

Uncovering the risks of apprenticeship, drop-out rates in early modern Antwerp, 1581-1781

Sietske Van den Wyngaert, Fellow of the Research Foundation Flanders, University of Antwerp

(sietske.vandenwyngaert@uantwerpen.be)

Supervisor: Professor Bert De Munck

Early modern apprenticeships marked an important stage in the lives of youngsters, predominantly boys, during which they received a technical training from a master artisan. While some historians study apprenticeships as a form of socialization, in recent years the historical agenda has been mainly focussed on the role of apprenticeship in human capital formation. Important groundwork was laid by Stephan R. Epstein, who created a theoretical model to understand how incentives to invest time or money were aligned for master and apprentice. He argued that the cost of training was highest during the first stage of the term when masters invested time and materials in insufficiently skilled apprentices.¹ Apprentices only became valuable to their master during the second stage of term, when their skill revenue had increased. This resulted in a fundamental imbalance between costing and gaining income between both stages of term, leading to high risks of opportunistic behaviour for either party. Apprentices were most at risk during the first stage of term to receive inadequate training, while masters were especially at risk during the second stage of term of losing their investment as better-trained apprentices had incentives to leave early and seek market wages.²

Recently, Patrick Wallis argued that Epstein's model misinterprets the manner in which apprentices acquired skills, which occurred not by intensive training but rather by observing, delivering, watching shop and performing other useful tasks.³ As a result, apprentices already contributed to their masters' workshop from the beginning of the term. Moreover, according to Wallis, Epstein's theoretical model also mistakenly presumes that apprentices started from zero in each subsequent apprenticeship they commenced. This is contradicted by recent research that highlights that only less than half of all apprenticeships were served out. A high turnover of apprentices over multiple masters implies previously acquired skills, which do not fit in Epstein's model. Wallis concludes that learning and working were indistinguishable and that, as a result, neither party was ever at high risk of opportunism during the course of term.

Although this revised model has successfully forced scholars to adopt a renewed understanding of the balance between learning and producing – costing and gaining income – little has changed in the way in which drop-out rates are interpreted. Scholars often assume, still within the framework of Epstein's model, that economic opportunism was the dominant reason for apprenticeships to break off. However, in line with Wallis' revision, it is crucial to re-determine why drop-outs occurred so frequently to determine whether opportunistic behaviour really was the most important reason for early departure. Why were so few apprenticeships served out? What is the connection between drop-out rates and economic cycles? At which stage were apprenticeships most at risk of breaking off?

Drop-out rates

As yet, drop-out rates remain elusive. Scholars can calculate drop-out rates at the aggregate level, but they are often unable to reveal exactly why and when apprenticeships broke off. Due to the scarcity of sources, drop-out rates are mostly calculated indirectly (based on linking apprentice- and freemen records) or based on crossed-out names written in the margin of apprentice registers or contracts. Efforts to reveal the exact cause for departure are mostly based

¹ Epstein, 'Craft Guilds, Apprenticeship and Technological Change', 690-691.

² Schalk, 'Splitting the bill', 46; Rappaport, *Worlds within worlds*, 315.

³ Wallis, 'Apprenticeship and Training', 841-846; Krausman Ben-Amos, *Adolescence and Youth*, 101 and 105-106.

on process files, which are unrepresentative. By combining multiple sources regarding the outsourcing of youngsters this study is able to capture entire learning careers, from roughly age six to economic independence. By linking sources I have gathered information on the ending of term, more specifically whether and why the term was prolonged, served out or ended early. The meticulous registration of the officials who oversaw the apprenticing of youngsters allows us to distinguish between as many as 47 very specific reasons for departure, which have been subdivided into 11 categories. In addition, the sources uncover information on other important factors in the term that could have contributed to drop-out, namely the clauses of the apprenticeship contracts, wages, tools or clothes that were bought, conflicts or occurrences between master and apprentice, renegotiations of the contractual terms and issues regarding the qualification and/or willingness of the apprentice to learn.

Information was gathered for six cohorts that each cover ten years, ranging between 1581 and 1776, allowing my project to detect long-term changes. There was no selection made based on occupations, which resulted in a sample group that is roughly representative for occupational patterns of the broad middle layers. Combined, I have accumulated data of 1955 apprenticeship terms from 1606 individuals.

It is the purpose of this article to analyse both the reported reasons for drop-out as recorded in the sources, as well as to search for correlations between drop-out and characteristics of the apprenticeship. Although the categories of departure as recorded in the sources provide us with a truly unique insight into apprenticeship practices, it might be problematic to take them at face value. A recorded account of an apprentice who was dismissed after a fight may either reveal an unsuccessful pairing of master and apprentice, or it might disguise opportunistic behaviour by the apprentice who may have forced their master into breaching contract in order to be free to work elsewhere.

Table 1: *Reason for departure*

	Completed	28.1%
	Unspecified	29.3%
Drop-out	Transfer to another master	17.8%
	Absconding (<i>conflict, marriage, unwillingness to work, etc.</i>)	11.3%
	Dismissal (<i>skills, misbehaviour, theft, etc.</i>)	5.6%
	Mortality and health apprentice	3.3%
	Economic hardship	1.7%
	Contract breach master (<i>abuse, exploitation, negligence, etc.</i>)	1.1%
	Employment elsewhere	0.9%
	Mortality and health master (and wife)	0.5%
	Cancelled prior to start	0.4%

Table 1 uses the apprenticeship records to provide an overview of the reported reasons for departure. When excluding the endings which remain unknown, the table indicates that 60.3 per cent of the contracts were not served out.⁴ Only Bristol and Salisbury saw even more apprenticeships break off (83 and 79 per cent respectively).⁵ Continental drop-out rates reveal large regional and occupational variations: while only 17.7 per cent of Lyonnais silk-weaving apprenticeships ended early, Amsterdam pastry bakers and pig butchers failed to serve out their term in 42 to 53 per cent of all cases.⁶

⁴ 833 drop-outs out of 1382 apprenticeships of which the ending is known.

⁵ Yarbrough, 'Apprentices as adolescents', 80; Griffiths, *Youth and Authority*, 330-331; Clark, 'Migrants in the City', 269-270.

⁶ Schalk, Wallis, Crowston and Lemerrier, 'Failure or Flexibility', 140.

Perhaps surprisingly, completed terms only lasted 1,9 years longer on average than uncompleted terms (3,8 and 1,9 years respectively).

Fewer points of reference to scholarship exist in regard to the exact reasons for departure. In my sample, the most common reported reason for early departure was the transfer from one master to another, thereby changing to another training in the same or a different profession. Herein, the distinction between training and working for market wages is crucial. That is, only 0.9 per cent of apprenticeships ended as the result of apprentices leaving training with the clear intention to work for wages elsewhere. Already, this potentially challenges dominant assumptions in scholarship. Absconding, accounting for 11.3 per cent, covers a wide array of motivations from opportunism to troubled relationships between master and apprentice or simply apprentices' desire to get married. Not shown in this table, but only 3.6 per cent of absconders left to work for wages elsewhere. Instead, most apprentices ran away after theft. Dismissals, the cause for 5.6 per cent of all outcomes, were initiated by masters and were mostly in regard to apprentices' inability to learn a trade (e.g. poor eyesight). Contract breach, only accounting for 1.1 per cent of the sample, was mostly related to masters' mistreatment and violence, although providing an inadequate training also did occur in a minority of these cases.

The categories above indicate that economic opportunism was, at least on the surface, not as predominant in ending apprenticeships as is often assumed by scholars. The following section tries to shed new light on drop-outs by taking into account important variables – such as chronological patterns, moment of departure and markers of the quality of the training – to verify that economic opportunism did not determine drop-out rates.

Graph 1: *Drop-out rates*



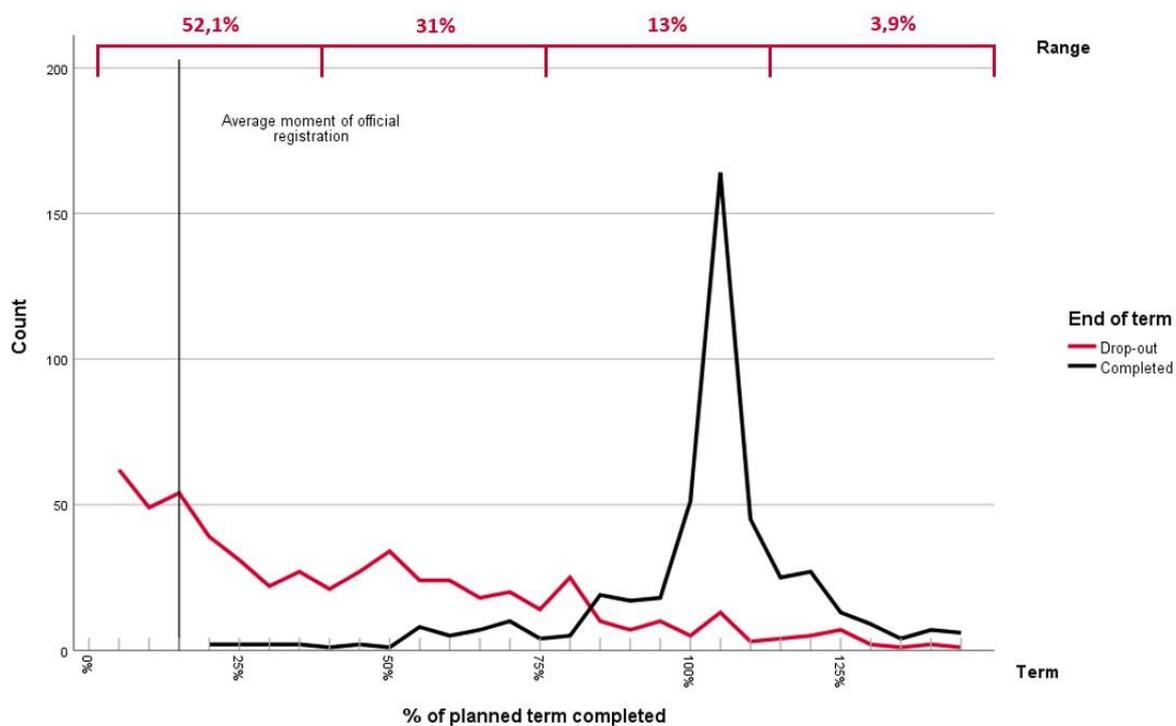
Graph 1 already challenges different dominant assumptions in literature. Firstly, it shows a structural decrease in drop-out rates throughout the early modern period, challenging scholars' expectations that an overall increase of drop-out rates occurred during the eighteenth century as a reflection of the diminishing importance of formal training. Secondly, despite recent revision, many scholars still use Epstein's framework of economic opportunism to predict and explain drop-out patterns and regard economic cycles as important predictors for drop-out rates.⁷ Following this logic which is based on theory rather than empirical evidence, early break offs are thought to have soared in growing economic climates with many apprenticeships collapsing under the pressure of better (paid) opportunities at market wages elsewhere.

⁷ Reith and Griessinger, 'Lehrlinge im Deutschen Handwerk', 181-183.

Surprisingly, recent research has shown that the opposite occurred in Lyon, where a growth in urban industries was accompanied by decreased exits.⁸ Lyon's position as an outlier is attributed to the city's specific economic and corporative-institutional context. However, based on the similar chronological pattern of drop-out rates that emerge in Antwerp, Lyon's case raises the question if it is indicative for a wider trend.

Similar to Lyon, the fluctuation of drop-out rates in Antwerp coincides with economic cycles in a manner opposite to the pattern that scholars would expect. Periods of economic growth – whether gradual (1655-65) or recovering (1766-76) – witnessed a decline of uncompleted apprenticeships. Correspondingly, more apprenticeships broke off early in times of economic hardship – both in a deep crisis (1581-1591) and in periods of lingering economic downturn (1692-1702 and 1729-39). This suggests that apprenticeship as a system did not primarily succumb under pressure of the apprentices' search for higher wages. This is not surprising, as we have already established that very few apprentices left with a clear motivation to seek paid employment elsewhere. Instead, the biggest threat may have been the inadequacy of training. Apprenticeships experienced less pressure in times of economic growth, when there was plenty of work and, therefore, learning opportunities and practice a trade. Economic downturns brought slackening businesses, resulting in fewer opportunities to learn and work. That chronological patterns of drop-out rates could be explained as the result of a search for adequate training rather than a search for economic opportunities is further underlined by evidence on the exact time of departure.

Graph 2: *Real time of departure, relative to planned term duration (%)*



The exact moment of departure does not confirm scholars' assumption that a great deal of agency should be attributed to apprentices who were prone to leave their master once they had acquired a sufficient amount of skills to work at higher market wages instead of further refining their skills. Instead, graph 2 shows that the real time of departure, relative to the planned term duration (set at 100 per cent), shows no indication of (this type of) economic opportunism carried out by apprentices. Rather, the figure reveals that over half of the uncompleted apprenticeships (52.1 per cent) ended before 37 per cent of the planned term was carried out. It is unlikely that many apprentices had a sufficiently advanced skill-set to sell their labour for

⁸ Schalk, Wallis, Crowston and Lemerrier, 'Failure or Flexibility', 138-143.

market wages at that early stage of their planned term. Based on the recorded accounts, the peak in drop-outs in the first quarter of term reflects transfers to another master (35.9 per cent), absconding (30.9 per cent) and dismissal (15.1 per cent). The peak in drop-outs starts to decline once apprentices were officially registered.

Surprisingly, a number of apprenticeships were regarded as successfully completed after only a fifth of the planned term had been carried out. Most of these cases concern older apprentices, who were presumably able to master a trade more quickly than expected. Only respectively 31 and 13 per cent of uncompleted apprenticeships ended in the second and third quarter of the range of drop-outs. Another 3.9 per cent of apprenticeships broke off after – technically – completing the duration of the planned term, but were nonetheless labelled as runaways and other types of drop-out in the historical accounts. All this suggests that drop-outs were not caused by economic opportunism of adequately-skilled apprentices who transferred to wage labour, but rather that a large group of drop-outs were the result of apprentices transferring early on to another master to continue their training.

Table 2: *Drop-out rates and contractual clause ‘official registration’*

			End of term	
			Drop-out	Completed
Official registration in guild ledger	Yes	Count	21	51
		% of Total	19,6%	47,7%
	No	Count	21	14
		% of Total	19,6%	13,1%

a. Pearson Chi-Square: 9,390
p: 0,002

The cyclical course of drop-out rates (graph 1) points towards the importance of connecting early departures to variables regarding the quality of the training and its prospects. There was no correlation established between drop-out and the extensiveness of the contract measured by the number of contractual clauses ($\chi^2 = -0.105$, $p = 0.758$), nor the inclusion of a clause that obliged the master to teach his trade to the best of his abilities ($\chi^2 = -0.349$, $p = 0.293$). Instead, there was a significant correlation between drop-out rates and official registration of the apprentice in the guild ledgers ($\chi^2 = 9,390$, $p = 0.002$). The ratio completed/drop-out of the apprentices who were officially registered was 2.4, compared to a ratio of 0.7 from the unregistered boys. Of all the apprentices who completed their term 78.5 per cent were registered, compared to 21.5 per cent of unregistered but successful apprentices. The official registration of apprentices had a reducing effect on drop-out rates. Official registration was not only an important enforcer, it might also be regarded as an important marker for the quality of the training and the opportunities connected to serving out. It was an incentive to stay or a factor that – if missing – put pressure on an apprenticeship. Registration provided opportunities for a future as journeyman or master. Its enforcing effect stems from the fact that registration fees were often paid at the beginning of term with the master promising to officially enrol the apprentice as soon as possible. As a result, the parties on the apprentice’s side had more interest in serving out the term as registration fees were already paid. It also placed expectations on the master, who was held accountable to the opposite parties as well as his craft guild colleagues. Moreover, further evidence in the sample underlines that neglecting the registration of an apprentice put pressure on apprenticeships. Master shoemakers who failed to register their apprentice were more than 30 per cent more likely to lose their apprentice solely to running away. Close to 80 per cent of official registrations in our sample occurred during the first quarter of term.

Conclusions

Firstly, this study shows that, in line with Wallis' arguments, evidence for Epstein's theoretical framework is not found in long-term empirical evidence on apprenticeship terms. In addition, this study introduces arguments against scholars' persistent assumption that economic opportunism was the predominant source of pressure put on apprenticeships. There is no indication that drop-out is mainly connected to strategies of economic opportunism. Rather, most apprenticeships were not served out as the result of apprentices transferring to another master, absconding or being dismissed by their master.

That economic opportunism never was the primary cause of drop-out in Antwerp is proven by the cyclical course of drop-out rates in function of economic cycles. Long-term drop-out cycles do not coincide with economic cycles in the way that scholars expect. Instead, drop-outs stagnated and/or declined during times of economic growth and rose during times of economic hardship. This does not point towards economic motives of apprentices, but rather points towards the possibility that apprentices were not in search of higher wages but in search of a better training. This could also explain why the majority of apprenticeships broke off as the result of apprentices transferring to another master to continue training, rather than wage labour. Another argument against Epstein's theory is that most apprenticeships ended well within the first half of term, at which point it is unlikely that apprentices were sufficiently skilled to sell their labour for market wages. There was a significant correlation between drop-out rates and the official registration of apprentices, that had a reducing effect on drop-out rates. It appears that most apprentices were in search of a qualitative training that provided them with opportunities for the future in the form of official registration.