played by financial institutions in a modern economy. Business historians now think as much about the economic, social, political and cultural environments in which business operates as they do about business operations in their micro-economic context. Meanwhile economics and social science theory more generally has evolved new conceptual frameworks and methodological tools that allow the development of new perspectives in business and economic history. One might therefore argue that the two disciplines are now bound together much more extensively than they would appear to have been in the 1950s.

This paper therefore argues that too much divergence between economic history and business history is both undesirable and unnecessary. Such an outcome might arise for example if business history were to become too strongly subsumed within the business school research agenda, embracing sociological and cultural methodologies to the exclusion of a productive relationship with economics. A further risk would be that micro-economic theory that has become useful for firm level analysis in fields such as corporate strategy is also lost to the history agenda. At its embryonic stage business history complemented economic history as a tool of further analysing the residuals in total factor productivity models. Today it offers more than that, including dynamic theories of resource creation, sustained competitive advantage and corporate control. Economic history meanwhile provides suitable methodologies for business historians to model the performance of entrepreneurs or the consequence of managerial decisions.

To exemplify the advantages of these overlapping approaches, the paper revisits a key theme in the economic history literature from a business history perspective: the loss of British competitiveness at the corporate level and consequent economic decline from the middle of the nineteenth century onwards, referred to in shorthand as the entrepreneurial failure hypothesis. An archetypal case study, Lancashire cotton textiles, is used for the purposes of reviewing this hypothesis. It is appropriate to do this, not least because business and economic historians have neglected what had been a productive research programme two decades ago. Most of the residual work has been done by economic historians, without reference to business history approaches, leaving an important gap for business historians to fill in a way which is helpful to the economic history agenda.

The paper begins by tracing the origins of business history as a branch of economic history reviewing recent developments in business history as it has developed into a discipline in its own right. It then examines aspects of management theory that have inputted into this process, differentiating between those that are helpful to achieving a coherent programme of economic/business history research and those that are inimical. The former include the resource based view of the firm, and the related notion of dynamic capabilities, which when linked to processes of governance and corporate accountability, offer the potential to link economic theory and economic history with business history by providing a micro theory of

the operation of the firm. The paper then updates the entrepreneurial failure literature in economic and business history and re-examines the evidence on the Lancashire cotton case study using this integrating theoretical framework. In doing so it shows that there is much to be gained from potential complementarities in a future economic and business history research programme addressing this, and wider debates. In outlining these potential complementarities for future research the paper will also set out an agenda for how economic and business history can work together in providing better insights into the operation of economic forces.

Mark Casson (Reading)

Entrepreneurial failure and economic crisis: an historical perspective

This paper analyses the major UK economic crises that have occurred since the speculative bubbles of the seventeenth century. It integrates insights from economic history and business history to analyse both the general economic conditions and the specific business and financial practices that led to these crises. The analysis suggests a significant reinterpretation of the evidence – one that questions economists' conventional views.

Crises are usually considered to be financial, but historical evidence suggests that their origins are often real. These origins lie in mistaken judgements made by entrepreneurs acting under the influence of simple and misleading theories. The financial aspects of a crisis are often the consequences of a real crisis, aggregated by defaults on fixed-interest debt and the consequent dislocation of the banking system.

The evidence suggests that major crises often originated outside the UK, and involved speculative investments in overseas locations. Whilst some problems were caused by failures in government policies, failures of privately-funded schemes created the most serious problems. Furthermore, whilst some crises were caused by wars and their aftermath, many were entirely peace-time phenomena.

In a global economy real failures in host countries can destabilize the financial systems of source countries. The failure of foreign investments in one country may raise concerns that similar (hidden) failures have occurred elsewhere because of similar misjudgements, creating international panics through contagion effects.

Theories of entrepreneurship are well-equipped to explain such behaviour. They emphasize that business decision-making is framed by simple theories. Under normal conditions alternative theories co-exist and, as a result, entrepreneurs are encouraged to collect detailed information on investment projects. But when a single theory becomes dominant detailed information may be ignored and theory alone may be used as a guide to decisions. A new theory may become dominant because conventional theories have failed to explain some anomaly, and because elites can profit from it. When a reputable elite endorse an over-simplified theory, many entrepreneurs may be misled, and so mistakes can be made on a large scale.

Developing and testing such theories requires source material relating to the state of the economy, the behaviour of elites, and the attitudes of entrepreneurs, and therefore benefits from the integration of economic and business history as exemplified in this paper.

Neveen Abdelrehim (York)

Political instability and stock market reaction: the Anglo-Iranian oil nationalization, 1951

In May 1951, the Iranian government, led by Mohamed Musaddiq, nationalized the assets of the Anglo-Iranian Oil Company (AIOC, now British Petroleum). From the point of view of the AIOC and its shareholders, these events would appear to be unequivocally bad news and to represent a serious failure of corporate policy. Approximately 80 per cent of the company's assets were deployed in Iran and therefore subject to confiscation by the Iranian government. However in the months following nationalization, the AIOC management, in public pronouncements at least, displayed confidence about the subsequent recoverability

of the lost assets. Such confidence was potentially well grounded. Working through international legal and political institutions and in Iran, through the Shah and other institutions, including the parliament (Majlis), the media and police, the AIOC exercised considerable influence in the period prior to nationalization. As a consequence, the impatience of political groups opposed to its domination of the country's oil resources intensified, providing momentum to Musaddiq's National Front coalition and the passage of the Nationalization Act. Behind the scenes meanwhile, the AIOC worked closely through its channels of influence to undermine Musaddiq, including the abortive coup that preceded the successful one organized by the CIA in 1953. Meanwhile in the shorter run, a further reason for the AIOC's confidence was its control of the oil industry through resources not subject to nationalization legislation, such as technical expertise and control over refining, tankers and other distribution channels.

To assess the potential threat to the AIOC's assets posed by the nationalization legislation of May 1951, the paper aims to evaluate the relative bargaining strength of the AIOC and Musaddiq governments in economic terms. To do so, it uses an event study methodology, comparing the stock market response to key events in the political negotiation calendar preceding and subsequent to the nationalization. The AIOC stock price is used as a barometer to test the extent of belief in the long run durability of the Nationalization Act factoring the relative strength of the political positions of both sides. The results suggest that the stock market's reaction was proportionately small relative to the scale of the assets potentially at risk, reflecting a strong endorsement of the political bargaining power of the company. Indeed, following the overthrow of Musaddiq in the CIA sponsored coup of 1953, and the end of an Iranian democratic experiment already thoroughly undermined, the company fully recovered its assets. With respect to the prior literature, the evidence suggests that the strength of Musaddiq's position has probably been overstated, even in 1951 and that in this case at least, the power of big oil remained undiminished in the post-colonial era.

III/A Elite Consumers, Space and Practices in Eighteenth-Century England

Chair: tba

Jon Stobart (Northampton)

Luxury and country house sales in England, c.1750-1830

The country house is often seen as a key site for the consumption of luxury goods: a place where no expense was spared to make a very public statement of the wealth, taste and connoisseurship of the owner. Today the resulting material culture of the country house often seems permanent – a priceless collection uniquely associated with a particular place – yet the reality was very different, with the nature and arrangement of furniture, etc. being in constant flux. New goods came into the house as fashion or fortune dictated, whilst others were removed, sometimes to less public rooms; sometimes altogether. One key mechanism by which luxury goods, amongst others, left the country house was via public auction, which normally took place at the house itself. Indeed, whilst the tradition of strict settlement limited the ability to sell landed estates, the contents of the house were an important asset which could be realized to meet debts or finance redevelopment or refurbishment of the property.

In this paper, I draw on a sample of house sales held in the English Midlands during the late eighteenth and early nineteenth centuries to explore this means of recycling luxury goods. I begin by examining the identity of those selling off the contents of their houses and the circumstances under which they came to be disposing of assets in this way. Building on this, I focus on the nature of luxury goods being sold and the ways in which they are promoted. Here, the language used to describe the goods is particularly revealing of contemporary attitudes to and constructions of luxury, and tells us much about the character and communication of luxury as an idea. I then turn to the question of absence: what luxury goods are missing from the sales, and what does this tell us about the changing relationship between luxury and elite identity.

Mark Rothery (Northampton)

The English country house, inheritance events and patterns of elite consumption: the Leigh family of Stoneleigh Abbey, 1730-1800

This paper addresses everyday patterns and processes of consumption at Stoneleigh Abbey, the home of the Leigh family, in Warwickshire. It focuses particularly on the relationship between inheritance events, the volume and nature of spending and the use made of networks of family and suppliers. Existing studies of inheritance and land ownership overwhelmingly focus on legal frameworks for the transfer of wealth, such as the Strict Settlement, entail and primogeniture. The aim of these studies has been to analyse the overall incomings and outgoings in the landed estate in order to trace broader shifts in the wealth and power of the landed classes. Where they have studied elite spending patterns, historians of consumption have mainly been concerned with conspicuous consumption. High value goods, many of them purchased during foreign travel and the Grand Tour and placed in the Country Houses (themselves objects of conspicuous status and consumption), have been the main targets of such research. However, little attention has been directed to the nature of spending on consumer items at the level of the mundane, and very few scholars have considered the importance of everyday patterns of consumption amongst landowners. Evidence on the Leigh family based on bills and receipts, household inventories and other ephemera shows that inheritance events were marked by significant shifts in patterns of spending, in the involvement of family members in spending as well as in the suppliers of products. Equally, important continuities were maintained through these periods of change. These shifts denote higher levels of short-term changes in landed lives than studies of estate settlement and management have generally identified.

Ben Heller (Oxford)

Recreational spending, taste, and milieu of the elite in London, c.1700-1820

Historians of the eighteenth century have revised our understanding of consumption among the middling sort. In doing so they have problematized the motivations behind shopping choices and discarded the unhelpful notion of emulation. However for the elite – particularly in the context of amusement – consumption continues to be examined by thinking about the acquisition of status within high society or, particularly with reference to attendance at musical performances, novelty. A more complex understanding of motivation is necessary. In the context of leisure and recreation, people spent money on multi-purpose foods and decorations, but also on goods and services especially created for amusement such as sporting gear and gaming equipment, performances and lessons. In this paper I put personal budgets as preserved in account books into dialogue with qualitative comments about recreational services and commodities found in letters and diaries to examine what the gentry and nobility in London, c.1700-1820, thought they were doing with their time and money. By trying to recover intention and motivation, the importance of an individual's milieu for shaping taste and decision-making is demonstrated (in line with the work of Hannah Greig on the beau monde). Re-asserting the importance of small groups for understanding taste and spending complicates the notion of commercialization, the most often employed meta-narrative for analysing leisure in this period, by questioning the impact of entrepreneurs and advertising. A more nuanced picture of lifecycle and friendship-cycle changes happening concurrently with inter-generational change is evident once we move away from the narrative of progressive commercialization.

III/B Transport and Development

Chair: **Martin Uebele** (Münster)

Gareth Campbell, John D Turner & Clive B Walker (Queen's Belfast)

The media in a mania: newspaper coverage of the British railway mania

Economists have recently begun to explore how the media affects financial markets.³⁹³ Robert Shiller has even suggested that the media plays a role in creating and sustaining asset price 'bubbles'.³⁹⁴ To date, however, there is little evidence to either refute or support this thesis.³⁹⁵ Consequently, we examine the role of the media during the Railway Mania, an episode which has been described as 'the greatest bubble in history'.³⁹⁶ This 'bubble' occurred in the mid-1840s, with hundreds of railways being promoted in Britain, and with railway stock prices doubling between the middle of 1843 and the autumn of 1845. Railway stock prices then fell substantially over the following four years. Throughout this rise and fall of share prices, the media commented extensively on developments within the railway industry and on the market for railway shares. Indeed, the financial press as we know it today was essentially developed during this episode.

The aim of this paper is to analyse the role of the media during the Railway Mania. In particular, we are trying to address the following three questions: (a) did media coverage become more extensive and positive during the run-up of stock prices? (b) Did media coverage contribute to the run-up of railway share prices? (c) Did negative media coverage in the summer and autumn of 1845 result in the decline of railway stock prices?

We selected three newspapers / periodicals in order to conduct our analysis. First, using OCR software, we scanned in every single page of each weekly issue of the *Railway Times* from 1843 to 1850. This newspaper was the main railway periodical of the day, and was popular amongst railway investors. Second, again using OCR software, we scanned in the *Economist's* coverage of the railway share market as well as its *Railway Monitor* supplement, from the point at which they commenced until 1850. Third, we analysed the editorials of both *The Times* and the *Economist* over the period to see how railway stock prices responded. In order to ascertain the effect of the media on the railway stock market, we collected weekly stock prices for c.400 railway companies and stock prices of other leading companies from the *Railway Times* and the *Course of the Exchange*.

Content analysis software was applied to this database of media articles in order to evaluate the scale of coverage as well as the nature of the coverage. The software gives each article a score based on its usage of positive / negative words, which permits us to see whether the positivity of articles changed throughout the course of the Mania.

We find that the coverage of railways by the media increased considerably during the boom. The page count of the *Railway Times* weekly paper expanded dramatically, but this was almost entirely driven by an increase in advertisements, with little increase in the extent of editorial comment. We also find an increase in the page count of railway coverage by the *Economist* during the boom, with the launch of a dedicated railway section which then became a formal supplement known as the *Railway Monitor*. During the downturn the page count of both the *Railway Times*, and the *Railway Monitor* declined.

The editorial position of the dominant railway periodical, the *Railway Times*, became more positive during the boom in prices. Granger Causality tests, however, suggest that share

³⁹³ Tetlock, Paul C. (2007), 'Giving Content to Investor Sentiment: The Role of Media in the Stock Market.' *Journal of Finance* 62, no.3, pp.1139-68; Fang, Lily and Joel Peress (2009), 'Media Coverage and the Cross-section of Stock Returns.' *Journal of Finance* 64, no. 5, pp.2023-52.

³⁹⁴ Shiller, Robert J. (2005), *Irrational Exuberance*. Princeton: Princeton University Press, 2nd edition.

³⁹⁵ Bhattacharya, Utpal, Neal Galpin, Rina Ray and Xiaoyun Yu (2009), 'The Role of the Media in the Internet IPO.' *Journal of Financial and Quantitative Analysis* 44, no. 3, pp.657-82.

³⁹⁶ 'The Beauty of Bubbles; Booms and Busts.' *The Economist* 389, Dec. 20th (2008): 115.

price changes preceded editorial changes, implying that the newspaper was responding to, rather than influencing, the market. Railway periodicals also published letters from readers, which often contained share tips, and there is evidence of a relationship between the positivity of these letters, and subsequent share price movements. Taken as a whole, this suggests that investors knew that *Railway Times* reporting was biased and discounted it appropriately. On the other hand, published letters may have expressed the views of informed and independent individuals.

We also look at the amount of coverage individual railway companies received in the press and attempt to ascertain whether or not the extent of coverage affects the returns on their stocks. Our cross-sectional analysis suggests that there was no media coverage premium, particularly during the boom phase of the Mania, which implies that individual companies were not hyped by the press.

Commentary from the mainstream press became increasingly hostile to the Mania, with both *The Times* and the *Economist* writing negative editorials up to several months prior to the peak in prices, and contemporaries claimed that these editorials were responsible for the bursting of the bubble. We test this suggestion using a series of event studies, but find that these articles did not produce abnormal returns in railway stocks.

However, we do find some evidence that the positivity or negativity of the *Economist's* *Railway Monitor* affected stock returns. As its comprehensive coverage of railways only commenced towards the end of the run-up phase, and as its tone was generally hostile to railway speculation, the *Economist* cannot be accused of contributing to the run-up of railway stock prices, but it may have had some influence on the decline. This suggests that investors took what the *Economist* said seriously and appear to have acted upon it, possibly because the *Economist*, in exposing the 'bubble' when it did, had credibility in the eyes of investors.

Dan Bogart (California, Irvine) & **Latika Chaudhary** (Scripps College)

Engines of growth: the productivity advance of Indian railways in comparative perspective, 1874-1912

India fell behind the richest economies in the world during the first era of globalization, but some scholars have noted a bright spot in the Indian economy: the service sector. Broadberry and Gupta (2010) estimate that Indian labour productivity in services began to increase relative to the UK between 1883 and 1910. India's improved performance in services depended to a large degree on the performance of railways. Christensen (1981) and Hurd (1983, 2005) show that labour and capital productivity nearly doubled from the late 1870s to the early 1910s. By comparison, labour productivity in Indian services increased by 18 per cent over the same period (Broadberry and Gupta, p. 275). Some scholars have gone further in arguing that the expansion of the railway network had a large aggregate impact on the colonial Indian economy (Donaldson 2010).

Current estimates on the growth and impact of Indian railways may be surprising considering the poor general performance of the colonial Indian economy. India lagged behind in terms of human capital development, registering a literacy rate below 10 per cent in 1901 (Chaudhary 2009). Was the colonial Indian economy capable of generating a labour productivity growth rate above 1.5 per cent per annum in railways or any other sector?

This paper re-examines the productivity performance of Indian railways before 1912. It presents the first estimates of railway-level total factor productivity (TFP) starting in 1874. The paper draws on a new dataset of outputs and inputs for 30 railway companies or systems. The sample covers all of the principal broad gauge (5'6) and meter gauge (3'3) railways, which account for more than 95 per cent of total output in the Indian railway sector. The data is drawn from *Administration Reports on the Railways in India* published annually from 1882 in conjunction with the *Report to the Secretary of State for India in Council on Railways in India*, published annual from 1860 to 1881.

Total factor productivity is defined as the difference between the weighted sum of outputs and the weighted sum of inputs. Outputs (i.e. ton miles and passenger miles) are combined into a single output variable using revenue shares or cost elasticities identified from a previous study (Bogart and Chaudhary 2010). Inputs weights are estimated using parametric approaches that are well established in the productivity literature. The baseline specification is a Cobb Douglas production function with input variables consisting of the log number of track miles, vehicles, engines, employees, and BTU of wood and coal fuel consumed.

The results show that TFP growth was relatively rapid in the Indian railway sector. TFP increased by 70 per cent from 1874 to 1912, averaging 1.4 per cent per year. The 1900s witnessed an especially high TFP growth rate of 2.3 per cent. A decomposition of the TFP estimates shows that growth in scale accounts for more than a third of the total increase in TFP. Indian railway systems grew to be substantial in terms of mileage and employment through a process of government takeovers, mergers, and internal expansion. In the aggregate greater size of railway systems increased TFP by 26 per cent.

TFP estimates from the baseline Cobb Douglas model are compared with other specifications to establish robustness. Different output measures and input measures are used with little change in the results. Index number approaches, commonly used in the literature, yield a higher annual average TFP growth rate of 2 per cent, but they suffer from several defects and need to be treated with caution. Endogeneity concerns are also addressed using the Levinson and Petrin approach (2003). Correcting for endogeneity lowers average annual TFP growth only modestly to 1.3 per cent. Finally, we consider alternative specifications to the Cobb Douglas. Estimates from a translog production function are somewhat different and raise the average annual TFP growth rate to around 2 per cent. Overall the results suggest that TFP growth on Indian railways was non-trivial irrespective of the estimation approach.

The TFP estimates have several implications. First, they speak to the aggregate impact of railways in colonial India. Calculations based on Crafts (2004) new growth accounting equation suggest that TFP growth on Indian railways contributed between 0.04 and 0.06 per cent per year to GDP capita from 1874 to 1912. Including the contribution of miles, vehicles, and locomotives to the aggregate capital stock raises the total contribution of railways to around 0.1 per cent per year or 15 to 17 per cent of the total increase in GDP per capita. By comparison to other countries, railways had a substantial economic impact in India. They were an ‘engine of growth’ in an otherwise slow moving economy.

The results also show that the rate of railway TFP growth in India was comparable to or higher than some of the richest economies in the world. TFP growth on British railways was below that of Indian railways, averaging 1 per cent per year from 1870 to 1913 (Crafts, Mills, and Mulatu 2009). The US had a higher rate of TFP growth in its railway sector – 2.1 per cent according to Fishlow (1966) – but it was not dramatically higher than India. Herranz Locain’s (2006) estimates imply that TFP growth on Spanish railways was similar to India.

The strong relative performance of Indian railways can be partly explained by their ability to exploit economies of scale. The production function estimates indicate that the degree of scale economies was sizeable, ranging between 1.18 and 1.3. Many Indian railway systems more than doubled in terms of mileage, employment and vehicles from the 1870s to the 1910s. Technological change was another important factor in explaining the strong performance of Indian railways. There were a number of innovations in the railway sector in the late nineteenth century including, automatic vacuum brakes and electrical lighting for vehicles and locomotives among others. Before 1900 India was a laggard in terms of its adoption rates, but in the 1900s most railway systems adopted several of the best practice technologies.

Fredrik Bergenfeldt, Mats Olsson & Patrick Svensson (Lund)

Wagons at work: a transport revolution in the age of agrarian transition in Sweden?

The level of transport costs is an important measure of economic development and change. Changes in the scale and the scope of transport affect the level of specialization and division of labour, the width of markets and the opportunities for trade, and the spatial pattern of economic activities. Previous research dealing with transport costs in pre-industrial Europe has mostly been concerned with the transport revolution in England during the period 1690-1830. The establishment of turnpike trusts, which gave private investors instead of parishes the responsibility for financing road improvements, has been emphasized as an important part of the transport revolution in England. These led to increased investments in infrastructure, improved roads and lower freight costs.

In contrast, other parts of Europe did not see the establishment of turnpike trusts and road maintenance was predominantly assigned to peasants. For example, according to one view, Sweden saw few changes in road transport before the 1840s, and the state of roads was in general poor. However, a conflicting view suggests that there was a transport revolution with better roads and wagons in Sweden during the period 1780-1830. If the first interpretation is correct, transport had little influence on the initial stages of the agrarian transition. If the second view is accurate, the transport revolution did not only coincide with the agrarian transformation, but may also have facilitated it.

The purpose of this paper is to study the development of transport costs in southern Sweden during the period 1750-1850. More specifically, our aim is to make a comprehensive and disaggregated study of the improvements in the means of transport, measured as prices on wagons deflated with grain prices. These changes are in turn related to market growth in Sweden and the demand for transport and conveyance. The correlation between better roads and better wagons is well documented in earlier research. The study period (1750-1850) captures the key elements of the transformation of the rural economy to an emerging industrial economy.

Our main sources for the analysis are probate records, which contain information on the prices of wagons. The information from this source is not only used to estimate improvements in the means of transport during this period, but also to assess the impact of property rights, farm size, and natural conditions on the propensity to make investments in means of transport. Consequently, our examination of transport costs enables us to add an important dimension to the possible interaction between the agrarian transition and the transport revolution.

Our estimations show that the wagons developed considerably during the period 1750-1850. The best wagon, on average became almost six times more expensive by the end of the period compared to the first period. Similarly, the results presented here show that the total number of wagons was worth near to eight times more in 1850 than in 1750. When decomposing what the improved wagons consisted of, our examination show that these included iron axis replacing wood axis and wooden wheels being substituted for by iron wheels. These improvements indicate that the wagons were improved in order to increase the loading capacity of the wagons. The estimates also show that these improvements were incremental. These came foremost during the period 1790-1810, a period during which agricultural commercialization was particularly strong with trade deregulations and growing demand for agricultural products coming from deficit areas, which supports the view that the best wagons developed concurrently with commercialization.

Does this imply improved roads? At least two different scenarios are possible: First, during the whole period, the eighteenth and nineteenth centuries, roads were of sufficiently good quality and it was changing market conditions that made peasants invest in improved wagons. Second, roads were bad creating no incentive for investments in improved transport means, but when roads became better from around the 1780s they could carry better wagons and peasants invested accordingly. At this stage we cannot rule out any of these scenarios but in any case, what happened was that in a situation with rising demand and rising prices on

grain, peasants invested in better wagons. This meant lower transport costs irrespective of if roads were improved or not. Possibly, this was the most efficient solution for an individual peasant, since investing in roads in the parish on one's own did not automatically mean that roads were improved all the way to the towns and ports due to problems with free-riders.

III/C Migration and the North Atlantic Economy

Chair: tba

Markus Brückner & Philipp Ager (Pompeu Fabra)

Cultural diversity and economic growth: evidence from the USA during the age of mass migration

We exploit the large inflow of immigrants to the US during the period 1870-1920 to examine the effects that changes in the cultural composition of the population of US counties had on output growth. We construct measures of fractionalization and polarization to distinguish between the different effects of cultural diversity. Our main finding is that increases in cultural fractionalization significantly increased output, while increases in cultural polarization significantly decreased output. We address the issue of identifying the causal effect of cultural diversity on output growth using the supply-push component of immigrant inflows as an instrumental variable.

John Killick (Leeds)

North Atlantic steerage fares and emigration, 1820-70: evidence from the Cope Line passenger service

International migration was a major element in the explosion of early nineteenth-century globalization, but there is continuing controversy about its causes and effects. Contemporaries and modern historians agree that although push and pull factors, for instance in Ireland and America, were the main determinants of rising migration, low fares – vaguely described – were an important permissive element. This paper therefore attempts to report accurately for the first time several related detailed series of migrant steerage fares, between 1820 and 1870.³⁹⁷ The data come from the unique Cope Line shipping records in the Pennsylvania Historical Society. Copes operated the leading Liverpool to Philadelphia packet line, and carried about 60,000 passengers westwards and 25,000 eastwards between 1820 and 1870.³⁹⁸

Early nineteenth-century travel was inevitably rough, but it is generally supposed fares fell rapidly to relatively low levels by the early 1830s, and then fluctuated. It is obvious they did not block the huge 1840s and 1850s migration – but to what extent did they encourage it – as with cheap flights today? Or did rising demand raise fares absolutely or relative to general prices and incomes? To begin to understand the role of fares in the migration a complete and consistent yearly series is required between say, 1820 and 1860. This paper shows fares fell unevenly between 1830 and 1844, but rose slightly, 1844-49. However the decline in fares in terms of US manual wages was more sharply concentrated in the critical 1846-52 period. After 1852, wage corrected fares rose again, just before Cope passenger traffic fell, and fluctuated until the end of the sailing ship passenger era about 1865. Cope fares were probably reasonably representative of transatlantic fares generally.³⁹⁹

³⁹⁷ Neither earlier studies such as Coleman, Terry, 'Passage to America: A History of Emigrants from Great Britain and Ireland to America in the mid-nineteenth century', (1972) or even the most recent work by Raymond L. Cohn, 'Mass Migration Under Sail: European Immigration to the Ante-bellum United States', (New York: Cambridge University Press, 2009), present a consistent and continuous series.

³⁹⁸ For Copes see Killick, John, 'An Early Nineteenth Century Shipping Line: The Cope Line of Philadelphia and Liverpool Packets, 1822-1872', *International Journal of Maritime History*, (2000).

³⁹⁹ This research should also be considered alongside Prof. Drew Keeling's 1870-1914 Cunard fare findings, in an attempt to establish a consistent and continuous long run, 1820-1914 fare series. See Drew Keeling, 'The Voyage Abstracts of the Cunard Line as a Source of Transatlantic Passenger Fares, 1883-1914', *Business Archives: Sources and History*, Vol. 96, pp. 15-36 (2008).

Drew Keeling (Zürich)

Economic recessions, travel costs and the business of migration across the North Atlantic: 1870-1914

Multiple explanations for mass migration across the late nineteenth and early twentieth-century North Atlantic have been advanced, by both contemporaries and later historians, but no definitive consensus has yet been reached concerning which underlying causes were most decisive. There is general agreement that what historians tend to call ‘chain migration,’ and social scientists ‘positive feedback’ or ‘path dependency,’ was crucial. Which mixture of forces got the ‘snowball’ rolling in the first place is still not very clear, however.

This paper examines two hypotheses which received greater emphasis during the historical period than they have since, and are thus ripe for fresh assessment: namely, that short-term fluctuations and long-term growth in transatlantic migration during the steamship era can be, at least partly, attributed (firstly) to shifts, e.g. long-term growth, in demand for labour in North America, and (secondly) to shifts, e.g. long-term decline, in the costs of transatlantic travel.

Rarely-used data from shipping archives, particularly that of Britain’s Cunard Line, enable examination of steerage passengers and fares on a quarterly basis. In contrast to most prior quantitative studies that have relied on annual time series, this makes it easier to distinguish short-term cyclical fluctuations from long-term trends. Account is also taken of transport companies other than Cunard, of relocation costs other than the oceanic fare, of the ‘affordability’ of these costs in terms of low-skilled wage levels, and of migrants who travelled in cabin rather than steerage class.

The general statistical pattern, confirmed by other qualitative evidence, suggests a greater causal role for developments in labour market demand than changes to the migration ‘cost hurdle’. There are, however, interesting parallels and contrasts to both to twenty-first-century long-distance international migration and early nineteenth-century transatlantic migration.

III/D The Late Tsarist Economy

Chair: **Matthias Morys** (York)

Andrei Markevich, Eugenia Chernina & Paul Castañeda Dower (New Economic School, Moscow)

The Stolypin agrarian reform and peasant migration

The Stolypin agrarian reform in Russia, giving peasants the right to withdraw from the commune to become individual landowners, has been primarily viewed as a solution to the agrarian problem of inefficient agricultural production related to communal land tenure. However, the designers of the reform may have had an additional goal in mind: exiting the commune and selling one's share of land afforded peasants the opportunity to migrate to less populated areas such as Siberia. This paper studies the connection between the agrarian reform and internal migration. Many additional factors affected the migration decision, not least of which was the government's migration policy that underwent changes during the same time as the Stolypin reform. Thus, a systematic empirical analysis is needed to determine whether or not the reform was successful in relieving population pressure through migration. We construct a panel of historical data from 1896-1914 on regional migration and other variables affecting the costs and benefits of migration in order to analyse the effect of the Stolypin reform on migration. We find a strong positive correlation between the reform and migration. We also employ instrumental variables to address the possible endogeneity due to omitted factors that might drive both commune exit and migration.

Natalia Drozdova & Irina Kormilitsyna (St Petersburg State University)

Government economic policy and the formation of investment climate: the experience of Russia in the late nineteenth – early twentieth centuries

The purpose of this study is to assess the impact of government economic policy on the formation of investment climate in Russia in the late nineteenth to early twentieth centuries. Following W. Smith and M. Hallward-Driemeier, under investment climate we imply 'the set of location-specific factors shaping the opportunities and incentives for firms to invest productively, create jobs, and expand', (Smith, Hallward-Driemeier, 2005, p. 40).

In the late nineteenth to early twentieth centuries the Russian government took a number of measures to strengthen the role of Russia in the world economy, namely: stimulation of economic growth through industrial development, improvement of public finances, stabilization of the ruble by the introduction of gold currency, protectionism, and expansion of transport infrastructure. This study assesses the impact of the above-mentioned measures on the formation of investment climate in Russia in 1885-1913. Based on comparative analysis of different methodologies of assessing the investment climate (Moody's, Standard & Poor's, Euromoney etc.) the authors identified the most important factors and indicators for assessing the investment climate at the country level, which were then adapted to the task of the study.

The years 1885-1913 are considered as an integral period from the point of view of the conducted economic policy, and, consequently, its impact on the investment climate. It should be noted that success in the development of Russia in the late nineteenth to early twentieth centuries is traditionally associated with the policies of Sergei Witte, who served as the Minister of Finance (1892-1903) and the Chairman of the Council of Ministers (1905-6). Indeed, Witte worked out a coherent programme for economic development of Russia, known as 'Witte's System'. However, the basis of the policy pursued by Witte was laid by Nikolaj Bunge, Minister of Finance (1881-86). Bunge carried out tax reform in 1885, started to prepare the reform of the monetary system and the transition to a gold ruble, took a number of measures to reorganize the state budget, pursued a policy of protectionism, and furthered the expansion of the railways. Thus it can be argued that Witte continued the policy of his

predecessors. The same point of view is held by such well-known experts as H. Von Laue, H. Barkai, P. Gregory. As for the policy of the successors of Witte as the Minister of Finance, the views diverge here. H. Von Laue believed that with the resignation of Witte the policy he followed was interrupted. O. Crisp and P. Gregory are of opposing opinion. They presume that the policy actually lasted almost until 1914.

Five hypotheses were formulated:

1. The economic growth positively influenced the investment climate in Russia in 1885-1913.
2. The increase of financial stability positively influenced the investment climate in Russia in 1885-1913.
3. The stabilization of the ruble positively influenced the investment climate in Russia in 1885-1913.
4. The policy of protectionism positively influenced the investment climate in Russia in 1885-1913.
5. The development of transport infrastructure positively influenced the investment climate in Russia in 1885-1913.

In accordance with the adopted definition of investment climate, the number of joint-stock companies (both Russian and foreign) which actually started their activities within a calendar year, was used as the explained variable that characterized the investment activity of entrepreneurs-investors.

Explanatory variables were supposed to meet the following conditions: firstly, they should reflect the economic policies pursued during 1885-1913, secondly, they should have analogs in methodologies to assess the investment climate, and thirdly, relevant statistics should be available. As a result, the following explanatory variables were chosen: 1) personal consumption as a reflection of economic growth; 2) general government debt/general government revenue ratio as evidence of financial strength of the government; 3) volatility of the ruble as an indicator of stabilization of the national currency; 4) the level of customs duties as a measure of protectionism; 4) railway lines built within a calendar year as a measure of transport infrastructure improvement.

To test the hypotheses the following regression model was built:

$$\text{StockCo}_t = \beta_0 + \beta_1 \text{Consumption}_t + \beta_2 \text{Debt}_t + \beta_3 \text{Volatility}_t + \beta_4 \text{Protect}_t + \beta_5 \text{Railways}_t + u_t,$$

where

StockCo	absolute increase in the number of joint stock companies, which started their activities within a calendar year;
Consumption	absolute increase in personal consumption, in millions of rubles;
Debt	government debt/government revenue ratio;
Volatility	volatility of the ruble, in British pounds;
Protect	customs duties, as a percentage of price;
Railways	absolute increase in railway lines built within a calendar year, verst (1 versta = 1,0668 km)

The regression model is statistically significant at 3 per cent level. R-squared shows that the independent variables explain about 56 per cent of the variation of the dependent variable.

Hypothesis H1 and H5 are supported: the economic growth and the development of transport infrastructure positively influenced the investment climate. Hypothesis H2, H3, and H4 are not supported.

The variable describing financial stability turned out to be statistically insignificant. It could be explained by the fact that in the test period the value of Russian government debt was not perceived by investors as critical.

As for H3, the introduction of the gold ruble in 1895-97 did not have a statistically significant positive effect on the explained variable in 1885-1913. This can be explained by the fact that throughout the whole test period the Russian ruble was relatively stable, and the currency reform of 1895-97 reduced the volatility of the Russian ruble to a minimum.

We also found that protectionism negatively influenced the number of ‘opened’ joint-stock companies.

The authors came to the conclusion that in total the economic policy, pursued during 1885-1913, contributed to the formation of a relatively favourable investment climate which was expressed in attracting domestic and foreign investment.

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Steven Nafziger (Williams College)

The economic consequences of serfdom and emancipation in Tsarist Russia

Perhaps no event in Russian economic history was as pivotal as the emancipation of the serfs in 1861. To investigate this dramatic change in the institutional structure of rural Russia, this paper takes advantage of the fact that roughly half of all peasants were not formally serfs before emancipation. Utilizing the geographic variation in serfdom and a new district-level dataset of socio-economic conditions in Russia before and after 1861, this paper employs a quasi difference-in-differences framework to uncover the impact of serfdom and emancipation on Russian economic development. A battery of extensions examines the robustness and implications of the main findings.

Besides ending formal seigniorial obligations, emancipation began a process of reform that transferred specific property rights to the former serfs while reconstituting the institutional structure of rural Russia. These changes included the installation of new administrative institutions in the countryside, a revamping of the tax collection system, and the reform of judicial bodies. However, Alexander Gerschenkron and other historians have famously argued that emancipation and subsequent reforms did little to spark economic development in the countryside, a failure that eventually led to the Revolutions of 1905 and 1917. But despite a few important attempts at evaluating the consequences of these reforms, economic historians have yet to provide adequate empirical evidence on exactly how the emancipation process affected the peasantry and the broader Russian economy. Drawing on a wealth of newly collected district-level data and a detailed accounting of the emancipation process, this paper investigates how ending serfdom affected property rights, the distribution of wealth, factor prices, and other economic indicators in the short and the long run. As such, this study will offer a significantly more comprehensive, evidence-based evaluation of the consequences of Russian serf emancipation than currently exists in the literature.

Before 1861, fewer than 50 per cent of the peasants in European Russia were actually categorized as seigniorial property, or serfs. The rest resided on state-owned land, on properties of the Imperial family, or in unclaimed border territories. While variation in seigniorial practices was immense, there were specific legal and institutional conditions that distinguished serfs from these other types of peasants. These included restrictions on property ownership, different tax obligations, and the fact that serfs were subject to the decisions of their owners when it came to the allocation of their labour (and other property). In this paper, I utilize district-level information on the geographic distribution of serfs relative to other categories of peasants from the pre-reform tax census of 1857-58. Merging this measure to a wealth of other district-level variables from the pre- and post-emancipation periods, I employ a quasi difference-in-differences empirical strategy to evaluate how emancipation differentially affected various measures of economic development in areas with more or less ‘serfdom’. I present results from both short-run (the late 1860s and early 1870s) and long-run

(up to the early 1900s) analyses to better understand the possible dynamic effects of the reforms. This empirical strategy is predicated on using the distribution of serfs just prior to emancipation as a roughly exogenous institutional ‘treatment’, and much of the paper examines and tests this assumption. I undertake a variety of empirical extensions, including IV and panel data models, to sort out the causal effects of serfdom and emancipation. I conclude that the results are not only indicative of the specific effects of the emancipation reforms, but they also shed light on the just what were the economic consequences of serfdom as an institutional regime.

III/E Welfare

Chairs: **Peter Kirby** (Manchester)

Peter Fearon (Leicester)

Women moneylenders in Liverpool, 1920s-1940s

Moneylenders, together with pawnbrokers, were an important source of credit for working class families. This paper analyses the reasons for, and the results of, the Moneylenders Act (1927) by considering Liverpool as a case study. During the early 1930s, about 10 per cent of the country's lenders lived in Liverpool. The Act strove to eradicate extortionate lending, especially to impoverished borrowers, and proposed that the interest rate charged for loans should not exceed 48 per cent. Moneylenders argued that this was the absolute minimum rate they needed to stay in business given the risks from non payment, and the fact that, unlike pawnbrokers, they had no forfeited pledges to sell.

The Act required licensed lenders to obtain a certificate from local magistrates and pay a relatively large (£15) annual fee. Using annual lists of certificates issued to prospective moneylenders, which provide their names and addresses, it is clear that the vast majority were women who were operating from their own homes. They were small scale lenders living alongside borrowers.

Little capital was required to operate as a moneylender. The application for a certificate created an opportunity for magistrates to assess the moral character of the applicant. They did not attempt to assess financial wealth, or even literacy. Where it has been possible to trace the husbands of moneylenders, the majority are listed as labourers indicating a household similar to that of borrowers. Male lenders usually worked from business addresses; most commonly pawnbrokers, drapers, furniture stores, or as independent financial agents. Very few women operated from business addresses.

This paper tries to explain how the licensed moneylending market operated both before and after the 1927 Act. It places borrowing and lending in the context of the local economy where unemployment and casual labour created an urgent need for short-term credit. It will offer explanations for the role of women in this activity, for the steady decline in the number of licensed money lenders during the 1930s and the collapse of this lending during the Second World War.

Jeremy Boulton (Newcastle) & **Leonard Schwarz** (Birmingham)

Welfare, accounting and financial priorities in a London parish, 1725-1824

It remains rare for historians to undertake local analyses of welfare spending in the eighteenth and early nineteenth centuries. This paper is a detailed, if unfashionable, analysis of the parish finances of the large West End parish of St Martin in the Fields, 1725-1824. The area itself has been studied intensively as part of a major ESRC project on welfare in the parish led by Boulton and Schwarz. The period in question includes the national surge in real welfare expenditure during the early stages of the industrial revolution. The parish was spending around £20,000 a year on its poor in the second decade of the nineteenth century, something like 4 per cent of the total spent in Middlesex at this time. The paper is based on a database which itemizes all surviving overseers' expenditure and income between 1765 and 1824. It also uses information taken from extant summary accounts between 1725 and 1750. How these enormous sums were accounted, raised and disbursed tells us a lot about changing welfare priorities over the entire period and allows us to appreciate the true meaning of the national statistics on spending deployed routinely by historians.

The paper will discuss, for example, what income and expenditure patterns tell us about the changing balance between indoor and outdoor relief, between the 'casual' and 'settled' poor and various revenue-raising strategies. Detailed analysis also reveals how local changes in spending priorities could fluctuate over time. Thus for example, there is evidence that both

the Gordon Riots (1780) and, more predictably the end of the Napoleonic Wars, coincided with a surge in spending on pauper removal via 'permissive passes'. Demobilization in 1816-17 also saw a surge in spending on the casual poor.

A complete analysis of the parish finances also reveals the stresses and strategies involved in running a welfare system which was raising and deploying very large sums of money. One marked finding, for example, is that, throughout the eighteenth and early nineteenth century, overseers seem to have managed consistently to balance overall income and expenditure, which suggests that spending was supply led, rather than demand led, or at least that parish authorities were capable of forecasting welfare future needs with surprising accuracy. This does not seem to have been a system, in other words, at the mercy of surges in demand. Only a detailed analysis of expenditure and income patterns can reveal how this balance seems to have been achieved.

Julie Marfany (Cambridge)

Responses to poverty in Catalonia: hospitals, charitable funds and outdoor relief, c.1750-1820

Some years ago, Pier Paolo Viazzo remarked that comparative research on poor relief across Europe was 'plagued' by the problem that evidence was usually available for rural areas in the north and urban areas in the south, but nonetheless called research into rural poor relief in southern Europe. Viazzo's comments also point to a tendency in the historiography to characterize European poor relief in terms of a north-south divide.

This north-south divide in poor relief corresponds to other perceived divides. Laslett suggested the nuclear family form dominant in northern Europe was more vulnerable to poverty than the extended family forms of southern Europe, since extended families could draw on a wider range of kin for support. Rural welfare provision was inadequate. By contrast, in northern Europe, transfers of wealth from the 'collectivity' were crucial in supporting households and individuals. Although family forms have been shown to be much more varied across southern Europe than Laslett suggested, the idea of a north-south divide still persists. David Reher views southern European families, past and present, as subject to much stronger ties than northern ones, with implications for welfare regimes, particularly as regards care for the elderly.

There were, however, important transfers of wealth from the 'collectivity' in southern Europe. Extended families could not always offer protection in times of need. Nuclear hardship may have been most evident for the elderly; by contrast, the extended family was often hardest hit in the early stages of the life cycle, when burdened with young children and often also with elderly parents. This life-cycle difference is adduced as an explanation for the greater levels of abandonment of children in southern Europe.

This paper represents a first step towards answering Viazzo's call for more research into rural welfare provision in southern Europe. The area chosen for a case study is Catalonia over the eighteenth and early nineteenth centuries, a period of rapid economic change, accompanied by greater social inequality and increasing vulnerability to poverty for many households. At the same time, Catalonia was an area characterized by extended family forms, traditionally viewed as very strong. As with Italy, the focus has mainly been on urban institutions, particularly those of Barcelona. Rural poor relief has received little attention, yet there is certainly evidence that parish, confraternity and private charity were practised in numerous locations, albeit not in forms that have generated systematic records. By the late eighteenth century, a growing number of reformers were addressing the question of how best to respond to poverty.

The paper starts by examining the network of smaller hospitals across the region, using two surveys, the census of Floridablanca of 1787, and a hitherto little-used survey of educational and welfare institutions from 1813-14. It then moves on to examine the evidence for other, less easily quantifiable forms of rural poor relief, using pastoral visits and the

records of the Napoleonic occupation, before concluding with a discussion of the changing responses to poverty during this period.

III/F Banking, International Finance and Comparative Crises

Chair: **Carsten Burhop** (Cologne)

Joost Jonker, Oscar Gelderblom (Utrecht) & **Abe de Jong** (Rotterdam)

Permanent capital and risk management: the VOC insurance contract of 1613

Continuity and permanent capital are basic characteristics of modern corporations. In Europe's early long-distance trade, however, finance was typically allocated via revolving partnerships. A major innovation of the Dutch Verenigde Oost-Indische Compagnie (VOC, 1602) was the freezing of its 6.4 million guilder capital for a period of 21 years. The initial capital sufficed to equip the first fleets, and returns from them were supposed to finance for subsequent fleets.

In a constellation of risk, financial constraints, and future investment opportunities, risk management may be valuable for the investors. Using a model based on costly external financing and derive optimal risk management strategies, Froot, Scharfstein and Stein (1993) argue that risk management adds value for investors when it can ensure that the corporation obtains sufficient internal funding for investing in valuable growth opportunities. In 1613 the VOC was about to send a fleet to Asia which had exhausted cash. We argue that if this fleet would not have returned with sufficient goods, the VOC could not equip new fleets. The VOC would then also have been unable to attract new financing at reasonable cost. In line with the Froot, Scharfstein and Stein (1993) model, the management (*bewindhebbers*) of the VOC designed an insurance contract to guarantee the continuation of the Asian trade. Drafted on 1 March 1613, the insurance contract was mainly sold to current shareholders of the VOC, who, if by August 1616 the revenues were below 3.2 million guilders, would pay the difference, for which they received a premium of 5 per cent.

The 1613 contract is relevant for three reasons. First, the contract is an early example of risk management, in line with the arguments of Froot, Scharfstein and Stein (1993). Second, the contract emphasizes the effects of permanent capital on corporate policies. More specifically, the contract illustrates the effects of shareholders' limited liability. Third, the contract was subsequently used by other corporations, including the English East India Company.

In the literature about the VOC, the 1613 insurance contract is often mentioned, but insufficiently (Van Dam, 1927, p. 207-208; Gaastra, 2007, p. 24) or incorrectly explained. For example, Stapel and Den Dooren de Jong (1928, p. 83-84) argue that *vroeде bewindhebbers* (crafty directors) drafted the contract to mislead participants, who were trapped, blinded by the 5 per cent premium, while Van Niekerk (1998, p. 83) claims that the contract served as a guarantee to pay dividends. Van Dillen (1958, p. 73-78) provides a careful description, but does not relate the contract to risk management. Our paper is organized as follows. In section 2 we discuss the VOC until 1613 and the Dutch market for insurance. Section 3 describes modern risk management and insurance theory. Section 4 provides a description of the 1613 contract, whereas in section 5 the contract is further analysed. Section 6 concludes.

Ronald Albers (European Commission) & **Lars Jonung** (Lund)

Major crises and depressions: comparisons of the current crisis to the Great Depression and the classical gold standard

The purpose of the paper is to give an historical perspective to the present crisis and to the policy actions chosen to address it.

The current crisis marks the return of macroeconomic fluctuations of an amplitude not seen since the interwar period and has sparked renewed interest in the experience of the Great Depression. The paper builds on earlier published work by the authors on the subject and goes beyond the now increasingly popular comparisons to the 1930s in arguing that the current credit crisis in some respects more closely resembles the financial crises of the classical pre-

First World War gold standard, in 1873, 1893 and in particular the 1907 financial panic. All these crises were global but not all led to an outright depression.

There are clear similarities between the 1907-8, 1929-35 and 2007-9 crises in terms of initial conditions and geographical origin. They all occurred after a sustained boom, characterized by money and credit expansion, rising asset prices and high-running investor confidence, and over-optimistic risk-taking. All were triggered in first instance by events in the United States, although the underlying causes and imbalances were more complex and more global, and all spread internationally to deeply affect the world economy. In all three episodes, distress in the financial sectors with worldwide repercussions was a key transmission channel to the real economy, alongside sharp contractions in world trade. And in each of the cases examined, the financial distress at the root of the crisis was followed by a deep recession in the real economy. However, there were also crucial differences in terms of cyclical patterns and synchronicity, role of the financial sector and monetary transmission, adjustment mechanisms, role of international cooperation, and policy responses and the effectiveness of measures. The paper undertakes to underpin the similarities and differences empirically for a long time span since the 1870s, focusing on major economies in Europe and North America, as data limitations limit the scope for comparative analysis covering a wide range of countries.

Next, the similarities and differences in policy responses are mapped. There is a broad consensus that a pro-cyclical and protectionist macroeconomic policy response was the major factor contributing to the gravity and duration of the global depression of the 1930s. This is contrasted both with the workings of the stabilization mechanism under the classical gold standard and with the impromptu coordinated and much more aggressive policy response to the recent crisis.

Finally, a set of policy lessons relevant for today's policy makers are proposed. It is argued that while the strong policy response to the recent crisis draws on important lessons from the past, the jury is still out on some of these, mirroring renewed fundamental debates in macro-economics. One challenge that is unlike previous historical episodes is the extraordinarily rapid increase in fiscal deficits and debt during peacetime.

Ali Abou-Zeinab (Lund)

Commercial banking regulation, supervision and performance in the Nordic countries: regional evidence from the twentieth century

The research domain is concerned with the interpretation of the regulating and supervision process of commercial banks in the Nordic countries: Denmark, Sweden, Finland, Norway and Iceland. This research provides detailed analyses on banking regulatory structure, permissible banking activities, deposit insurance schemes, and supervisory practices in each of the Nordic countries. The history of Scandinavia shows that there is a roughly equal division between those countries that rely on the central bank as the chief banking supervisor and common characteristics. Almost all of these countries allow a wide range of banking activities, including underwriting, dealing, and brokering in both securities and insurance, and these activities can generally be conducted either directly in a bank or indirectly through a subsidiary of a bank, rather than through a holding company structure. In addition, although all of these countries had deposit insurance schemes during the 1980s and 1990s, they faced severe banking crises. These crises, which lasted almost one and a half years, classified the Nordic crises in late 1980s and early 1990s among the Big Five crises that had happened before the current crisis, which is now of a global nature. This research outlines the development of the Nordic crises; causes behind them, crisis management, response and resolution implemented by the authorities. The research will consider the lessons that can be drawn from the Nordic crises. Together this research gives a unique insight into the banking regulation and supervision in this important region of Europe.

Outlines for the research:

1. The historical evolution of commercial banking in Nordic countries.
2. The historical roots of banking regulation and supervision in the Nordic countries.
3. Regulating the Nordic banking systems in the era of EEA and EU financial regulation and supervision.
4. Financial liberalization 1980s: the Nordic banking crises of 1990s and response to deregulation.
5. Resolving the financial crisis: lessons from the 1990s Nordic banking crises.
6. Regulating the international financial markets and the response of the Nordic countries.

Rui Esteves (Oxford)

The Belle Époque of international finance: French capital exports, 1880-1914

This paper aims at contributing to our understanding of the French capital market by introducing the most detailed source on French financial applications abroad available to date. This source not only identifies the French positions in the flotation or initial trading of individual foreign securities, but also tracks them on a regular basis through time.

To date the literature has had to rely on indirect estimates of the size and valuation of the French portfolio, usually based on reconstructions by aggregating capital flows through some version of the permanent inventory method (Lévy-Leboyer 1977, Parent and Rault 2004). Such exercises are critically dependent on assumptions on the value of initial stock, the share of foreign issues effectively owned by French investors, and, not least, the market valuation of these issues.

Compared to them, the present paper is based on a database of 2,204 individual foreign securities with a par value of 13.5 billion francs (£534 million). These data represents capital calls raised by 1,336 foreign cities, provinces, and companies located in 72 countries, territories and colonies. The nature of the data also allows us to distinguish between changes in the composition of the portfolio from valuation changes. By using a large number of contemporary financial sources, we were able to match up to 70 per cent of the issues (or 94 per cent of the capital calls) covered by our data source with their market prices in the French or foreign exchanges. For the whole portfolio, 2/3 of the changes in value were due to price movements and only 1/3 to changes in holdings.

The data also allow drawing inferences on the drivers of capital flows and the consequences of financial volatility to capital flows – e.g. the impact of sovereign defaults on foreign finance of the corporate sector (Trebesch 2009). Nevertheless, in this paper we concentrate on the size, composition, and return of the French portfolio between 1880 and 1913.

In terms of the geographic composition of the French foreign portfolio, our data confirms the concentration of holdings in Europe and the near East implied by the estimates available in the literature for a few benchmark years (Woodruff 1966). However, it also reveals specific large investments in Africa – mostly Egypt, joined by South Africa at the turn of the century. By sector of activity, the French portfolio was distinct in its emphasis on raw materials (mining) and finance (financial services and real estate). British and German capital applications, on the contrary, were more intense in industrial and railway ventures (Stone 1999, Esteves 2007).

We also quantify the return performance of the French holdings of foreign securities. Apart from the years 1894-98, French investment abroad clearly paid off over and above a conceivable measure of home bias and equity premium. Over the whole period the cumulative total returns were 12.6 per cent for shares and 6.7 per cent for bonds. These figures compare favourably with British investment in similar foreign private securities that yielded a cumulative 7.4 per cent for shares and 4.4 per cent for bonds (Edelstein 1971).

Although our data does not cover the substantial French investments in foreign sovereigns, these results put into question the received wisdom about the inconsistency of

French foreign investment (Lévy-Leboyer 1977) or its ‘revenue’ nature (Fishlow 1985). Finally, the paper uses the information about the nature of the French institutions representing foreign issuers to characterize the structure of the market.

The results from this analysis are generally in agreement with the conventional knowledge that the French market for foreign securities was very concentrated and under the dominance of the traditional *haute banque* group of merchant bankers and, increasingly, of the big deposit banks – Crédit Lyonnais, Société Générale, Comptoir National d’Escompte, and the Banque de Paris et des Pays-Bas (Paribas). This fits also with the work of Flandreau et al. (2009), who have recently interpreted this concentration in the context of a model of certification and suasion of foreign sovereigns by their parent banks in the great European financial centres. Nevertheless, there are some nuances compared to the sovereign debt market, namely, the unimpressive presence of Crédit Lyonnais, the uncontested leader in the sovereign segment of the market, and the creeping up to the top places of less known financial houses.

We also take a different angle in analysing the consequences of market power, this time by looking at underpricing of IPOs associated with the four types of representatives, as well as their long-term performance. The median IPO discount in our data was 2 per cent for securities represented by big banks, 1.5 per cent for other banks and zero for the other two categories of representatives. The evidence therefore implies that, initially at least, only well-established foreign companies that traded very close to par were able to penetrate into the French portfolio without the seal of approval of a French financial institution. By contrast, more speculative or less well-known issues had to acquire that certification, which came at a moderate cost of around 1.5 per cent of the value of the securities. The order of magnitude lines up generally with evidence for other European financial centres at the time. Chambers and Dimson (2009) found a 1.9 per cent median first-day return for IPOs in London between 1917 and 1929. Schlag and Wodrich (2000) computed a 2.95 per cent median initial return in Germany between 1870 and 1914.

Long-term performance of IPOs reveals that securities represented by the established French banks did much better over time than other foreign securities with less exalted local intermediaries. This evidence therefore suggests that the fee paid to financial intermediaries for their signalling services was actually compensated over the long-run. As DeLong (1991) famously concluded, not only J.P. Morgan men added value, the elite of the French banking industry added value too.

IV/A Technology and Growth

Chair: **Stephen Broadberry** (London School of Economics)

Robert C Allen (Oxford)

Technology and the Great Divergence

My research on the industrial revolution concluded that the famous technologies of the period were biased technical changes that increased the use of capital relative to labour. In an article in the *American Economic Review* in 2002, Kumar and Russell estimated frontier production functions for 1965 and 1990 cross sections of data for 57 countries and concluded that technical change in this period was also biased and increased the use of capital relative to labour. Technical progress consisted in inventing techniques that increased capital per worker and output per worker in rich countries, while there was no improvement in technology at the low capital-labour ratios employed in poor countries. In this paper, I extend the 1965 and 1990 cross sections back to the industrial revolution to see what happened in between. National accounts studies for 17 countries were used to backcast the 1965 cross sectional data into the past. Cross sections were created for 1820, 1850, 1880, 1913, and 1938-40. I apply Kumar and Russell's frontier methods to these cross sections and find that technical change was biased over the whole period. For two centuries, improvements in the world technology frontier have consisted of inventing techniques that increased output per worker by increasing capital-per worker in rich countries. No improvement occurred at low capital-labour ratios. As a result, today's poor countries, many of which have capital-labour ratios like those used in the UK or USA in 1820 or 1850, get no more output per worker than did the UK or USA in the middle of the nineteenth century. A corollary is that the cross-sectional data for 1965 and 1990 trace out the same pattern as did the USA and the UK in the course of their development. Growth over time, in other words, is the same as variation across space today. The economic history of the last two hundred years is the story of today's rich countries inventing a 'world production function' that defines the technology and growth possibilities of today's poor countries.

Paul Sharp, Ingrid Henriksen (Copenhagen) & **Markus Lampe** (Carlos III, Madrid)

The role of technology and institutions for growth: Danish creameries in the late nineteenth century

The story of the emergence and success of Danish creameries at the end of the nineteenth century is well known and is considered to be one of the primary causes of the success of the Danish economy during this period. Two innovations are normally considered to have been the main contributors to this success: one technological, and one institutional. First, the invention of the automatic cream separator in 1878 allowed for butter production on a larger scale than had been possible under previous technologies. In particular, it allowed for the extraction of more cream from the (whole) milk; and for the immediate separation of cream from milk which had been transported over great distances, without first needing a period of time for the cream to separate by itself and for the extraction of more milk from the cream. The technology quickly replaced pre-existing technologies in almost all dairies. Second, the cooperative movement emerged as an efficient way to utilize this technology. By solving some of the incentive problems involved in the management of a creamery dependent on many small suppliers, cooperatives allowed for the efficient use of the technology. In doing so they successfully outcompeted rival institutional forms, such as the old estate dairies and private creameries. The technological and institutional determinants of the success are thus clearly interdependent: the invention of the automatic cream separator led to the success of the cooperative movement which in turn allowed for the successful use of the technology. This makes it difficult to know whether the productivity increases were due to better

technology (a shift in the production possibility frontier) or better institutions (higher productive efficiency) or both.

We shed light on this story by quantifying the impact of the institutional and technological innovations using appropriate econometric modelling. We collect production data from archival and other contemporary accounts from a large sample of creameries using different technologies and different institutions and quantify the gains from moving to cooperative ownership and from using the automatic cream separators by applying the tool of stochastic frontier analysis.

We find that the old technology exhibited diminishing returns to scale whilst the new technology exhibited constant returns to scale. The inefficiency of the estates and the private creameries at 7 per cent was approximately the same under the new and the old technologies and twice that of the cooperative dairies, thus demonstrating that the institutional innovation had an impact separate from that of the technological innovation. For the story of the take off and growth of the Danish economy, both technology and institutions clearly mattered. This story plays to a wider audience in that the relative contributions of technology and institutions to growth are a subject of much debate.

IV/B Demography and Economic Development: New Techniques

Chair: **Leigh Shaw-Taylor** (Cambridge)

Mark Casson (Reading)

The determinants of local population growth: a study of Berkshire, Buckinghamshire and Oxfordshire parishes in the nineteenth century

While population growth in the nineteenth century has been extensively studied, the causes of variations in growth between parishes are still not fully understood. The publication of the *Historical Atlas of Oxfordshire* in 2010 provides a stimulus to study this issue from a novel perspective. This involves using panel data econometrics to test formal hypotheses regarding the influence of railway building, road improvement and local land ownership on local population growth. Census tables have been used to generate decadal estimates of population growth for over 600 parishes (adjusting for boundary changes where appropriate). A range of other sources, including railway atlases, turnpike databases, county atlases and the Victoria County History have been used to identify the times at which railway building, road improvements and changes in land ownership affected particular parishes. The impact of particular types of change, as well as the leads and lags involved, can then be estimated by statistical regression.

Preliminary results indicate that the expansion of large towns, associated with industrialization and suburbanization, was the dominant force in local population growth in the three counties, even though they were predominantly rural. Large towns attracted railways and benefited greatly from them, but smaller towns and villages lost out in the long run whether they were served by railways or not. Institutional owners played an important role in releasing land for speculative building purposes, especially near the larger towns, although parliamentary enclosure was not a significant influence.

Cartographers have suggested, as a result of the visual interpretation of maps, that there was systematic regional variation within counties that could be explained by altitude, soil type, and so on. Statistical analysis fails to support most of these claims, however; it suggests that visual interpretation of maps is not always a reliable method for investigating the factors governing local economic development. On the other hand, the results support the particularism of many local historians, in identifying a wide range of specific local factors that stimulated or retarded population growth in particular villages at particular times. Population changes are therefore best explained by a combination of a grand narrative of urban growth in major centres combined with local particularism at the small town and village level.

Marta Felis-Rota (Autónoma, Madrid), **Jordi Martí Henneberg** & **Laia Mojica** (Lleida)

A GIS analysis of the evolution of the railway network and population densities in England and Wales, 1851-2000

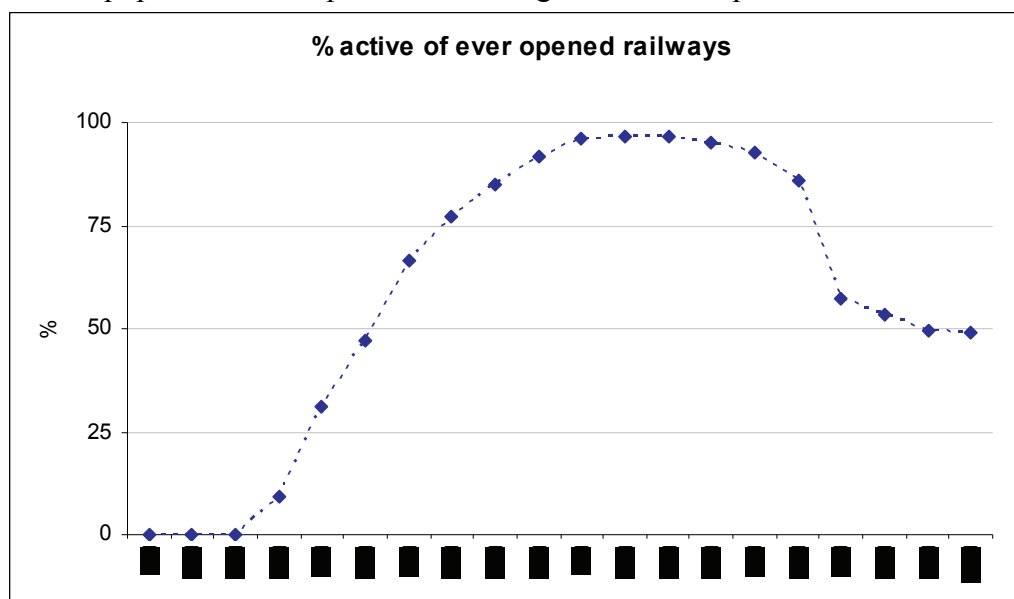
The aim is to analyse the uneven geographical transformation of England and Wales from 1851 to the present day, by means of following the evolution of the railway network as an explanatory factor for the development of urban settlements in England and Wales. In the nineteenth century, railways would have helped to promote new areas and those with previous economic activity and the capacity for growth were particularly successful at attracting population. In this paper, we test whether the uneven distribution of population is significantly related to access new means of transportation, namely the newly established railway lines and stations.

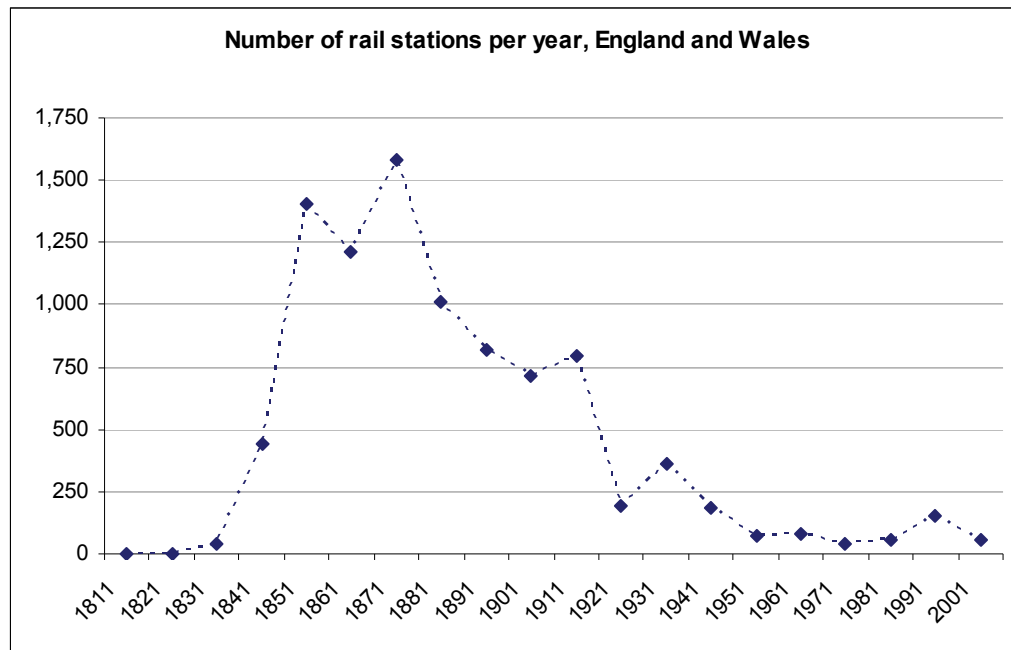
From economic geography, we know that transportation costs, the spatial location of firms and urban nuclei are important to generate complementarities and economies of scale (Krugman, 1991). We also know that industrial hubs and cities are live events in the sense that they are subject to continuous interactions and changes. The future of research in economic geography is advocated to follow this direction (Thisse, 2009). Thus, the study of

historical or dynamic economic geography is therefore fundamental to understanding the processes of change and evolution.

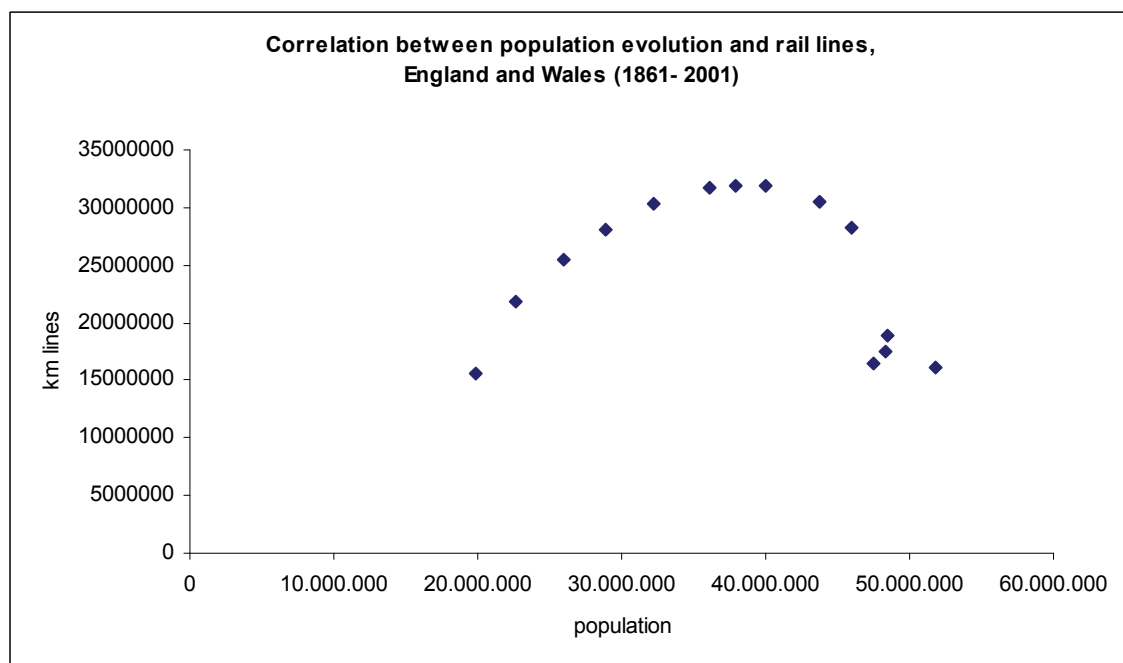
We assemble a dataset including the population of local civil parishes and operational railway lines and stations with annual detail from 1851 to 2000. Then, we use spatial analysis methodologies. We propose to develop what we have called the Historical Geographic Information System - Europe (HGISE). This will form part of an information infrastructure designed to facilitate a step forward in our understanding of the emergence of modern Europe. The HGISE offers a spatiotemporal platform for the integration, visualization and analysis of European development over time. By using space or location as a means for combining and comparing data, the HGISE promises to become a highly flexible, multi-disciplinary tool which can be employed over a wide academic area ranging from history and cultural studies to environmental sciences and transportation studies. This type of approach should give rise to a series of relevant conclusions within the economic history of the impact of railways and territorial inequalities.

The beginning of the real articulation of the railway network at the beginning of the nineteenth century coincides with the publication of the first reliable population censuses. Before, total population head counts do not coincide with the regional breakup disaggregated numbers. Recall that members of the army, merchant marine, missionaries, and others were excluded from local registers simply because they were outside Britain at the time of the headcount. The present work combines data from two different but complementary sources. On one hand, there are the data relating to the evolution of the rail network that provided transport services for passengers and merchandise. On the other, there are data relating to the distribution of population over space and time – gathered at the parish level.

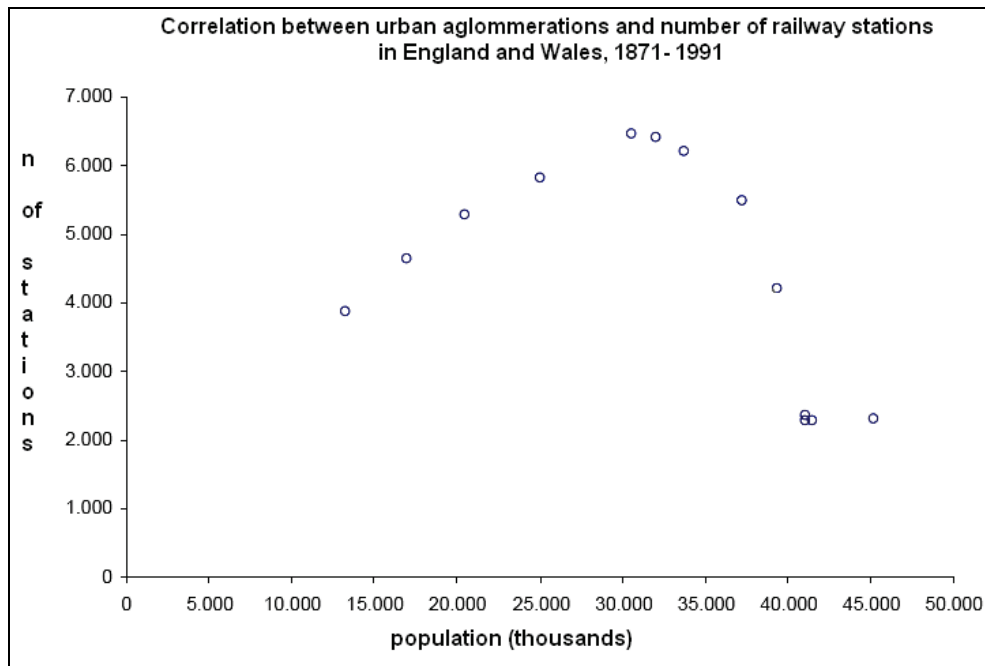




Data relating to both railway networks and population have been included in a Geographic Information System (GIS). In this case, GIS helped us to compile, analyse and quantify data, recognize patterns and treat the information after a previous task of georeferencing undertaken at the Universitat de Lleida.⁴⁰⁰ Although there are relevant documentary sources available that chart the history of the railway in England and Wales, they have not previously been exploited using GIS. In this way, the HGISE project carried out the exhaustive task of compiling and digitalizing data relating to both railway lines and their attributes (year of opening and/or closure, type of track, etc.) at 10-year intervals for the period 1800-2000.



⁴⁰⁰ HGISE refers to our research group. For more information, consult the HGISE web site, at the Universitat de Lleida. www.europa.udl.cat/hgise



We can distinguish two phases or periods in the history of the British railways. Since the beginning of the nineteenth century with the opening of the first railways lines, kilometres of new lines and stations were being inaugurated for the first time all the way through the nineteenth century and well into the twentieth century. However, this happened not always at the same pace. The expansion phase took place mainly in the second half of the twentieth century, comprising a period running from the 1840s to the 1910s. Twentieth-century British railway history has been more characterized by the closing of numerous inefficient lines and sparsely used stations than by the opening of new lines. So, the number of lines and stations has been following an evolution like that of a life animal (see graphs), and it is worth studying.

Population growth was taking place simultaneously at a much smoother and constant pace throughout the period under examination. However, it was uneven; rural and urban developments differed considerably. We find some evidence of the co-evolution of new railway lines and stations and population density increase shocks. This paper examines to what extent railway expansion and urbanization were linked to one another. For this purpose we map all new lines and stations and check any population shocks following the opening of the railway. We do this with a software analysis based on Geographic Information Systems (GIS) and follow its evolution throughout history.

Indeed, there is a dynamic relationship between population growth and transport infrastructure. We relate data obtained from population censuses taken at 10-year intervals (from 1851 to 2001) to a Railways GIS including tracks and stations in operation and compiled at one-year intervals for the same period (Cobb, 2007). We suggest the use of railway stations instead of kilometres of line as a more precise indication of access to rail. We find that rural and urban settlements were uneven, and very much linked to the opening of new railway stations.

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IV/C Business History I

Chair: **tba**

Gil Montant (Caen)

Market power inside the Belgian coal industry, 1901-45: a new empirical industrial organization approach

In this paper we consider the functioning of the Belgian coal industry during the first half of the twentieth century. Historical documents underline the fact that during this period, Belgian collieries contracted numerous collusive agreements in order to protect themselves from destructive competition as well as foreign competition due to high levels of imports.

Economic theory considers that inside a market firms can adopt various strategic behaviours according to the degree of competition of the market. If the market is perfectly competitive firms price at their marginal cost and their profit vanishes while if they act as a monopoly they price in order to maximize their profits (i.e. there is a significant difference between the market price and their marginal cost). If firms have some market power then their tariffs are above their marginal cost but below the monopoly price. These different cases can be summarized through the rate of margin that varies between zero (competitive market) and one (monopolistic market). Intermediate cases correspond to an imperfect competitive configuration.

In this analysis we consider the following question: What was the degree of market power achieved during the 1901-45 period by the Belgian coal industry inside the domestic market? In order to respond to this question, we develop a theoretical model based on T. Bresnahan's (1981) approach in order to identify and measure the degree of market power sustained by this industry during the first half of the century.

The econometric model is based on two equations. The first one corresponds to the demand for coal that depends on several variables such as the real coal price, the Belgian economic conjuncture and several dummy variables to take into account various historical facts. The second equation is the domestic coal supply that contains the market power term. We introduce a price-cost margin index inside the supply equation. Due to lack of data on the Belgian coal industry's marginal cost, we estimate a marginal cost chronicle with various proxies of production factor's costs.

The econometric model is estimated with a yearly database constructed through personal searches. The econometric methodology is developed in two steps. First, each equation is estimated separately by 2SLS in order to perform autocorrelation tests. Next the whole model is estimated with NL3SLS so as to consider the simultaneity dimension of the model. In order to assess the robustness of our estimates, various specifications are considered. A yearly price-cost margin index is computed from our estimates in order to assess the evolution of the degree of market power sustained by the Belgian coal industry from 1901 to 1945.

Aside by the historical dimension of this work, the approach performed here permits us to test various theoretical results derived from Industrial Organization. Specifically the impact of the demand cycle on the degree of collusion sustained by the industry is tested. Our model is specified so as to test J. Haltiwanger's and J.E. Harrington's (1991) result. According to their model collusive firms reduce their price when demand is high. They show that the markup is procyclical. Our model considers four situations regarding demand in order to take into account (i) an increasing demand as well as a decreasing demand and (ii) a low demand and a high demand.

Eric Golson (London School of Economics)

Did Swedish ball bearings keep the Second World War going? Re-evaluating neutral Sweden's role

This paper examines Swedish-belligerent trade and determines it is closely linked to both Swedish and belligerent wartime survival. The belligerents wanted Swedish iron ore and ball bearings, two products over which Sweden had a virtual monopoly in excess wartime capacity; the Swedish government needed the belligerents to ensure Sweden's political and economic survival. This paper demonstrates in every respect Swedish neutrality was pragmatic, trying to maintain positive relations with both parties, but not necessarily following the stated diplomatic agreements. It details the system of Swedish-belligerent wartime trade negotiations. Using new nominal and real trade statistics it demonstrates political promises were not followed; concessionary prices were given; illicit trade traffic endorsed and terms of contracts overlooked. But the Swedes did benefit from consistent import surpluses and were able to maintain their economy during the war. Finally, it examines particularly contested areas, including iron ore, ball bearings and Sweden's energy position. It determines Swedish iron ore and ball bearings were important in percentage terms for the Allied and Axis war efforts, but the Swedish provision of these items was not a determining factor in the war.

IV/D Agricultural Markets and Prices

Chair: **tba**

Max-Stephan Schulze & Oliver Volckart (London School of Economics)

The long-term impact of the Thirty Years War: what grain price data reveal

This paper examines the long-term economic impact of the Thirty Years War. So far, much of the relevant historical research has concentrated mainly on the devastating demographic consequences of the war. In contrast, this study offers the first quantitative assessment of its effects on market integration and trade in Europe.

The analysis relies on a new, comprehensive set of grain price data that covers 84 cities in the Holy Roman Empire and neighbouring regions and spans the period 1550 to 1715. Overall, we draw on more than 260,000 observations on price differentials between urban markets to examine the changing pattern of market integration before, during and after the Thirty Years War and across a broad geographical space.

The basic insight on which our study relies goes back to Cournot who was the first to point out the link between trade and price convergence. He formulated an early version of the Law of One Price, according to which he defined a market as a region whose ‘parts are so united by the relations of unrestricted commerce that prices there take the same level throughout, with ease and rapidity’. From a more modern perspective, market integration is often defined as ‘tradability between markets’, implying trade flows between localities in the presence of arbitrage opportunities. In line with many studies on market integration, we take non-random, systematic deviations from the Law of One Price as indicators of trade costs.

Our analysis proceeds in two steps. First, we examine coefficients of variation to gauge the extent of price dispersion across markets in the whole sample and, likewise, markets in sub-samples defined according to regional population losses suffered during the war, and to trace changes over time. The preliminary results of this essentially descriptive exercise indicate that markets located in regions that lost more than a third of their population between 1618 and 1648 had not recovered their prewar level of integration by the second decade of the eighteenth century. This finding cautions us against optimistic assessments of local conditions made on the basis of qualitative evidence (cf. Beachy, 1999).

In the second step, we explore the evidence on wars affecting market integration econometrically and within a panel-data framework, controlling for geography (distances between markets, access to waterways), social characteristics (religious affiliations, dominant languages), political regime conditions and unobservable location-specific factors that may have affected trade and grain prices. Here, our preliminary results suggest that there was a systematic difference between the impacts of the Thirty Years War and other wars during the period under review: The Thirty Years War had a much stronger, statistically significant effect on price differentials than any other war between 1550 and 1715. Controlling for a number of other influences, we trace the particularly serious consequences of the Thirty Years War to its close connection with the incidence of epidemics – a link that became much weaker in later decades – and its extraordinary length that disrupted commercial links for generations.

Aashish Velkar (Sussex)

‘Deep’ integration of nineteenth-century grain markets: coordination and standardization in a global value chain

This paper explores the dynamics underlying ‘deep’ integration of the international grain markets of the nineteenth century. ‘Deep’ integration here refers to a more explicit and deeper level of coordination. It is characterized by the elimination of product differences through harmonization of practices and standardization, emergence of governance structures, multiple levels of coordination, and dependence on global value-added activities. The paper argues that ‘deep’ integration of international markets involved changes to market structures, firm

strategies and the commodity being marketed. Coordination in international wheat markets occurred at multiple levels (markets, firms, committees, etc.) and in several different ways (integration, voluntary consensus, etc.). Various governance structures and institutions emerged along a global value chain, which helped to coordinate activity internationally and enable the enormous expansion in scope as well as scale of trade. Many of these structures and institutions continue to coordinate the international markets in the twenty-first century. Historically, they helped to develop international standards that underscored the expansion of an increasingly complex commodity. Decentralized, de facto standards dominating domestic markets were replaced by centralized systems developed by commodity exchanges. These systems, which emerged independently in the US and UK, formed the basis of international trade by the last quarter of the nineteenth century. Fungibility in international markets depended upon standardization and was institutionally created. On this basis, 'deep' integration developed between international grain markets.

The methodological approach in the paper incorporates explanations for historical changes to the commodity, in addition to the market structure and firm strategies and offers a broader perspective on the historical processes. Correspondingly, the paper explores the integration process through the study of the international wheat markets of the nineteenth century centred around the UK as the major consumption centre. The paper uses the global value chain approach, proposed by Gary Gereffi and Peter Gibbon. Archival sources consulted for this research include records of the London Corn Trade Association, parliamentary select committees, and the UK Board of Trade Papers. Also, trade journals, official statistics and published histories are consulted.

The major implications of this research are that historical studies of integration should allow for long-term changes in commodities. Fungibility and tradability are social constructs and not inherently physical qualities. Also, effects of 'deep' integration endured for a long time when productive and economic activity are effectively disintegrated along global value chains.

IV/E Demography

Chair: **Bishnupriya Gupta** (Warwick)

Andrew Hinde (Southampton)

Sex differentials in mortality in mid-nineteenth-century England and Wales

This paper examines sex differentials in mortality in England and Wales in the 1860s, focusing on the impact of particular causes of death. I first decompose the sex differential in the expectation of life at birth by age, showing that regional variation in the sex differential is principally due to mortality at ages five years and above, with females enjoying a fairly consistent advantage over males in infancy and early childhood. I then study the impact of particular causes of death, using death registration data from the Registrar General of England and Wales for the 1860s, and a recently developed method for evaluating the impact of different causes of death on differential mortality. This method partitions the effect of each cause into a 'direct' component – its impact on the difference in the expectation of life at age five years for males and females, and an 'indirect' component – measuring the way that the impact of eliminating a particular cause of death depends on the causes those who formerly died of the eliminated cause will now die from.

The analysis first focuses on 11 Registration Divisions of England and Wales. Mortality was most favourable to females in London, and least favourable to females in parts of the Midlands. The causes of death which have most impact on the sex differential are pulmonary tuberculosis (or phthisis), 'other violent deaths'; and deaths associated with childbirth. In particular, the overall sex differential is sensitive to the relative mortality of males and females from pulmonary tuberculosis. These results are illustrated by an analysis of eight smaller areas of England and Wales which have distinctive occupational and economic characteristics, including poor and 'better off' rural areas, areas where female employment outside the home was widespread, a traditional manufacturing area, a coal mining area, and one of the most notorious 'phthisis pools', where mortality from pulmonary tuberculosis was especially high. The results provide little support for the account of sex differentials in mortality which argues that females' poor bargaining position within households led to their being poorly nourished relative to males and hence more vulnerable to infectious diseases than males. In contrast, the overall sex differential in mortality was often as responsive to the nature of the mortality environment which men faced as to the experience of women. For example, females did well relative to males in south Wales because of the particularly hostile environment which males faced – with high male mortality from phthisis in rural areas, and heavy mortality from accidental deaths in the mining districts. The tendency of previous work to view the sex differential through the lens of 'excess female mortality' has obscured this point.

Jean-Pierre Dormois (Strasbourg) & **Jean-Pascal Bassino** (Montpellier III)

Socio-economic determinants of height and infant mortality in nineteenth-century France

Infant mortality and height are two of the most significant indicators of biological wellbeing across time and space. A negative correlation is typically observed between these two outcomes: the level of infant mortality, like the growth in stature during the gestation and in the first months of extra-uterine life is strongly influenced by the degree of transmissible diseases. Furthermore, differences in nutritional status and in the provision of health services also affect both indicators. In addition, an 'urban penalty' is also identified in nineteenth-century European industrial cities.

Sizeable unexplained differences can nevertheless be observed across regions apparently similar in urbanization, provision of health services, and income levels. In particular, a number of poor rural regions exhibit comparatively low infant mortality rates while lagging behind in terms of average height. This was particularly the case in nineteenth-

century France where annual series can be constructed at the *département* level for both infant mortality and the average height of conscripts.

A mismatch in the regional ranking of the two indicators of biological wellbeing is not surprising. Infant mortality could in principle drop almost immediately as a result of a massive increase in health spending, or following the introduction of new technology, whereas the growth in human stature from one generation to the next is constrained by maternal height. In practice, however, a comparison of infant mortality time series for nineteenth-century European countries reveals that the process was gradual and marred by volatility and persistent national differences.

The determinants of the rise in stature in nineteenth-century France have been already investigated. Cross section regressions using regional data show that height was influenced by various socioeconomic indicators such as wages and education (Weir 1984), as well as milk consumption (Baten 1996). The regional wages used in these studies were not adjusted to purchasing power equivalents and health indicators were not considered as possible explanatory variables. The paper proposed will rely on regional price data, the density of certified midwives and medical practitioners, along with additional indicators of educational achievement to review the determinants of changes in height. Since the determinants of mortality can be less clearly identified, we also take advantage of this regionally disaggregated data and compute *département* level infant mortality with a view to checking whether the same explanatory variables influence both height and infant mortality.

IV/F Financial History I

Chair: **Paolo di Martino** (Birmingham)

Carsten Burhop (Cologne)

Transaction costs, liquidity and expected returns at the Berlin Stock Exchange, 1892-1913

High transaction costs on security markets are a sign of market inefficiency. For example, transaction costs can limit the ability of traders to profit from mispricing. Moreover, high transaction costs increase the expected return on assets and thus reduce asset prices. Furthermore, it has been shown that multiple equilibria exists in standard capital market models: equilibria with high transaction costs, low trading activity and high volatility versus Pareto superior equilibria with low transaction costs, high turnover, and low volatility. By and large, the modern empirical finance literature has confirmed a positive risk premium of illiquidity and higher volatility. So far, this question has not been investigated using data from the nineteenth century.

We measure the size of transaction cost at the Berlin Stock Exchange for the period 1892-1913. One would expect that transaction costs were comparatively high in this market for at least two reasons. First, technology progress during the last century – e.g. the introduction of electronic trading – should have resulted into lower transaction costs. Second, stock markets are supposed to be small and inefficient in the traditional German financial system. However, we show that transactions at the Berlin Stock Exchange a century ago were of about the same size as they are in modern financial markets.

This result fits well with recent contributions investigating Germany's early stock market history. Germany had a relatively large and efficient stock market. Its size was - in relative terms - comparable to the US market. Moreover, stock price differentials for similar stocks were small within Germany. In addition, stock prices reflected risk-return characteristics of the stocks quite well and markets were weakly information efficient.

We confirm this view of a relatively efficient stock market. Moreover, we show that transaction costs vary substantially over time and across firms. Transaction costs were particularly high during periods of financial distress and they were generally higher for smaller firms.

Sybille Lehmann (Cologne)

The market for underwriter services and the importance of close bank-industry relationships in Imperial Germany, 1897-1914

Universal banks played a major role for Germany industrialization. Close bank-industry relationships ameliorated liquidity constraints of industrial firms and thereby facilitated investment and supported industrial ventures before 1895.

The argument is simple: first large banks provided loans to the industry at low interest rates; at the time of take-off they increased rates to balance the previous subsidy (Burhop 2006). A necessary feature for this purpose was a sufficient concentration of market power. Otherwise banks could not rely on firm loyalty. However, this causal relationship works only until 1895. Afterwards the concentration of the market diminished (Fohlin, 2007; Burhop, 2010).

Nevertheless, close bank-industry relationships still seemed to matter to support industrial growth in later years. For instance Fohlin (2007) shows that if a banker was a member of the control board of a firm, its chance to get listed on the stock market increased. This implies that similar importance also applies to banks in the role of lead underwriters at the time a firm goes public. The likelihood that close bank-industry relationships are still important and necessary to overcome liquidity constraints is high.

These considerations lead to the fact that we know very little about underwriter services and firm-bank relationships. This paper aims at improving our knowledge in this area by

focusing on three questions. First, what did the market for underwriter services on the German stock market look like, i.e. was it equally as concentrated to only a few, prestigious banks like the market for loans in earlier years? Second, did issues of banks with a high reputation perform differently? And third, how did a firm pick the lead underwriter in the first place?

The results surely depend on the definition of reputation and or prestige. For modern markets rankings based on the role in advertisements and market shares are quite established. We focus on market shares as a measure of reputation, since it is popular and also available for our historical sample. However, we assume that this measure is endogenous and use a two stage instrumental variable approach to account for this. According to an act of the German Parliament from June 1896, all IPOs and SEOs had to be published in an official statistical record (*Vierteljahreshefte zur Statistik des Deutschen Reichs*). The record includes the date of the issue, the name of the firm, underwriter, offering price and size of the emission. For the present paper, these records have been used to compile a dataset that includes detailed information about market shares, how they developed over time, and the frequency of activity in the market for IPOs and SEOs, their volumes and sectoral structure.

By analysing this unique dataset on all issuing activities on German stock exchanges in this period, the paper provides the first complete overview of underwriter activities of German banks not only in Berlin but also on provincial stock markets.

V/A Twentieth-Century Agriculture

Chair: **tba**

Mark Spoerer (German Historical Institute, Paris)

'Fortress Europe' in long-term perspective: agricultural protection in the European Community, 1957-2003

The history of European integration is usually told as a success story. Countries that used to fight against each other for centuries decided to cooperate politically as well as economically and established supranational institutions. More than half a century after its foundation, the European Union forms an umbrella under which its member states pursue common interests or compete peacefully for resources and markets. At least for the core of the states that joined the European Union before the turn of the century, the very idea that neighbouring states take up arms to resolve conflicts is hardly conceivable. By all political standards this is indeed a tremendous success.

This historical achievement, however, did not come without cost. As numerous states have to coordinate their decision-making, costly institutions emerged to manage the European Union. The notorious 'bureaucrats in Brussels', though, cost the European taxpayer not more than 0.06 per cent of the combined gross national income (GNI) of the EU member states. Even if some bureaucratic excesses may call for rationalization, the EU's political coordination costs are quantitatively negligible.

For an assessment of the true costs of the European Union it is not sufficient to consider administration costs alone. A more interesting issue is whether the policies pursued by the EU caused costs that feasible alternatives would not have had. In this respect the EU's Common Agricultural Policy (CAP) comes immediately to mind. In the first three decades of the EU it was the CAP that received by far most public attention, to an extent that the CAP seemed at times to be nearly congruent with EU politics. This was mirrored by the EU budget, the expenditure side of which was (and still is) dominated by the CAP, with its share peaking at 90 per cent in 1970.

Yet the CAP cost European consumers and taxpayers much more than what was visible in the EU budgets. European farmers enjoyed high protection levels against cheaper imports and even received subsidies to export their production surpluses. This may be interpreted as a huge redistribution programme from the non-agricultural sectors to agriculture. In total, however, the costs borne by taxpayers and consumers were larger than the farmers' benefits because high prices crowded out consumer demand and the subsidized expansion of European agriculture bound labour and capital resources that might have been used more productively in other parts of the economy. Hence the CAP was not just a zero-sum game.

The purpose of this paper is to present first results of a larger exercise aimed at estimating the full costs of the CAP, thus supplementing historians' EU success stories with the sober results of the cost side. Within the EU taxpayers and consumers incurred these costs while farmers benefited. Outside the EU the CAP was criticized for its protectionist effects. In this paper, we are particularly interested in the degree of agricultural protection caused by the CAP and its development over the last half century. This will allow us to assess the validity of two arguments that are often repeated. First, that the EU's Common Agricultural Policy just continued national agricultural policies, and second, that the MacSharry reform of 1992 led to a substantial reduction of agricultural protection in the EU.

Based on data compiled by the OECD and the World Bank which have so far not been used for historical research, we find that the protectionist effects of the CAP between the 1960s and the 1980s were larger than those of its national predecessors. Moreover, there is evidence that already the piecemeal reforms of the 1980s reduced the level of protection and support in the EU, that is prior to the MacSharry reform of 1992.

Eva Fernández (Carlos III Madrid)

The cost of protection to grain farmers during the interwar years

This paper looks at the welfare costs of protection of grain producers in the United States, Spain, France, Italy and Germany during the interwar period. After exploring major changes in the grain international markets, protection to grain producers is measured through the nominal rate of assistance (Anderson et al., 2008), defined as the percentage difference between the price received by producers and the world price. This rate has been calculated annually for five commodities (wheat, barley, rye, oats, and maize) for the period 1920-38.

Grain policies followed during this period in Continental Europe sought to increase domestic production and isolate domestic markets from slumps in international prices post-First World War. Wheat tariffs were reintroduced in most European countries in the early 1920s and raised after 1925 as a reaction to the slump in international prices (Liepmann, 1938). Although tariff levels were lower in 1927 than in the prewar years, domestic prices were increased significantly above world levels. The severe fall in agricultural prices after 1929 brought much greater intervention into markets. Governments raised import barriers, but also established milling quotas, import restrictions, trade monopolies, compulsory storage of surplus grains and minimum prices (Tracy, 1989; McCalla, 1969; Ménasseyre, 1934; Malenbaum, 1953; Lorenz, 1941; Bertrand, 1937). These measures were especially important in countries with authoritarian regimes, which considered food self-sufficiency as a central goal of its economic policy. As a consequence, the gap between domestic and foreign prices broadened. Protection to wheat farmers reached an average of 106 per cent in Spain, 85 per cent in Germany, 100 per cent in Italy, and 32 per cent in France. Moreover, protection measures were extended to feed grains. Maize achieved greater protection than wheat in Spain, Italy and France. Germany increased its tariffs on barley in 1929-30, which resulted in a rate of assistance substantially high (152 per cent). Exporting countries also intervened in domestic markets as a response to falling prices and decreasing demand from Continental Europe. World surplus wheat increased substantially after 1929 to account for nearly 40 per cent of world consumption in 1933-34. As a response, the United States and other exporting countries created agencies to regulate markets through storage of surplus output (Malenbaum, 1953).

Previous literature has considered that these policies resulted in a decline in grain production, causing a substantial decline in per capita consumption, especially in Germany or Italy. Moreover, high grain prices discouraged livestock production and increased the cost of animal labour (Schmidt, 1936; Cohen, 1979). This paper tries to quantify the effects of these policies. Initially, a partial equilibrium approach had been followed. Initial calculations show that the cost of protection to wheat farmers reached a minimum of 1.1 per cent of the GDP and a maximum of 3.2 per cent in France. These figures reached 0.8-2.5 per cent in Spain, 0.4-2.4 per cent in Germany, and 0.1 per cent in the United States.

V/B Gender and Property

Chair: **Eve Rosenhaft** (Liverpool)

Mary Beth Combs (Fordham)

The origins of the 1870 British Married Women's Property Act: a test of competing hypotheses

Late nineteenth-century England adopted a law that forever changed the property rights of married women: the Married Women's Property Act of 1870 gave women the legal right to own and control certain forms of property. Contemporaries hailed the Act as a major achievement of the women's movement because it gave wives married after 1870 the right to own and control personal property and thus had the potential to alter their investment decisions and wealth. Curiously, in 1857, a slightly different version of the bill to reform the property rights of married women was defeated in Parliament. In the 1869 vote, however, both liberals and conservatives in the all-male Parliament supported the legislation. A number of theories exist about why the Act was passed in 1870 but not in 1857, and what events, specifically, led to the legislative change.

That married women received property rights at all, in a male-governed society where men controlled much of the property and women had no right to vote in Parliamentary elections, has consumed the curiosity of all the major contributors to the study of married women's property legislation on both sides of the Atlantic Ocean. This paper analyses three explanations drawn from the literature on the Married Women's Property Act. The first is a political hypothesis that focuses on a shift in Parliamentary ideology that favoured class equality before the law (Griffin, 2003). The second is a political hypothesis that focuses on a shift in parliamentary ideology that favoured gender equality before the law (Shanley, 1989). The third is a public interest hypothesis: the Act, which made married women liable for familial debt, was a possible reaction to an increase in fraud that involved the separate estates of married women. This paper uses event history analysis to examine factors that may explain why the Act was passed in 1870 but not in 1857. One additional issue discussed in the paper involves the alliance that was built across groups who all wanted change but for different reasons.

Janette Rutterford (Open)

Spreading risk: how far did investors actually go?

Modern Portfolio Theory (MPT) (Markowitz, 1952) allowed investors to optimize their portfolio diversification – that is, increase expected return whilst not increasing risk as measured by standard deviation, and create so-called 'efficient' portfolios. Post-MPT, investment strategies which did not mathematically optimize return per unit of risk, such as investing equal amounts in a number of securities, were labelled 'naïve'. And yet, investors understood and discussed the concept of diversification as early as the 1870s and of international diversification by the early twentieth century.

Various papers (Edelstein, 1982; Goetzmann and Ukhov, 2005) have explored whether investors in the late nineteenth and early twentieth centuries could have diversified risk by investing part of their portfolios overseas, as authors such as Lowenfeld (1907) suggested. Researchers have also explored whether today's investors do in fact hold efficient portfolios (Goetzmann and Kumar [forthcoming]). However no systematic analysis has been done as to whether investors in pre- Modern Portfolio Theory days did in fact diversify their portfolios and how efficient these were.

There has also been substantial debate on the democratization of investment during the late nineteenth and early twentieth centuries. Rutterford et al (forthcoming), for example, have documented a decline in the size of average shareholdings over the period 1870 to 1935, a feature also noted by contemporary commentators (*Economist* 1926, *Financial Times*, 1949).

However, there is no consensus on whether this change was due to increased numbers of investors entering the capital markets or the same élite group holding more but smaller amounts of securities in an attempt at increased diversification.

This paper examines the probate portfolios of 508 investors who died between 1870 and 1902 and who held stock market securities. I look at the characteristics of these portfolios, the type of securities held, the number and value of holdings, and the changes over time. I also explore potential factors affecting the extent of diversification such as wealth, age at death, gender, and whether the portfolios were held in trust.

Preliminary results document a limited amount of diversification in terms of numbers of holdings but a reasonably efficient spread across asset classes. The average number of holdings increased over time, with little evidence of ‘democratization’. Trust portfolios had different characteristics from those without trust constraints.

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V/C Business History II

Chair: **Janet Hunter** (London School of Economics)

Bernardo Bátiz-Lazo (Bangor) & **Thomas Krichel** (Long Island & Novosibirsk State University, Russia)

The creation of internet communities: a brief history of on-line distribution of working papers through NEP, 1998-2010

Topic

More and more academic journals adopt an open-access policy, by which articles are accessible free of charge, while publication costs are recovered through author fees (see Jeon and Rochet, 2009). We study the ‘pre-history’ of this open access policy by documenting the emergence and development of a software platform created to offer a service for speedy, on-line distribution of recent additions to the broad literatures on economics and related areas called NEP: New Economics Papers.

Argument

NEP service emerged as part of a wider project called RePEc. By 2005 RePEc was one of the two leading repositories that facilitated distribution of contributions to economics and related disciplines to the relevant scientific communities through the internet. NEP was born as a free of charge alternative in the digitalization of working paper series (collections of pre-print academic articles that became a popular response to long delays in the publication of printed peer-reviewed academic journals). As other software platforms, the construction of NEP benefited a number of user groups using the same platform. But as is the case of similar multi-sided applications within the free software movement, success was contingent to reaching critical scale in the number of users and items in the depository, sorting out issues of high fixed costs, attracting talent to develop incremental innovations and differentiation. The paper thus tells of the challenges to create a successful open source platform. These include the consequences of decisions about programming (such as the selection of readymade vs purpose specific applications, negotiating host computers, etc.). It tells how it resisted attempts to develop into an online journal as a way to attract new collections and therefore, make the platform more valuable to new and prior subscribers (that is, the emergence of network externalities). But as had been the case for other online communities as the number of subscribers, collections and editors grew coordination required evolution and adaptation of responsibilities. In other words a move from ad hoc, fortuitous collaboration to the introduction of processes, procedures and formal governance (selection of content and editors, duties and responsibilities of general editor, role of editorial and technical board, etc.). Unique to this article is arguing that today’s journals have adopted an open-access policy as a direct result of the success pre-publication repositories.

Evidence

The authors who created RePEc and NEP explain the history of these resources and their continuing impact. The article will tell of the development of both technical and academic aspects of this platform. Interviews and views of others involved were also sought. Oral histories were cross referenced with email correspondence.

Contribution

Librarians viewed digital libraries as extensions of what they had long done (Cortada, 2008:318) but the use of open source software that eventually supported an online repository of working papers plus a scalable model to segment by knowledge area and distribute new additions to interested parties resulted in something more than an evolutionary development (Dongarra et al., 2008; Varian and Schonfeld, 2003). Open source software and internet

standards have been dealt with at length by economists (e.g. Economides and Katsamakas, 2006) and to a lesser extent by historians (e.g. Campbell-Kelly, 2004; Russell, 2008). Except for the collection in Aspray and Ceruzzi (2008), not much has been done by business historians and historians of technology to document the development of the internet in the commercial era. This article adds to the scarce literature to date on the formation of online communities from an historical perspective (Campbell-Kelly, 1987; Dongarra et al., 2008; Eklund, 1994; Estrin, 2000; Kelty, 2008).

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Maki Umemura (Cardiff)

Re-examining Japan's underperformance in pharmaceuticals, 1945-2005

Japan's existing pharmaceutical industry was devastated in the Second World War. But the industry recovered quickly, and in 1963, Japan had become the second largest producer of pharmaceuticals after the United States. Unlike its automobile or electronics industries, however, Japan's pharmaceutical industry did not become a global leader. Japan remains a net importer of pharmaceuticals and few Japanese drugs are found outside of Japan. The global pharmaceutical industry is led by firms from the United States, the United Kingdom and Switzerland, rather than those from Japan.

This paper traces the development of the Japanese pharmaceutical industry after 1945, and offers several explanations for why it did not become a world-leading industry. It uses two classes of medicines, antibiotics and anti-cancer drugs, as case studies for exploring the overall history of the Japanese pharmaceutical industry. These case studies were selected because of their importance to health outcomes in postwar Japan. In the immediate postwar period, the leading causes of death in Japan were infectious diseases such as tuberculosis, but in later decades, cancer morbidity and mortality rose. Japan was found to be much more successful at developing antibiotics than anti-cancer drugs.

This paper shows that, while the Japanese pharmaceutical industry had caught up with its Western counterparts by the mid-1970s, it did not exploit its potential to become a global leader. A few of Japan's leading pharmaceutical firms did develop blockbuster drugs and expand overseas, but most firms remained domestically oriented. The major reasons why Japan did not develop a strong pharmaceutical industry lay in the lack of R&D incentives, the government's protectionist policies, industrial structure, and Japanese medical culture. Other reasons of secondary importance include the industry's historical origins in import houses, national differences in patterns of disease, Japan-specific drug standards, and barriers to entrepreneurship among university academics.

The main contribution of my research is to provide a multifactoral explanation for the development of Japan's pharmaceutical industry. One original explanation is to suggest that medical culture played a significant role in the shaping of Japan's pharmaceutical industry. My paper addresses several different fields. This includes works on the history of the pharmaceutical industry, contemporary works on the Japanese pharmaceutical industry, works on Japanese industrial policy, works on late development, and scholarship on the varieties of capitalism. My research is based on a range of published sources and on archival sources in Japan and the United States; these are supplemented by interviews with company executives.

V/D Labour Supply

Chair: tba

Jessica Bean (Denison)

'Not much use in disliking it': labour supply among female home workers in London, 1897-1908

This paper uses newly compiled data from two surveys of female home workers undertaken by the Women's Industrial Council in London in 1897 and 1907 to investigate various issues related to their labour supply. Though home workers in this time period were the subject of much public discussion and served as catalyst to a major social policy change, the minimum wage legislation offered by the Trade Boards Act of 1909, they have largely stayed under the statistical radar. They were difficult to count, naturally excluded from regular wage surveys in factories and workshops, and most likely undercounted in the census. Who were they? How long were their hours, and how low their wages? What was the relationship between wages and hours among this group? What is it possible to conclude about their reasons for being in the labour force, and in home work in particular?

The Home Industries of Women in London reports detail the occupations, average weekly earnings and hours, marital status, and household size, composition and total income of approximately 850 female home workers, offering a unique, and as yet unused, opportunity to explore labour supply behaviour among the lowest-paid workers in the early twentieth century. Analysis of the data reveals that the female home workers who were surveyed were drawn overwhelmingly from poor households. The poverty rate among the households of these home workers was almost 50 per cent, and would have been over 85 per cent without their earnings. Most were married or widowed, and the majority of married workers reported that their husbands were out of work, sick, disabled, or in casual or irregular work. Weekly wages and hours of work varied considerably by industry, but averaged about 7-9s. and 40-45 hours per week, with many workers reporting the desire for more work. The correlation between hours of work (daily and weekly) and hourly wages was negative and significant, suggesting that those who earned the lowest hourly wages needed to work longer hours in order to make a living. Contemporaries suggested that women driven into the labour force by immediate household need were forced to take the lowest paid work, whether because they lacked skill and experience or bargaining power in the labour market. While it is difficult to distinguish one explanation from another, I do find that the wives and daughters of men who were out of the labour force due to unemployment or illness tended to work longer hours at lower wages, and that having a household member who was sick, disabled or out of work exerted downward pressure on a female worker's wage rate. Anecdotal evidence in the reports is also suggestive – there were indications that women from better off households were able to refuse work they considered to be beneath them, while poorer women spoke of taking what they could get. The conclusion is that, overwhelmingly, female home workers in this time period were motivated by poverty and exhibited labour supply behaviour that is consistent with that observed in developing countries today.

Kentaro Saito (Kyoto Sangyo)

Labour market integration and British engineers, 1856-1965

This paper discusses labour markets in Britain between 1856 and 1965, focusing on skilled engineers. Data for engineers' wages are combined with data for their migration to develop an argument about the drivers of market integration.

Markets are thought have become better integrated regionally and then nationally as industrialization proceeded. In previous studies, some major sections of workers, e.g. carpenters and agricultural labourers, have been especially well-researched. In contrast, this paper focuses on a more modern section of skilled workers, engineers, one of the most typical

groups among the skilled in nineteenth and twentieth century-British industry. While they have been discussed in relation to artisans' migration, wage-movements on a regional level have not yet been documented comprehensively.

Firstly, therefore, this paper documents the movements in wage rates of skilled engineers, i.e., fitters and turners, in more than 70 British towns over a relatively long period to show patterns of inter-regional and intra-regional integration. This is based on the archives of the Engineering Employers Federation (EEF), established in 1898 with a Statistical Department collecting historical data on wages. The paper shows that labour markets of engineers were continuously being integrated throughout the period, and also that cointegrations in some groups of towns existed. These discussions are also supplemented with data for the lesser skilled workers in the trade.

Secondly, the paper explores the links between labour market integration and its drivers: skilled workers' migration, the establishment of new institutions and binding rules, and technological change. Migration of workers between regional labour markets is thought to have been a strong impetus for national market integration. However, although the migration of skilled workers between towns, or 'tramping', has been well-documented by previous research, this has not previously been fully combined with data for wage movements. The paper, therefore, provides data constructed from the travel records of the Amalgamated Society of Engineers (ASE), which from 1865 recorded monthly journeys of its members between more than 200 branches in England, Scotland and Ireland.

Finally, the paper discusses the relationship between the frequency of engineers' migration and the integration of their labour market. The number of travel-cards issued fluctuated throughout the period and its frequency can be shown to match closely the trade cycle of the engineering industry. In addition, the paper also refers to the influence of changes in institutions on both the workers' and the employers' side, and of new technology in the industry. By discussing these points, it aims to add new dimensions to the discussion of labour market integration.

V/E Social Mobility

Chair: **Niels van Manen** (Manchester)

Gregory Clark (California, Davis)

Was there ever a ruling class? Social and economic mobility in England, 1200-2010

The paper measures long run social mobility in England from 1200 to 2010, using three methods: common surnames such as ‘Smith’ (1200-2010), rare surnames such as Bazalgette (1560-2010), and the linking of testators with rare surnames with their grandchildren, great grandchildren and even more remote descendants (1450-2010). All three sources suggest that all through history England displayed complete long run economic and social mobility, with no group persistently staying above or below average. Thus evidence from both attendees at Oxford University and from those leaving high status wills suggest that there was a rapid and almost complete rise of men whose ancestors circa 1300 were artisans, as witnessed by surnames such as Smith and Tiler, into the higher ranks of society by 1500. Equally, however, there was a rapid descent of the original landed classes of the thirteenth century, again witnessed by distinctive surnames such as Neville, into the middle class and into the criminal classes by 1600. Measures of the speed of this diffusion, from the wills of fathers and sons, show that the process was just as fast before 1600 as it is in the modern world. The last part of the paper asks why this was possible in what has been regarded as a relatively traditional and hidebound society, particularly before 1540? And why was it just as possible before the emergence of modern public education as in a world where literacy was privately acquired?

Patrick Wallis & Chris Minns (London School of Economics)

Apprenticeships and social mobility in early modern England

Craft apprenticeship was a leading source of skill formation in early modern England. Traditional interpretations of craft apprenticeship emphasize that it was primarily an activity engaged in by youths from the ‘middling sorts’ with well-developed familial networks linking prospective apprentices to potential masters. The social and geographical narrowing of the pool of entrants in the later seventeenth and eighteenth centuries has been seen as one factor leading to the consolidation of urban oligarchies in English cities. Recent research suggests that entry into apprenticeship may have been more open to those without observable ties than was previously thought (Leunig, Minns, Wallis, 2009) and that apprenticeship structures were flexible and adaptable to the circumstances of individuals (Minns and Wallis, 2009). A natural question to ask is whether the relative openness of apprenticeship meant that the institution also provided a stronger source of social and intergenerational mobility than has sometimes been suggested in some analyses. This is particularly pertinent as understanding the sources of social mobility, and when societies began to present large-scale opportunities for economic betterment, are at the leading edge of historical debates in the field.

This paper uses evidence from London apprenticeships to examine the degree of social fluidity that operated through this institution. By linking evidence on the wealth of apprentices and their masters recorded in the Hearth Tax for several counties in the 1660s to an extensive dataset containing the details of apprenticeship indentures recorded by London’s livery companies, we are able to explore the determinants of entry into trades and the subsequent social and occupational trajectories of individuals. In particular, we consider how wealth and social status affected the likelihood that an apprentice would become an independent master with his own apprentices. This broad measure of occupational success allows us to consider the relative significance of parental wealth and status; geography; social capital in the form of connections within the city; and the wealth and success of the masters’ involved in training. Our endpoint is a consideration of the relative significance of parental resources against acquired human capital in shaping social mobility within early modern urban society.

V/F Financial History II

Chair: **Anne Murphy** (Hertfordshire)

Catherine R Schenk (Glasgow) & **John Singleton** (Sheffield Hallam)

Foreign reserves management in the 60s and early 70s: Australia and New Zealand

In recent years there have been suggestions, albeit contested, that the US dollar is in decline and that other countries would be well advised to diversify their foreign reserves. The rapid growth in reserves held by Asian countries since the late 1990s, the quick evaporation of these reserves in the wake of currency crisis and the anticipation that more countries will wish to accumulate precautionary reserves as the current global crisis recedes also raise questions of the appropriate level of reserves, motives for holding reserves and how reserves should be managed in an environment of volatile exchange rates. There is now an extensive literature on these issues, emanating both from academics and from official agencies such as central banks and the IMF, but the prevalence of political and institutional factors means that understanding the practical issues of reserve management remains underdeveloped, 'rule of thumb' guidance persists and there is no predictive model for global reserves.

Forty years ago the application of economic analysis in the field of foreign reserves management was in its infancy. Central banks and governments were even more reliant on rule of thumb judgements, such as relating desired reserves to months of imports, than they are today. Some of the problems faced by these institutions were similar to those of recent times, such as exchange rate instability, the desire for precautionary reserves, and underdeveloped local capital markets (such as in China today), but others were very different. The 1960s saw the progressive weakening of the Bretton Woods system and of the Sterling Area mechanism. Nations that had traditionally held their reserves in the form of sterling were planning diversification, though the US dollar did not necessarily offer a safe haven at a time of weakness in the gold value of that currency. In the early 1970s, just as exchange rate instability increased, a general commodity boom brought a massive expansion in reserve holdings for some primary exporting economies, albeit a short-lived one for those without large oil reserves, and posed new challenges for these states.

This paper examines the reserves management policies of Australia and New Zealand – two of the core members of the Sterling Area – between the mid-1960s and the mid-1970s. Using quantitative and qualitative data from Australian, New Zealand, and British central bank and government archives, the authors show how the authorities adjusted their strategies to the changing environment of trade, debt and exchange rate risk. What level of reserves did they consider to be adequate, and how does their analysis stand up in relation to modern thinking on the appropriate level of reserves? When diversifying away from sterling – a process that was faster in Australia than in New Zealand – how did they decide on the allocation of reserves between currencies, and do their actions make sense in the light of modern thought in this area. Both countries were under pressure (from the British) to manage their diversification strategies in order to avert a stampede out of sterling. Their reactions are of interest to countries that might face similar pressures in the future.

This paper, which complements earlier work by the authors on the exchange rate policies of Australia and New Zealand in the 1960s and 1970s, makes a contribution to our understanding of how small to medium sized countries chart a course for themselves in the area of external monetary policy when confronted by major shifts in the global balance of economic power.

Economic History Society Annual Conference

30 March – 1 April 2012
St Catherine's College, Oxford
Call for Academic Papers

The 2012 annual conference of the Economic History Society will be hosted by St Catherine's College, University of Oxford from 30 March – 1 April.

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) for further information.

The committee invites proposals for individual papers, as well as for entire sessions (3 speakers, 1.5 hours duration). Please note that 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.

Proposals should please be submitted online via the Economic History Society website (www.ehs.org.uk). You will be asked to submit:

For single paper submissions:

- The title of the paper proposed.
- A short abstract of the paper proposed (400-500 words).*
- Up to five keywords, which can be used to help the conference coordinating committee allocate papers between sessions.
- Contact details (name, affiliation and e-mail address; including those of co-authors).
- A brief C.V.

For sessions:

- The title of the proposed session.
- The rationale for the session (up to 100 words).
- The titles of each paper proposed.
- A short abstract for each paper proposed (400-500 words).*
- Contact details for each speaker (name, affiliation and e-mail address; including those of co-authors).
- A brief C.V. for each proposed speaker.

* The abstract(s) should: explain the background to the paper; the questions it addresses; the sources and methods it employs; and the main conclusions or findings.

For full consideration, proposals must be received by 12 September 2011. Notices of acceptance will be sent to individual paper givers by mid-November 2011. Should your paper be accepted, you will be asked to provide the following:

- A revised abstract of the paper (750-1,000 words) for inclusion in the conference booklet (by 12 December 2011).
- A brief non-technical summary of your paper (if required) for the 'Media Briefings' section of the Society's website (by 1 February 2012).
- An electronic copy of your full paper, or a web address where the paper is available for consultation (by 1 March 2012).

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. It is important that a completed application form is submitted by the September deadline. Only in exceptional circumstances will later applications for support be considered.

Any queries should please be directed to: Maureen Galbraith.

Economic History Society Annual Conference

30 March – 1 April 2012

St Catherine's College, Cambridge

Call for New Researcher Papers

The 2012 annual conference of the Economic History Society will be hosted by St Catherine's College, University of Oxford from 30 March – 1 April.

The annual conference opens with papers presented by new researchers. They offer those completing (or who have recently completed) 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 30 March 2012. Those wishing to be considered for inclusion in the programme must submit a synopsis by 5 September 2011. This should provide: a firm title; a succinct summary of the principal themes and methodology of the paper; and an outline of probable conclusions. Proposals should please be submitted online via the Economic History Society website (www.ehs.org.uk).

The synopsis should be of not more than 500 words. It must be accompanied by a clear statement of the progress of research and intended date for submission of thesis. A supporting statement from the supervisor must be emailed separately. 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 12 December 2011 for circulation in the conference booklet. Each new researcher will have the opportunity to speak for 20 minutes, followed by 10 minutes of discussion. Up to 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.

Any queries should please be directed to:

Maureen Galbraith
Economic History Society
Department of Economic & Social History
University of Glasgow
Lilybank House, Bute Gardens
Glasgow G12 8RT
Scotland, UK
E-mail: ehsocsec@arts.gla.ac.uk

* New researchers, who have achieved their PhD by 31 December in the year preceding the conference, will not be eligible for the New Researcher Prize.