

Can We Rehabilitate the Guilds?
A Sceptical Re-Appraisal

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Abstract: This paper examines recent attempts to rehabilitate pre-modern craft guilds as efficient economic institutions. Contrary to rehabilitation views, craft guilds adversely affected quality, skills, and innovation. Guild rent-seeking imposed deadweight losses on the economy and generated no demonstrable positive externalities. Industry flourished where guilds decayed. Despite impairing efficiency, guilds persisted because they redistributed resources to powerful groups. The ‘rehabilitation’ view of guilds, it concludes, is theoretically contradictory and empirically untenable.

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A guild is an association formed by a group of people who regard themselves as sharing some common characteristic and wish to pursue some common purpose. The characteristics uniting guild members might be as various as residential propinquity within a town, religious observance, or alien geographical origin. In Europe, however, by far the most frequently observed characteristic around which guilds were formed was occupation, and the commonest type of guilded occupation was manufacturing. Throughout the medieval and early modern periods, most European craftsmen and even many export-oriented proto-industrial producers organized themselves into guilds. The typical guild, therefore, was a craft guild – a local association among the independent practitioners in a particular branch of industry in a particular locality, usually centred in a town but often including surrounding rural areas. Some craft guilds pursued religious, cultural, social, and political activities, but all craft guilds pursued economic ones. The one universal purpose uniting members of any European craft guild was to obtain charters and ordinances from the political authorities endowing its members with exclusive rights to practise a particular industrial occupation and to enjoy privileged access to its input and output markets.

The craft guild was one of the most widespread institutions in Europe from the Middle Ages to the Industrial Revolution. Although it began to break down in some European societies as early as the sixteenth century, it survived in others well into the nineteenth century. Its widespread existence and long survival raise the question of why it existed, what impact it had on European economic development, and whether it provides any insights into the institutional sources of economic well-being more widely.

For as long as guilds have existed, people have been divided about the impact they exerted on the economy. Contemporaries already held strong views about guilds, with mercantilists and cameralists such as Colbert and Becher regarding them as essential for national industrial development while early political economists such as De la Court, Childs, Smith, and Turgot advanced more critical assessments. Historians, too, have been deeply divided on the question, with some arguing that guilds exercised harmful monopolies, others that guilds were economically powerless, and still others that guilds were positively beneficial.²

The traditional historiography on guilds consisted mainly of economic historians criticizing the monopolistic regulations in guild charters, and social historians celebrating guilds' contribution to pre-modern social solidarity – two perspectives that seldom intersected. In recent decades, however, these views have been brought together by a group of scholars who use arguments derived from a particular strand of economics to buttress their favourable view of guilds as social institutions. These scholars argue that the craft guild was so widespread and long-lived that it must have been an efficient solution to economic problems facing early modern industries.³ According to one such enthusiast, 'Guilds were not in fact the rent-seeking organizations bound by tradition and against technological change painted by their Liberal critics, but flexible and adaptable associations ...'.⁴

These scholars have sought not only to downplay the negative effects of guild monopolies and rent-seeking, but to make a positive case for guilds as solutions to market failures. Some

¹ I thank André Carus, Tracy Dennison, and Jeremy Edwards for their very helpful comments on earlier versions of this paper.

² For surveys of the European guilds debate, see Bräuer 1993/4; Ehmer 1998, pp. 19-35; Epstein 1998, pp. 685-6; Gustafsson 1987, pp. 1-7, 12-13; Ogilvie 1997, pp. 308-10, 339-66; Pfister 1998, pp. 12-14; Reith 2000, pp. 21-8.

³ For representative recent examples, see Epstein 1998; Gustafsson 1987; Hickson / Thompson 1991; Pfister 1998; Reith 2000; and a number of the essays in Epstein et al. 1998; Haupt 2002; and Prak et al. 2006.

⁴ Epstein 1999, p. 986.

adherents of this view have argued that guilds existed to solve asymmetries of information between producers, merchants, and consumers concerning *product quality*, thereby increasing the volume of exchange and enabling industries to expand over larger spatial areas.⁵ Others have claimed that guilds existed to overcome imperfections in markets for *trained labour*, thereby both increasing the volume of exchange and improving industrial productivity.⁶ Still others have contended that guilds existed because they were an efficient institutional solution to imperfections in markets for *technological innovations*, creating incentives for innovators to invent new ideas and disseminate their innovations more widely.⁷ Guilds persisted so widely and for so long, these scholars argue, because they were economically efficient institutions.

At the same time, some political scientists have begun to adduce guilds as historical exemplars of ‘social networks’ which generated beneficial ‘social capital’ for the economy as a whole. Thus a final and more general version of the case for the economic benefits of guilds has claimed that they created social capital by sustaining shared norms, punishing violators of these norms, effectively transmitting information, and successfully undertaking collective action. This in turn is supposed to have heightened the overall level of trust in the society, causing markets and governments to function better and benefiting aggregate economic growth and social well-being.⁸

In a series of publications over the last decade or so, I have argued that these teleological views of guilds as efficient and beneficial economic institutions are flawed. Empirically, they have relied mainly on legislative or literary sources, often assembled impressionistically from the secondary literature on a wide array of different societies and time periods.⁹ Theoretically, their arguments are contradictory and uncorroborated. Detailed case studies of what particular guilds actually did, combined with cross-European comparisons on an industry-by-industry basis, indicate strongly that guild rent-seeking and monopolies were a major *source* of market failure in pre-modern economies. The widespread persistence of guilds was caused not by their efficiency, but by the fact that they redistributed resources in ways that benefited the powerful.¹⁰ This more sceptical view of pre-modern guilds, as I have pointed out, is supported by empirical findings from outside the guilds debate, including much of the literature on the history of technology,¹¹ women’s work,¹² migration,¹³ Jewish occupations,¹⁴ illegitimacy,¹⁵ and economic marginalization.¹⁶

Enthusiasts for guilds, however, continue to claim that their favourable economic assessment of pre-modern guilds has turned into a ‘modern consensus’ from which there can no longer be any deviation. In December 2006, a conference was held at Utrecht on ‘The Return of the Guilds’, at which criticisms of guilds were almost universally dismissed in favour of a new orthodoxy, according to which guilds were described as flexible and well-functioning

⁵ Pfister 1998, pp. 11, 14-18; Gustafsson 1987; Reith 2000, pp. 49-53.

⁶ Epstein 1998, pp. 688-93; Pfister 1998, pp. 14, 18.

⁷ Epstein 1998, pp. 693-705; Reith 2000, pp. 45-8.

⁸ Putnam et al. 1993, pp. 163-85; Raiser 2000, p. 231.

⁹ As vigorously criticized, e.g., by Ehmer 1998, pp. 29, 40; Bräuer 1993/4, p. 37.

¹⁰ See the theoretical discussion and empirical findings in Ogilvie 1997; Ogilvie 2003; Ogilvie 2004a; Ogilvie 2007.

¹¹ Clark 1936; David 2004; Mokyr 1999; Mokyr 2002; Mokyr 2005a; Mokyr 2005b; Mokyr 2005c; Mokyr 2007.

¹² Bandhauer-Schoeffmann 2006; Coffin 1994; Crowston 2001; Eibl 1995; Hafter 1995; Hafter 2001; Jacobsen 1998; Ogilvie 2003; Simon-Muscheid 1998; Vámos 1987; Van Neederveen Meerkerk 2006a; Van Neederveen Meerkerk 2006b; Quataert Vicente 1996; Wiesner 1990.

¹³ Esser 2006; Goose / Luu 2005; Lee 1999; Luu 2005, esp. ch. 4; Yildirim 2006, esp. pp. 6-8, 16.

¹⁴ Botticini / Eckstein 2003; Penslar 2001; Wischnitzer 1965.

¹⁵ Boes 2003; Kuehn 2002; Ogilvie 1986.

¹⁶ Boes 2003; Stuart 1999.

institutions which benefited pre-industrial European economies and societies.¹⁷ A recent article by one member of this group, Epstein, explicitly criticizes my more sceptical assessment of guilds, thereby seeking to re-establish the claim that guilds' aggregate benefits outweighed their costs.¹⁸

This suggests that the time is ripe for a renewed and critical assessment of the economic debate about guilds. This is the more important in that the discussion seems to be becoming bogged down in the issue of whether one is 'for' or 'against' guilds. But this is not the basic question. Rather, the important challenge is that of explaining how European economies first escaped from poverty and stagnation, and thus of understanding the institutional constraints on economic growth more widely. To do so requires that we apply to our examination of European guilds both rigorous empirical analyses of how these institutions worked in practice and a critical theoretical consideration of what causes economic institutions to arise and survive.

This paper seeks to begin this process by examining the claims advanced in Epstein's paper, as well as other recent re-statements of the view that guilds were beneficial economic institutions. It begins, in Section 1, by examining the precise claims that enthusiasts for guilds advance concerning the aggregate impact of these institutions on the pre-modern economy. Focussing specific attention on claims that guilds were 'efficient' or 'optimal', it explores what it means to argue that the aggregate economic benefits of guilds outweighed their costs, and examines the implications of making that claim for any institution – a theme which is revisited in the methodological discussion in Section 7.

Section 2 then turns to the first major argument advanced in favour of guilds as beneficial economic institutions – that they overcame asymmetries of information and problems of delegated monitoring concerning product quality. It asks what economic theory tells us about guild quality controls, whether legislative evidence is adequate to demonstrate that guilds benefited quality, what precisely can be deduced from the fact that some guilds imposed numerous penalties on quality violations, and whether available evidence – including the findings of my German case study – can be reinterpreted in such a way as to rehabilitate guilds' role in quality control.

Section 3 investigates the second argument often advanced to support the view that guilds were beneficial economic institutions – their role in human capital investment. It critically examines recent claims that cognitive psychology can demonstrate that guilds were essential for ensuring skilled training in pre-modern crafts. It then asks if legislative evidence can be used to establish that craft training required guild regulation, if guilds' exclusion of females from industrial training can be dismissed as having no deleterious economic impact, and if the absence of apprenticeships in many successful pre-modern crafts can somehow be reinterpreted to support the view that guilds were essential. It then addresses the claim, advanced in Epstein's recent paper, that evidence that guild training was unnecessary derives solely from a single branch of manufacturing, the worsted textile industry analysed in my case study. It concludes by investigating whether European evidence can be reinterpreted in such a way as to establish that guilds were essential for human capital investment in the centuries before the Industrial Revolution.

Section 4 explores the third argument advanced by enthusiasts for guilds – that guilds encouraged technological innovation. It begins by asking whether guilds' widespread opposition to new techniques and practices can be dismissed as economically harmless. It then examines the quality of the evidence adduced in support of the view of some enthusiasts,

¹⁷ See <http://www.iisg.nl/hpw/return-guilds.php>.

¹⁸ Epstein 2008, to which I refer hereafter by paragraph-number as the published version with page-numbers has yet to appear. For my 2000-word response to that article, see Ogilvie 2008.

that guilds positively encouraged innovation by encouraging the transfer of ‘embodied’ technical knowledge. It addresses the claim, advanced in Epstein’s paper, that evidence from my empirical case study of the German territory of Württemberg can be reinterpreted to show that guilds actually encouraged innovation. Finally, it examines whether cross-European comparisons can be interpreted to rehabilitate guilds as having played a positive role in technological progress before factory industrialization.

Section 5 discusses the phenomenon of guild rent-seeking. Even scholars who wish to argue that guilds were economically beneficial acknowledge that they engaged in rent-seeking, investing resources in obtaining legal monopolies and other economic privileges from the political authorities. Monopolies cause deadweight losses to the economy and rent-seeking activities consume resources that could otherwise have been used for productive purposes. This section begins by examining the argument, advanced by enthusiasts for guilds, that the welfare loss from guild rent-seeking was quantitatively trivial and cannot have inflicted significant harm on the pre-modern economy. The section then investigates the more extreme claim, advanced in the recent paper by Epstein, that guild rent-seeking was positively beneficial for early modern European economic development.

Section 6 examines differences in the strength of guilds and the success of industry across pre-industrial Europe. Scholars concerned to argue that guilds were beneficial have sought to dismiss the harmful activities of strong guilds, such as those revealed in my German case study, as atypical. This section therefore begins by investigating how widespread such strong guilds were in pre-modern Europe and whether the degree and type of economic regulation they exercised was indeed atypical. Enthusiasts for guilds are also concerned to establish that strong guilds were associated with successful economies, and hence that, counter to the existing historiography, English and Dutch guilds were especially strong by European standards. This section investigates whether such arguments can be supported by the empirical findings.

The paper concludes, in Section 7, by considering the theoretical and methodological underpinnings of arguments that guilds were beneficial, and suggests that they are lacking in coherence. It examines whether enthusiasts for guilds are justified in criticizing the methodology of the in-depth empirical case study or the cross-country comparison among industries. It also analyses the tenability of the alternative approach they advocate, in particular the ‘efficiency’ view of economic institutions. It concludes that much remains to be discovered about guilds and their role in European economic development. But to do so, this paper argues, requires us to replace the desire to view traditional institutions as beneficial and efficient with a more critical and balanced exploration of how they behaved in practice and how they affected pre-modern economies.

1. What Does It Mean to Say That Guilds Were Efficient?

Let us begin by examining what exactly is claimed by scholars who are enthusiastic about the benefits of guilds. The view that guilds existed so widely and for such a long time because they corrected failures in markets for product quality, skilled training, and technological innovation certainly appears to imply a belief that guilds were economically efficient institutions. But some enthusiasts for guilds object to the idea that they are asserting that guilds were efficient. Thus Epstein, in his recent paper, denies having argued ‘that guilds were “efficient” institutions’, on the grounds that he had never claimed ‘that guilds were socially optimal’.¹⁹

But this is based on a confusion between economic *efficiency* and social *equity*. It is understandable that enthusiasts for guilds should deny claiming that guilds were ‘socially

¹⁹ Epstein 2008, para. 7.

optimal' institutions (i.e. ones that accorded with acceptable levels of distributional justice). As has been demonstrated in innumerable analyses, guilds used their monopoly privileges to overcharge customers, underpay employees and suppliers, and exclude potential competitors, thereby redistributing resources to relatively well-off guild masters at the expense of consumers and poorer social groups such as women, labourers, and migrants.²⁰ But whether economic arrangements result in a socially equitable distribution is a separate issue from whether such arrangements are efficient. A set of economic arrangements is Pareto-efficient if there is no feasible alternative set of arrangements that can make some individual better off without another being made worse off. An improvement in efficiency involves a change that benefits at least one individual without harming any others. Since this concept of efficiency relates only to changes in which there are no losers, it is silent about distributional trade-offs. In practice, it is difficult to make changes in economic arrangements that do not involve both gainers and losers, so the concept of efficiency is often interpreted in terms of the gainers being able *in principle* to compensate the losers and still be better off after the change. On this interpretation, an institution is efficient if there is no feasible alternative institution such that the gains of those who would benefit from the alternative exceed the losses of those who are harmed by it.

It is important to note that minimizing the costs of economic activity (producing and transacting) is a necessary, but not sufficient, condition for economic efficiency. For example, a monopoly may produce its output at minimum cost, but the outcome is not efficient because the price charged to consumers exceeds the marginal cost of production. Ending the monopoly would increase efficiency because the gains to consumers exceed the losses of the monopolist, and thus in principle the consumers can compensate the monopolist for the lost monopoly profits and still be better off.

The publications of most scholars who are enthusiastic about guilds suggest that they are at least claiming that guilds minimized the costs of economic activity, and in some cases are making the wider claim that guilds' aggregate benefits outweighed their aggregate costs. Thus Hickson and Thomson offer an 'efficiency-based theory of the social function of entry-restricting guilds' as cost-minimizing institutions for protecting members from opportunistic exploitation, collecting capital taxes, and ensuring provision of military protection.²¹ Gustafsson argues that medieval craft guilds were an efficient solution to asymmetries of information between producers and consumers about product quality.²² Pfister claims that craft guilds helped ensure quality control in proto-industries where production was geographically dispersed, and also provided an efficient solution to credit-market imperfections.²³ Reith contends that guilds were an efficient mechanism for transferring advanced knowledge and skills among different localities through journeymen's travels.²⁴ Mocarrelli argues that Italian and Spanish guilds were 'extremely efficient, thus guaranteeing their survival over a period of several centuries',²⁵ and that as late as the final years of the eighteenth century, guilds were 'a still efficient organization' which protected customers, stabilized markets, and reduced transaction and organization costs.²⁶ Van Zanden argues that 'the efficiency of the guilds' in providing skilled training helped Europe surpass Asia in the early modern period.²⁷ Persson claims that craft guilds provided a bargaining mechanism whereby 'collusion was institutionalized into co-operation based on a balance of rights and obligations', transaction costs were reduced through the regulation of prices and qualities,

²⁰ For a summary, see Ogilvie 2004a; Ogilvie 2005b.

²¹ Hickson / Thompson 1991, p. 136; on efficiency, see also p. 132.

²² Gustafsson 1987.

²³ Pfister 1998.

²⁴ Reith 1989.

²⁵ Mocarrelli 2006, p. 8.

²⁶ Mocarrelli 2006, p. 12.

²⁷ Van Zanden 2004a, p. 9.

entitlement crises were mitigated by rationing, and implicit insurance was provided to guild members by reducing competition. While admitting that we cannot be certain that this was efficient ‘because we do not have straightforward efficiency results for bargaining outcomes’, he nonetheless concludes that guild institutions were ‘adequate and even progressive’.²⁸

Even those who most vehemently deny advancing an efficiency view of guilds give every evidence of doing so. Thus Epstein, in an article of 1998, asserts that craft guilds existed because they were the best institution ‘to allocate skilled labor efficiently’²⁹ and ‘to provide an ideal market structure for innovation’.³⁰ In an article of 2004, he states that the purpose of guild-mandated tramping by journeymen was ‘to coordinate information and allocate skilled labour more efficiently across regions’.³¹ In a recent reiteration of these arguments, he argues that ‘the extraordinary longevity of the craft guild’ can be explained by its ‘functional complexity and flexibility’ in solving information asymmetries, providing capital, enforcing quality, and ensuring skilled training.³² Guilds, he claims, ‘offered a superior organizational matrix for the acquisition of skills by most urban artisans working under the prevailing technological, commercial and political circumstances’.³³ He summarizes his position by stating that guilds’ ‘*aggregate* social benefits outweighed their costs’.³⁴ This statement is essentially the view that guilds were efficient not just in the limited sense that they minimized the costs of economic activity, but in the broader sense that the gainers from guilds would have been in principle able to compensate the losers and still be better off. That is, it amounts to the claim that guilds satisfied the conditions for potential Pareto-efficiency.

To reach a balanced assessment of the craft guild as an economic institution, it is important to be clear about what is implied by the assertion that they were ‘efficient’ or that their aggregate social benefits outweighed their costs. Epstein’s recent paper claims that critics of guilds adopt ‘a public choice perspective that assumes that historical markets are deviations from a hypothetical competitive optimum’.³⁵ On the contrary: to assess the efficiency of an institution, one compares it to feasible alternatives. My own evaluation of the efficiency of guilds compared a strongly guilded textile industry in early modern Germany to other examples of that same textile branch in other early modern European economies which were characterized by a variety of alternative institutional frameworks.³⁶ These ranged from very strong guilds (including those in my own study of the Württemberg Black Forest), to much weaker guilds in some other central and northern European economies, to entirely unguided frameworks in some Dutch and English worsted regions. Product quality, training and technology were regulated in some European worsted industries by guilds, but in others by municipal administrations, state regulations, merchant offices, or private contracts between individual weavers, apprentices, spinners, merchants, and customers. The evidence presented in these case studies demonstrates that those industries that made use of these institutional alternatives to guilds produced something closer to the quality-price combinations that customers demanded, transmitted more appropriate levels of skill to a wider array of practitioners, and more readily generated and adopted innovations, than those that were regulated by guilds. This demonstrates that there were feasible alternative institutions in pre-modern Europe that were more efficient than guilds, and hence that guilds cannot be characterized as efficient.³⁷ In a publication of 2004, I point out that none of the alternative

²⁸ Persson 1988, pp. 50-54.

²⁹ Epstein 1998, p. 692.

³⁰ Epstein 1998, p. 704.

³¹ Epstein 2004b, p. 384.

³² Epstein 2008, para. 2.

³³ Epstein 2008, para. 48.

³⁴ Epstein 2008, para. 7.

³⁵ Epstein 2008, para. 30.

³⁶ Ogilvie 1997; Ogilvie 2004a.

³⁷ I also pointed out that guilds were less *equitable* than some of these alternative institutions, which did not transfer so much of the consumer surplus to a guild monopolist, did not compel employees and

institutional frameworks for pre-modern industry were free of market failures, but that they demonstrate the existence of alternative institutions that were superior to guilds:

As shown by the difficult and often painful process of development even in the richest, most innovative, and fastest-growing economies of early modern Europe – the Low Countries and England – the pre-industrial economy had plenty of market failures, and these could be very hard to correct. But the even more painful development of economies such as Württemberg suggests that powerful guilds were not the answer to correcting them.³⁸

As will be discussed later in Section 7, precisely such systematic comparison of detailed case-studies on particular industries across different European economies is essential for investigating whether guilds – or any other institutional arrangement – were efficient in the sense that there was no feasible alternative institution such that the gains of those who would benefit from the alternative exceed the losses of those who were harmed by it.

Most enthusiasts for guilds explicitly describe them as economically ‘efficient’. Even those who do not acknowledge subscribing to an ‘efficiency’ theory assert that guilds’ aggregate social benefits outweighed their costs – and thus advance the claim of potential Pareto-efficiency. In making such assertions, these scholars focus specifically on the contribution of craft guilds to four aspects of pre-modern economic activity: quality control, skilled training, technological innovation, and political ‘coordination’ of the economy. In the following sections of this paper, I explore each of these arguments in turn.

2. Did Guilds Improve Quality Control?

A first argument advanced by enthusiasts is that craft guilds were an efficient solution to asymmetries of information about product quality, because they imposed minimum quality standards and punished masters who violated them. As I have pointed out in a number of publications, even in theory there are a number of problems with this view. First, it takes for granted that what merchants and consumers wanted, and what was best for the economy, was a high absolute quality. But the relevant quality level is *what consumers want*. The problem of ‘quality’ under asymmetric information is solved not by guaranteeing a minimum quality level, but by providing reliable information about what the quality is. The quality can be low, as long as the customer knows what it is. Second, guilds were not ideally suited to provide the relevant quality level – i.e. what consumers wanted – because they justified their *other* privileges (e.g. barriers to entry) by claiming that these ensured *high* quality. This could lead to the rigid imposition of inappropriately high quality standards, even when a lower quality in combination with a lower price would have better addressed customer demand. Third, while a single, monopolistic entity such as a guild might be more capable than a variegated range of individual producers to guarantee a single, standard quality, those same characteristics made a guild less able, and probably also less willing, to undertake the market research and the flexible response to changes in demand necessary to deliver the combinations of quality and price desired by a varied and changing population of consumers. This problem was pointed out by contemporary critics and surfaces repeatedly in disputes between low-cost competitors and the guilds who sought to prohibit them.

These theoretical problems are compounded by the inadequacy of the evidence adduced to support the view that guilds benefited the economy through their quality-related activities.

suppliers to sell inputs to guild masters at below-market prices, and permitted a wider range of producers to participate in production. In a number of publications, I have explored these issues with regard to a specific (but substantial) group of consumers and producers – women – who suffered particularly acutely from the economic discrimination exercised by strong guilds. On this, see Ogilvie 2003; Ogilvie 2004a, pp. 289-90, 297-8, 303-08, 312-13, 315-16, 319, 323-6; Ogilvie 2004b; Ogilvie 2004c; Ogilvie 2006a.

³⁸ Ogilvie 2004a, p. 331.

This evidence consists primarily of references to low-quality craft work in medieval literature, together with the quality regulations included in guild legislation. As I have pointed out, literary evidence is a poor guide to what guilds actually did, since works of the imagination have an interesting but inconsistent relationship with reality. Legislation, too, is an inadequate guide to economic practice, since it serves normative rather than descriptive ends.³⁹ Furthermore, guild legislation was typically influenced by guild lobbying. Since quality controls could be portrayed as generally beneficial, they provided a good rhetorical basis for justifying entry barriers, output quotas, and price controls that would otherwise have aroused socio-political opposition.⁴⁰

Even if legislation could be regarded as an accurate guide to economic reality, it does not support the view that guilds placed a high priority on quality control. Enthusiasts for guilds have claimed that a ‘majority’ of guild statutes were devoted to monitoring quality and that guild legislation imposed ‘exceedingly harsh sanctions’ for quality violations. But these can be falsified by analyses of actual guild charters and ordinances, many of which dedicated little space to quality-related issues and imposed quite lenient penalties on quality offences.⁴¹

To assess whether guilds solved information asymmetries between producers and consumers, we need to analyze actual guild practice with regard to quality control. In publications of 1997 and 2004, I carried out such an analysis using exceptionally rich surviving records from a strongly guilded worsted textile industry in the German territory of Württemberg between the late sixteenth and the late eighteenth century.⁴² These showed that guilds levied numerous trivial fines for quality offences, but that the fines imposed were lower than for any other type of offence – too mild a sanction to constitute an effective deterrent, which is why the number of offences was so high. Even when guild inspectors did enforce quality regulations, they did not always do so to protect customers against poor products, but rather to protect guild masters against cheaper competitors threatening to attract away customers. Weavers, guild inspectors, merchants and government officials all described guild quality controls as inadequate, and merchants soon substituted their own quality inspections carried out at the point at which they purchased cloths from weavers.

There were two structural reasons why guild quality controls were inadequate. First, as self-regulating professional associations guilds suffered from disincentives to offend or penalize their members. Second, guild inspectors lacked the incentive to develop the skills and deploy the effort necessary to detect low-quality work beyond superficial features (such as size) which were readily apparent to merchants and other customers anyway. In some industries, in fact, guild regulations indirectly *harmed* quality, by imposing price ceilings on raw materials (so suppliers could only compete by lowering quality), imposing piece-rate ceilings on sub-contractors such as spinners (depriving them of incentives to work more carefully), and enforcing collective ‘monopoly contracting’ between producers and merchants with fixed prices and quotas (creating a rigid regime of prices and quotas that removed craftsmen’s incentives to do better work and merchants’ incentives to experiment with new quality-price ratios that might better suit consumer demand).

A comparison of outcomes in the same craft across different European economies vividly illustrates the weakness of the view that guilds were efficient institutions for ensuring product quality. My survey of the European worsted industry – one of the largest branches of the pre-modern textile sector – showed that product quality in strongly guilded industries compared

³⁹ For a discussion of these methodological issues in the context of analysing early modern European ‘social disciplining’, see Ogilvie 2006b.

⁴⁰ For discussions of how guild legislation came into being, see Ehmer 1998, p. 39; Ogilvie 1997, pp. 39-45; Ogilvie 2004a, pp. 292-3.

⁴¹ Ogilvie 2004a, p. 292.

⁴² Ogilvie 1997, pp. 343-52; Ogilvie 2004a, pp. 291-301.

poorly with that in many of the more dynamic and successful industries where guilds were weak or absent.⁴³ In many successful European worsted industries, insofar as information asymmetries between producers and consumers were important, they were solved through alternative institutions – municipal, merchant, or state inspections – that dealt with the problem efficiently without the rigidities imposed by guilds. The West Riding of Yorkshire, for instance, developed the most successful worsted industry in eighteenth-century Europe by producing ‘cheap and nasty’ cloths subject to no quality (but also no price) controls by guilds; quality was monitored by merchants and customers at point of sale.

Enthusiasts for guilds have sought to cast doubt on these arguments in four ways, which are exemplified in the essay by Epstein mentioned above.⁴⁴ A first approach is to claim that the relevant quality standard – the one that was best for the economy as a whole – was not that which consumers desired, but rather the minimum quality standards desired by guilds. A second is to reassert the importance of legislative evidence, claiming that the fact that most guild laws *mentioned* quality indicated that it was a major guild *concern*. Third, enthusiasts for guilds argue that high numbers of quality offences by guilded craftsmen testify not to guilds’ ineffectiveness in improving quality but to guilds’ success. A final approach, adopted by Epstein, is to dispute the evidence presented in my German case study, seeking to reinterpret it such a way as to establish that guilds were economically beneficial. Let us examine each of these arguments in turn.

2.1. What Does Economic Theory Tell Us about Guild Quality Controls?

The first line of approach by enthusiasts for guilds is to dispute what precisely was required to solve asymmetries of information between producers and consumers. Previously, enthusiasts had argued that guilds solved this problem by setting minimum quality standards, thereby ensuring high average quality. Thus, for instance, Gustafsson’s thesis was ‘that the craft guilds were founded primarily for guaranteeing a certain minimum of quality of the products produced by the craftsmen’ and that guilds’ primary concern was to ensure ‘a sufficiently high quality of product’.⁴⁵ According to Richardson, ‘For guilds of manufacturers, a typical commitment was making high-quality merchandise’.⁴⁶ Pfister argued that guilds were especially important in proto-industries because dispersed rural producers tended to let quality fall unless a centralized guild constrained them to produce to a higher standard: ‘By controlling quality ... the guild acted as an institution for delegated monitoring. ... The guild would also assure a supply of goods of constant high quality and thus greatly reduced transactions costs of merchants.’⁴⁷

In earlier publications, I pointed out that the key to encouraging consumers to make purchases, thereby increasing gains from trade, was not to enforce a single, high average quality but rather to reduce the variance (that is, ensure that consumers knew what quality to expect of an item, even if that quality was low) and to ensure that producers offered the quality-price combinations desired by a varied and changing population of consumers (poorer consumers would be satisfied with lower quality if that implied lower price).⁴⁸

In response to these points, the recent paper by Epstein has sought to change the theoretical basis for the argument that guilds solved asymmetries of information about product quality. His approach is to argue that the guilds’ approach of fixing minimum standards was *identical*

⁴³ Ogilvie 2004a, pp. 300-01.

⁴⁴ Epstein 2008.

⁴⁵ Gustafsson 1987, p. 13.

⁴⁶ Richardson 2005, p. 159.

⁴⁷ Pfister 1998, p.15.

⁴⁸ Ogilvie 2004a, pp. 299-300.

to reducing variance, and that this was what was needed to ensure the quality that was best for the economy at large.⁴⁹

This argument ignores the fact that the appropriate quality-price combinations are those that consumers want. This is reflected in the modern literature on quality control in which, according to a recent survey, ‘the most pervasive definition of quality currently in use is the extent to which a product or service meets and/or exceeds a customer’s expectations.’⁵⁰ High quality *per se* – the level achieved by setting a minimum standard – is not obviously desirable.

By imposing minimum standards, guilds cut off the lower part of the quality distribution. This was a bad way to address consumers’ wants, since it ruled out a whole array of quality-price combinations which poor consumers in particular were likely to demand. Nor was it obviously a good way of reducing variance or information asymmetries. Guild inspections not only denied lower-quality items the guild seal, but often prohibited them from being sold at all, by confiscating them, defacing them, or prosecuting their sellers. If the aim of guild quality controls had been to reduce information asymmetries, the guild would have permitted consumers to choose between guild-sealed items (higher in quality but also higher in price) and non-guild-sealed items (lower in quality but also lower in price). The fact that guild quality controls prohibited non-guild-sealed items *altogether* suggests that the guild’s aim was not so much to reduce information asymmetries as to ensure that only recognized guild members could legally supply products to customers and to enforce arbitrarily high standards with the aim of excluding lower-priced competitors. The quality-regulation procedures typically selected by guilds were thus well suited to excluding entry but poorly suited to addressing consumer wants.

Such reduction in variance as *was* achieved by guild regulations which cut off the lower part of the quality distribution came at a high cost in terms of lost gains from trade, since these prevented all trade in low-priced, low-quality items which addressed the demand of the mass of poorer consumers who could not afford the expensive, high-quality products mandated by monopolistic guild producers. As the French aristocrat Alexis de Toqueville described – not wholly approvingly – in 1840, ‘When none but the wealthy had watches, they were almost all very good ones: few are now made which are worth much, but everybody has one in his pocket.’⁵¹

It is not even clear that guilds’ net effect on variance was to reduce it. On the one hand, guild regulations reduced variance by prohibiting low-quality, low-priced goods. But on the other, they pushed nasty-but-cheap wares into the black market, where quality variance was even higher and where cheated customers had no legal redress. The net effect of guild controls on quality variance was thus indeterminate, while the prohibition of lower price-quality combinations damaged consumers – especially the poor. The attempt to conflate guilds’ enforcement of ‘minimum standards’ with the desirable aims of reducing variance, improving consumer confidence, and encouraging exchange is logically misguided.

Even within the restricted quality range permitted by guilds, my German case study suggested that guild inspectors applied quality requirements that were inappropriately high and then operated corruptly by letting some quality offences pass unpunished.⁵² Epstein asserts that this is impossible: guild quality standards cannot have been *both* inappropriately high *and* corruptly enforced. But this conflates two issues – the regulations guilds imposed and their

⁴⁹ Epstein 2008, para. 7: ‘what really mattered was enforcing minimum standards, e.g. low quality variance’.

⁵⁰ Reeves / Bednar 1994, p. 423.

⁵¹ De Toqueville 1840, vol. 2, ch. 11, para. 5.

⁵² Epstein 2008, para. 10.

enforcement in practice. Evidence from guilded industries throughout pre-modern Europe shows that guild inspectors were subject to personal pressure and often enforced quality regulations inconsistently; this rendered them ineffectual in maintaining *any* mandated quality standards. At the same time, the standards that they were supposed to enforce (and did enforce when they were not operating corruptly) were often inappropriately high, prohibiting the legal production and exchange of lower quality-price combinations that better suited consumer demand; this rendered guilds ineffectual in ensuring appropriate quality (the quality that consumers wanted) and thus in encouraging exchange. Inappropriately high guild quality standards could even *encourage* corrupt enforcement, since such regulations created pent-up demand for the low quality-price combinations banned by the guild, and hence incentives for producers and consumers to bribe and pressure inspectors. This in turn imposed deadweight losses by diverting resources into redistributive activities (attempts to put pressure on the inspectors) rather than productive uses. Recent studies find precisely this mutually reinforcing combination of inappropriate regulation with corrupt enforcement in modern less-developed economies, although the institutions that give rise to it are seldom characterized as beneficial or efficient.⁵³

2.2. Can Legislation Show That Guilds Benefited Quality?

Enthusiasts also seek to buttress the quality case for guild efficiency by reasserting the usefulness of legislative evidence. Rehabilitation studies about guilds' quality benefits continue to proliferate, basing their assertions wholly on legislation, yet providing no data on how, if at all, such legislation was put into practice.⁵⁴ These studies are then cited to demonstrate a 'modern consensus' that guilds were efficient institutions to ensure quality.⁵⁵ In his recent paper, for instance, Epstein claims that 'there is substantial evidence that ... urban guilds, particularly those specializing in high quality goods, could protect their brand names successfully'. This 'substantial evidence' turns out to be a single article based entirely on legislative sources.⁵⁶

In previous publications, I have pointed out three fundamental problems with using legislation as evidence of guild concern for quality control. First, legislation says nothing about what actually happened: without evidence on enforcement, it is meaningless. Second, legislation reflects rhetorical aims as well as real concern: beneficial ends such as quality control can be used to justify harmful means such as exclusive privileges. And third, a law may mention an issue without prioritizing it.⁵⁷

The literature that uses legislation to buttress the claim that guilds performed a beneficial quality function has found no way of dealing with the first two problems, and continues to ignore them. The third problem was already recognized by Gustafsson in 1987, who addressed it by claiming that 'the majority of the guild statutes [sic] are concerned precisely with demands for a sufficiently high quality of product'.⁵⁸ My German case study investigated this claim for a series of Württemberg worsted-weavers' guild ordinances and found that only a minority of articles in any ordinance – ranging from a low of 12 per cent to a high of 35 per cent – bore even the remotest application to quality control.⁵⁹ This investigation has yet to be replicated by scholars studying other guilds and industries. However, Mocarelli's assessment of the statutes of the guilds established in Milan in the second half of the sixteenth century found that, unlike the statutes of their medieval predecessors, they were 'extremely vague'

⁵³ Schneider 2006, esp. pp. 7-8.

⁵⁴ See, e.g., Richardson 2000; Richardson 2001; Richardson 2004; Richardson 2005a.

⁵⁵ See, e.g., Epstein 2008, fnn. 1, 20.

⁵⁶ Epstein 2008, para. 13 with n. 20.

⁵⁷ Ogilvie 2004a, pp. 292-3.

⁵⁸ Gustafsson 1987, p. 9.

⁵⁹ Ogilvie 1997, pp. 345-8; Ogilvie 2004a, p. 292.

about quality.⁶⁰ Such findings place the onus of proof on enthusiasts for guilds to demonstrate that even guild legislation, let alone guild practice, made quality a priority.

Epstein's essay does not provide such evidence, instead claiming that what Gustafsson meant, and what really matters, is whether an entire guild statute contains *any mention* of quality, not how much space it devotes to quality.⁶¹ This is certainly a good way of making guilds' concern with quality appear to its best advantage. But is it a good way of assessing such concern? If quality control was of central importance to guilds then one would expect a majority of articles in any guild law to be concerned with that issue. But if guild ordinances simply allude to quality control in passing, as a justification for imposing other restrictions that might otherwise evoke opposition, then one would expect to find most guild laws mentioning quality control but allocating few articles to it. The empirical findings support the latter view.⁶²

All three problems with legislative evidence therefore remain outstanding. Legislation cannot be used to analyse what guilds actually did. Even in order to use it as evidence of guild concerns, its rhetorical function in justifying guild privileges, and its priority compared to other concerns, must be analysed carefully. Insofar as such investigations have been carried out, they suggest that quality was not of overriding concern even to those who drafted legislation, let alone to those who enforced the resulting regulations.

2.3. What Do Numerous Quality Violations Show?

Claims that guilds created quality benefits have hitherto relied mainly on legislative evidence, so studies of guilds' practical enforcement are few. Those that exist rely mainly on qualitative examples rather than quantitative analyses. One of the few available quantitative analyses is provided in my study of the annual account-books of the largest worsted-weavers' guild in the Württemberg Black Forest between the late sixteenth and the late eighteenth century.⁶³ In his recent paper Epstein claims that I ignore the high numbers of quality offences which, he contends, demonstrate that guilds were 'seriously concerned with quality control'.⁶⁴ Both assertions are false. My case study explicitly draws attention to the numerous quality offences fined by the guild.⁶⁵ These high numbers, as I demonstrate, arose from the trivial level of fine inflicted for quality violations, which was significantly lower than for non-quality-related offences.⁶⁶ The combination of lenient penalties and numerous violations provide greater support for an interpretation precisely contrary to that advanced by Epstein – guilds were unconcerned to maintain quality standards (otherwise they would have imposed heavier penalties) and ineffectual in doing so (otherwise they would not have tolerated such high numbers of offences over such long periods of time).

Similar findings emerge from other guild studies. Thus, for instance, London livery companies also imposed very lenient penalties – apologies, minor fines, promises of reformation – 'even in quite serious matters such as assaults [on guild quality inspectors] or the deliberate falsification of goods'.⁶⁷ Some companies imposed slightly heavier penalties, but the number of offences remained high. Thus Wallis found that 30 per cent of the membership of the London Apothecaries and Stationers' Companies in the early seventeenth

⁶⁰ Mocarelli 2006, p. 7.

⁶¹ Epstein 2008, para. 9.

⁶² Ogilvie 2004a, p. 331; Mocarelli 2006, p. 7.

⁶³ Ogilvie 1997, pp. 348-52; Ogilvie 2004a, pp. 293-4, esp. Tables 1-2.

⁶⁴ Epstein 2008, para. 9.

⁶⁵ Ogilvie 1997, pp. 329-33; Ogilvie 2004a, pp. 293-4.

⁶⁶ Epstein 2008, para. 9, claims that I explain it in terms of guild output quotas, which I do not.

⁶⁷ Wallis 2002, pp. 88-92.

century were guilty of breaking ordinances. As Goose points out, this raises two important questions:

If at least the short-term, moderated costs of offending could be quite substantial, why were offences so common? And if the principle of regulation was so clearly accepted, then why were even senior members of these companies able to transgress without serious damage to their long-term reputation?⁶⁸

Davis found that members of the London Merchant Taylors' Company also committed a large number of quality offences in the seventeenth century and, as Goose comments,

In the realm of quality control ... the company played a much more limited role, which perhaps testifies to the sophistication of the market and the effectiveness of consumer choice by this period. We are, of course, still left unclear as to how effective the company's measures were, for if repeated levying of fines gives a firm indication of intent, it could also reflect a continuing failure to remedy the problem once and for all.⁶⁹

As criminologists and historians of crime have long recognized, when a particular offence is committed frequently and persistently, it raises serious doubt about the authorities' concern to control that offence and their effectiveness in doing so.

Guilds' actual practice in penalizing quality violations needs more thorough analysis. But the pattern revealed by both the Württemberg worsted-weavers' guild and these London livery companies suggests not so much that guilds were concerned and successful in deterring quality offences, but rather that they regarded quality delicts indulgently and tolerated high levels of violation over very long periods. This was consistent with the political realities of early modern rent-seeking, which meant that guilds needed to be *seen* to be penalizing quality offences as a visible justification of their other privileges. It is not consistent with modern enthusiasts' desire to view guilds as efficient institutions for actually guaranteeing quality outcomes.

The few available studies of guild enforcement, therefore, do not show guilds imposing sanctions remotely substantial enough to prevent their own members from frequently and persistently violating quality standards. This casts further doubt on the putative economic benefits conferred by guild quality regulations.

2.4. Can the Evidence Be Reinterpreted to Rehabilitate Guilds' Role in Quality Control?

The literature arguing that guilds generated quality benefits typically does not support its claims with evidence on actual guild practice, as discussed above. This does not prevent the recent article by Epstein from claiming that my more sceptical view of guilds' quality role is based on inadequate evidence – on 'a few' merchant complaints, on low-quality industries with dispersed producers, or on a misinterpretation of my own case study. But this cavalier dismissal of the empirical findings is without foundation.

Epstein's first claim is that evidence of guild ineffectiveness consists only of 'a few merchant complaints about the Württemberg and Gera worsted industries'.⁷⁰ This is false. My study provides examples of failed guild inspections from four European worsted industries – those of the Black Forest of Württemberg, the Gera region of Thuringia, the English city of York, and Valenciennes in French Flanders.⁷¹ It also provides examples of eight other European worsted industries which successfully ensured appropriate quality standards with an unguilded or weakly guilded institutional structure – those of Douai, Hondschoote, Verviers,

⁶⁸ Goose 2003, para. 9.

⁶⁹ Goose 2003, para. 8.

⁷⁰ Epstein 2008, para. 10.

⁷¹ Ogilvie 2004a, pp. 295-6.

Maubeuge, Igualada, Stockholm, Norwich, and the rural West Riding of Yorkshire.⁷² Twelve European case studies is a far cry from ‘a few merchant complaints’.

A second claim is that guilds were only ineffective in controlling quality in low-quality rural industries where producers were spatially scattered. Thus Epstein asserts that Württemberg worsted guilds failed to control quality because they operated in a rural proto-industry with dispersed producers.⁷³ This claim is echoed by Mocarelli, who proclaims that Württemberg guilds ‘were special, not only on account of their rural character, but above all because they did not produce high quality goods’.⁷⁴ In fact, as my publications make clear, the Württemberg worsted industry was practised in both urban and rural locations.⁷⁵ It was highly concentrated, with between 26 and 43 per cent of the households in proto-industrial communities headed by worsted-weavers, and guild officers residing locally in both towns and villages.⁷⁶ Guild ineffectiveness in quality control also emerges from high-quality urban crafts. Thus, for instance, the twelve European case studies mentioned above include both urban and rural industries, high- and low-quality worsteds, yet demonstrate no correlation between quality and guilds.⁷⁷ Many highly concentrated urban crafts maintained quality through alternative, non-guild institutional arrangements set up by merchants, municipalities, or the state.⁷⁸ Early modern London craftsmen, with livery company regulations at their disposal, instead chose to protect brand names using the common law courts.⁷⁹ Conversely, London craft guilds in ‘high-quality’ sectors enforced quality regulations as corruptly as Württemberg proto-industrial guilds in ‘low-quality’ sectors, as shown by Homer’s study of the London pewterers’ company which levied quality fines on products from provincial workshops ‘on the flimsiest pretext’, not because ‘the London company was driven by altruism to protect the populace at large from dubious goods’ but because of ‘the profit received from fines and from the sale of seized metal’, which it split with the Crown in return for enforcement of its guild charter.⁸⁰ In recognition of the fact that high-quality crafts developed non-guild institutional mechanisms to control quality, other scholars have advanced precisely the opposite argument to Epstein and Mocarelli. Thus Pfister argues that guilds were necessary for quality control *precisely* in rural proto-industries because the dispersed nature of the producers made it more difficult for merchants to monitor quality directly.⁸¹ The contradictory claims of different scholars concerning guilds’ impact on quality illustrate how totally conjectural they are. When one subjects these conjectures to empirical inquiry, one finds that guilds were neither necessary nor sufficient for quality control, whether the industry was urban or rural, craft or proto-industry, concentrated or dispersed, high-quality or low-quality.

In the absence of convincing evidence to support a positive assessment of guilds’ quality role, Epstein seeks to discredit my more critical assessment through an inaccurate attack on my German case study. He begins by claiming that the quality of Württemberg worsteds was not actually low and was improved over time by guilds, asserting that there is ‘evidence that demand for Wildberg worsted shifted to lower quality cloth in the aftermath of the Thirty Years War, but improved again from the early eighteenth century’.⁸² He provides no footnote

⁷² Ogilvie 2004a, pp. 300-01.

⁷³ Epstein 2008, para. 13.

⁷⁴ Mocarelli 2006, p. 8.

⁷⁵ See, for instance, Ogilvie 1997, pp. 91-106, 128-39, 155-74, 203-16, 310-21; Ogilvie 2004a, 289-90, 304-05 (esp. Table 3), 309-10 (esp. Table 5), 319, 323.

⁷⁶ Ogilvie 1997, pp. 277, 310-21.

⁷⁷ Ogilvie 2004a, pp. 295-6, 300-01.

⁷⁸ As acknowledged in Epstein 1998, p. 686; Pfister 1998, esp. pp. 20-1.

⁷⁹ Stolte 2006.

⁸⁰ Homer 2002, p. 107. On the financial incentives behind London livery companies’ enforcement of quality controls, see also Forbes 2002, p. 118.

⁸¹ Pfister 1998, pp. 11, 14-16, 21.

⁸² Epstein 2008, para. 9.

to substantiate this startling assertion, which has no basis in fact and is falsified by the major nineteenth-century study of this industry by Troeltsch,⁸³ as well as by my own publications of 1997 and 2004⁸⁴ – all included in Epstein’s bibliography. Epstein’s assertion is sheer invention.

More inaccurately still, Epstein seeks to reinterpret the Württemberg evidence in the light of his own enthusiasm for guilds. As an illustration of the pattern whereby guilds prohibited nasty-but-cheap goods that consumers desired to buy, I instanced the case of Jacob Zeyher. Zeyher was a weaver in the Württemberg town of Wildberg who complained in 1661 that his guild refused to seal the cloths he made, thereby preventing him from selling them, even though he had customers in a town in the neighbouring German territory of Baden who demanded that specific type of cloth from him.⁸⁵ Epstein claims that ‘the Wildberg guild objected to the man’s attempt to apply the guild’s trade mark illegitimately, and not to his shoddy goods per se’.⁸⁶ This is simply false. The guild described the situation as follows, in the words quoted in my article: ‘Old Jacob Zeyher makes absolutely terrible cloths, which are not worth sealing, but sells his cloths very cheap, and thereby causes the craft great injury’.⁸⁷ This is all the guild said about the goods in question: they described Zeyher’s cloths as ‘absolutely terrible’ and ‘very cheap’, but made no mention whatsoever of any attempt ‘to apply the guild’s trade mark illegitimately’. In fact, Zeyher was willing *either* to comply with the guild trade-marking practices by obtaining the appropriate seal from the inspectors *or* to sell his cloths without seals, but found that the guild would permit him neither option. As his defence made clear, Zeyher was not trying to act illegitimately, but rather to comply with guild regulations while supplying the type of cloth his customers demanded: ‘he has to make the cloth 2 ells wide, he sells such cloth in Offenburg, the people want it like that from him, and otherwise he can’t sell it, but the sealers will not seal it for him’.⁸⁸ It is impossible to judge whether Zeyher’s cloths were truly ‘terrible’ (since the guild sealers had an incentive to claim they were shoddy, irrespective of their actual quality) or simply the non-standard 2-ell width (since Zeyher had an incentive to minimize his deviation from guild standards). What emerges from the testimony of both Zeyher and the guild officers was that these cloths were attractive to customers and profitable to Zeyher. Both the customers and Zeyher were therefore harmed by the guild’s prohibition on the exchange they would otherwise voluntarily have undertaken. There is no evidence that Zeyher was trying to apply the guild’s trade mark illegitimately, nor for Epstein’s further farfetched argument, that this case reveals the guild ‘creating a market for lower quality ... by overcoming potential moral hazard and information asymmetries’.⁸⁹ The example of Jacob Zeyher provides no support whatsoever for Epstein’s rosy vision of what guilds might have done.

Neither economic theory nor empirical findings thus support recent efforts to breathe new life into the case for guilds’ beneficial quality role. Claims that there is now a ‘modern consensus’ about the quality benefits of guilds are weakened by the scepticism evinced even by some enthusiasts for guilds concerning such arguments, who have themselves pointed out that quality control was often exercised more efficiently by other institutional arrangements and that many successful pre-modern crafts did not have guild quality controls.⁹⁰ Furthermore, the arguments advanced for the necessity of guild quality controls are contradictory, with some enthusiasts claiming that guilds’ quality role was reserved to high-quality crafts while others argue that it was particularly important in low-quality proto-industries. The conjectural

⁸³ Troeltsch 1897, pp. 35-7, 101, 125-31, 163-6.

⁸⁴ Ogilvie 1997, pp. 348-57; Ogilvie 2004a, pp. 297-9.

⁸⁵ Ogilvie 1997, pp. 350-351; Ogilvie 2004a, pp. 296-7.

⁸⁶ Epstein 2008, para. 14

⁸⁷ Hauptstaatsarchiv Stuttgart, A573 Bü. 91, 28.10.1661, fol. 9r.

⁸⁸ Hauptstaatsarchiv Stuttgart, A573 Bü. 91, 28.10.1661, fol. 6r.

⁸⁹ Epstein 2008, para. 14

⁹⁰ Notably Pfister 1998, pp. 12, 21; but see also even Epstein 1998, p. 686.

assertion that guild controls were the best way to ensure appropriate quality and encourage exchange breaks down under logical analysis. The relevant quality level is what consumers want, whereas guilds enforced the quality level desired by a cartel of producers. Attempts to reinstate legislative evidence as a basis for demonstrating guild quality concerns fail to address the usual problems with using normative sources as a guide to actual practice. Claims that numerous quality violations show serious guild concern for quality control are undermined by evidence that they arose mainly because guilds lacked the motivation or the capacity to deter offenders effectively. Finally, efforts to reinterpret my German case study so as to cast a rosier light on guild quality controls are completely lacking in foundation.

3. Were Guilds Important for Human Capital Investment?

A second theory advanced by enthusiasts claims that guilds solved imperfections in markets for human capital investment, through their apprenticeship, journeyman, and mastership requirements. As I have pointed out, this view is based on three assumptions for which there is no evidence: first, that pre-modern crafts all required high levels of skill, justifying many years of apprenticeship and journeyman; second, that the skills needed for pre-modern craft production could only be transmitted through formal apprenticeship; and third, that guilds were the only possible providers of apprenticeships.⁹¹

No evidence is cited for any of these assumptions. The favourable assessment of guilds' economic role again derives almost exclusively from legislative sources. Not only does legislation show nothing about actual practice, but guilds had strong incentives to emphasize skilled training in their charters in order to justify entry barriers.

Evidence on actual practice, which I have presented in a series of publications, casts doubt on the view that guilds were necessary or sufficient to provide appropriate levels of training.⁹² Black-market 'encroachers' who failed to secure guild training – often, as in the case of women, Jews, immigrants, and bastards, because guilds excluded them from apprenticeship and journeyman – were bitterly opposed by guilds precisely because the wares they produced were indistinguishable from guild output and were willingly purchased by merchants and consumers. Non-trivial numbers of masters' wives and widows were permitted by guilds to work in guilded sectors without guild training even after very short marriages, producing wares which passed guild and merchant inspections and sold successfully on export markets. At the same time, vast numbers of similarly untrained women – and men – who lacked legal guild licenses were forbidden to do the same work, illustrating the irrelevance of training to most guilded crafts and the indifference of guilds to skill as a criterion for selecting who could practise. Guilds made apprenticeship and journeyman compulsory, but then often failed to guarantee skills: they did not penalize masters who neglected apprentices, they issued certificates to apprentices without examination, and they conferred mastership licenses on journeymen without seriously testing skills. This resulted from the incentives which guilds had, as associations of masters, to certify members' sons without discrimination, and to permit opportunism by masters who did not wish to incur the costs of training their apprentices or journeymen. Evidence on how guilds actually operated suggests that they imposed apprenticeship, journeyman, and mastership requirements not to ensure skilled training but rather as a means rhetorically to justify and practically to monitor the entry barriers that sustained their monopoly rents.

These findings are borne out by comparisons across different European industries and economies. Many pre-industrial crafts were not highly skilled, hence did not require prolonged formal training, and yet were guilded in some European societies and unguilded in others. Textiles made up by far the largest pre-modern industrial sector, yet a comparison of

⁹¹ Ogilvie 2004a, pp. 302-14.

⁹² Ogilvie 1997, ch. 6; Ogilvie 2003, ch. 3; Ogilvie 2004a, pp. 302-14; Ogilvie 2005b.

textile industries across Europe shows that most textile wares – particularly in the rapidly-growing worsted, light woollen, linen and cotton sectors – could be successfully produced and sold on export markets for centuries by producers who did not have formal guild training.⁹³ Not just in textiles, but in metal and wooden wares as well, guilds appear to have been irrelevant to skills transmission, since the same industry was guilded in some parts of Europe and unguilded in others – examples are scythe making, iron goods making, wooden toy making, and straw hat plaiting.⁹⁴ In England, nearly every craft one observes regulated by guilds in the older incorporated towns had an unguilded equivalent in a new town, an old town that had abolished its guilds, or a rural industrial region.⁹⁵ What decided whether an activity was guilded was thus not its skill requirements but rather whether a group of practitioners was politically able to secure and maintain guild privileges over that activity.

Faced with such evidence, enthusiasts for guilds have sought to reassert their views through five lines of argument. First, the recent article by Epstein seeks to short up the ‘human capital’ view of guilds by appealing to cognitive psychology. Second, enthusiasts reassert the importance of legislative evidence, claiming that the fact that all guild laws *mentioned* skilled training indicated that these were a major guild *concern*, and that there was no possible alternative reason for guilds to have included training regulations in their legislation except for a sincere desire to protect consumers by guaranteeing skills. Third, scholars who wish to rehabilitate guilds seek to dismiss as economically irrelevant the fact that guilds excluded females from learning industrial skills through apprenticeship or journeymanhood and prohibited them from deploying such skills as fully-fledged masters. Fourth, scholars who favour guilds’ positive economic role dispute the evidence that guild apprenticeship itself did not function effectively as a training mechanism in many cases but did function effectively as a barrier to entry. Fifth, the recent article by Epstein claims that evidence on guilds’ ineffectiveness in providing skilled craft training derives solely from the industry analysed in my own case study, namely worsted textile production. Finally, enthusiasts for guilds dispute the evidence from European comparisons casting doubt on guilds’ importance in training. Let us examine each of these arguments in turn.

3.1. Does Cognitive Psychology Show That Guilds Were Essential?

The human capital case for guilds, as I have pointed out, rests on shaky foundations, since it fails to address whether all pre-modern crafts required long training, whether craft training required formal apprenticeship, and whether apprenticeship could only be supplied through guilds. In a recent attempt to shore up these foundations, Epstein has appealed to the authority of cognitive psychology. Epstein claims that to question the training role of guilds is to ‘ignore the cognitive foundations of human learning’.⁹⁶ To remedy this omission, he provides a disquisition on knowledge transmission derived from psychology textbooks. This exposition may accurately summarize the content of the textbooks from which it is drawn, but is not germane to the economic role of guilds. Upon inspection, ‘the cognitive foundations of human learning’ boil down to just two propositions: first, learning to do something usually requires some sort of training, which can be either formal or informal; second, becoming a ‘top-level’ expert can take quite a long time (5,000-10,000 hours), but ‘most professionals reach a stable, average level of performance within a relatively short time frame’.⁹⁷

These truisms, a slim yield for any purpose, are wholly irrelevant to the issue at hand. Few would dispute that skill requires training and training requires time. But this tells us nothing about the questions that matter for assessing economic institutions. How much training was

⁹³ Ogilvie 2004a; Ogilvie 2005b.

⁹⁴ Ogilvie 1996a, pp. 30-3; Ogilvie 1997, pp. 419-43.

⁹⁵ Walker 1985, pp. iii, 4-5.

⁹⁶ Epstein 2008, paras. 29-30.

⁹⁷ Epstein 2008, paras. 29-30 with fn 51-3.

needed to practise a pre-modern craft? What type of training did pre-modern crafts require – in particular, did they all need formal apprenticeship? What institutions were needed to administer pre-modern craft apprenticeships? These questions must be addressed in order to judge the conclusion that craft training was ‘best done by guilds’.⁹⁸ Cognitive psychology provides no answers to these questions, even in theory.

Answers to these questions are, by contrast, provided in my own publications, through focussing on the acquisition of skills in a particular branch of pre-modern industry – the production of worsted and woollen textiles.⁹⁹ On the basis of micro-level findings for the Württemberg industry and macro-level comparisons among different European worsted regions, my study established that worsted production did not require the length of training imposed by guild apprenticeship regulations.¹⁰⁰ Epstein seeks to dispute this finding by claiming that worsted production was actually highly skilled, supporting this assertion by referring to a historian of early modern Pennsylvania concerning the long list of skills ‘a weaver’ had to have.¹⁰¹ But this is irrelevant to the question of how long it took to learn these skills, let alone whether they required a guild apprenticeship – which they cannot have done in Epstein’s Pennsylvania example, since American crafts were not organized in guilds.¹⁰² Even in Europe, as shown by the evidence presented in my study, many contemporaries did not believe that it took a long time to learn worsted-weaving skills or that guild apprenticeship was required to do so.¹⁰³ That there *were* skills is irrelevant – what matters is how difficult they were to learn. Furthermore, as I show, European worsted industries in which practitioners did not train for lengthy periods and did not undergo guild apprenticeships achieved levels of skill that enabled them to satisfy customers and expand successfully.¹⁰⁴

My study also showed that production in the worsted sector did not require the *type* of training involved in formal apprenticeship.¹⁰⁵ Female workers, for instance, were denied access to guild apprenticeship and journeymanship, but were nonetheless so skilful that they were viewed as serious threats by guilded masters, who used their guild organizations to harass and exclude them.¹⁰⁶ Epstein retorts that non-guild-trained female labour does not show guild training to have been unnecessary since ‘their training may have been informal, but it existed none the less’.¹⁰⁷ This is precisely the point. Practising this industry – and those many others in which unapprenticed persons worked, whether legally or illegally – required a type of training which could be, and was, obtained without formal apprenticeship. Indeed, as Epstein himself acknowledges, my data for the Württemberg worsted industry show that 20 per cent of practising widows were in a position to practise the craft successfully despite having been married to a master for less than the 6 years of combined apprenticeship and journeymanship required by the guild.¹⁰⁸ Many unmarried women, widows of non-masters, and male outsiders sought to practise the industry illegally, without ever having been in the household of a master weaver, and hence without having had the opportunity to obtain formal or informal training from a guild master. This could be because the industry in question did

⁹⁸ Epstein 2008, para. 11.

⁹⁹ Ogilvie 1997; Ogilvie 2004a.

¹⁰⁰ Ogilvie 2004a, pp. 302-14.

¹⁰¹ Epstein 2008, para. 16 fn 25, quoting Hood 2003, p. 311.

¹⁰² In her discussion of weaving in Britain, Hood 2003 emphasizes the importance of the English weaving industry’s pursuit of greater flexibility through relocation to rural environments, in which, as is well known, guild apprenticeships were largely absent. She also emphasizes that the weaving industry Yorkshire (in which guild apprenticeships played a particularly unimportant role) was the industry most similar to the Pennsylvania industry she studies.

¹⁰³ Ogilvie 2004a, pp. 302-14.

¹⁰⁴ Ogilvie 2004a, pp. 312-14.

¹⁰⁵ Ogilvie 2004a, pp. 302-14.

¹⁰⁶ Ogilvie 2004a, pp. 304-07.

¹⁰⁷ Epstein 2008, para. 18b.

¹⁰⁸ Epstein 2008, para. 18b.

not require much training (as suggested by much evidence for mass-market textile crafts such as worsted production) or because the industry *did* require skilled training but formal apprenticeship was unnecessary for providing it (as suggested by the prevalence of black-market female workers in numerous crafts all over pre-industrial Europe). In either case, the existence of females (and Jews, and immigrants, and other ‘encroachers’) who were sufficiently skilled to constitute a threat to formally guild-trained producers demonstrates that formal guild apprenticeships (and the guilds that demanded them) were irrelevant to providing whatever training was required.

Finally, the evidence presented in my publications established that guilds did *not* provide would-be craft practitioners with the appropriate level of learning. Almost all guilds excluded females from apprenticeship and journeymanhood, thereby denying half the population access to formal training in the industrial sector. Guilds also excluded many males from apprenticeship according to parentage, religion, ethnicity, nationality, legitimate birth, and other economically irrelevant characteristics. Nonetheless, non-guild-trained females and males demonstrated both the desire and the capability to participate in industrial activities wherever guilds did not prevent them from doing so.¹⁰⁹ Industries in which there were no guilds or where guild apprenticeship regulations were widely flouted achieved levels of quality and technical innovation that enabled them to satisfy customers and expand successfully. Where formal apprenticeships were needed, young people entered into them voluntarily and privately as in painters’ workshops, without any need for guild compulsion. Alternative institutional frameworks were evidently capable of providing training at least as efficiently as guilds, without excluding a large majority of would-be practitioners.¹¹⁰

It seems likely, as I have pointed out in previous publications, that skills requirements differed across pre-modern industrial activities.¹¹¹ But it is indubitably the case that some large sectors – such as wool textiles – demanded a length, type, and institutional framework for training that did not require guilds. The question of the appropriate length and type of training is still unanswered for most pre-modern industries, both inside and outside the textile sector. But enthusiasts for guilds have cited no evidence against the proposition that for many industries in pre-modern Europe the required training was shorter and less formal than that required by guilds. Nor have they provided an alternative explanation for the fact that many successful and expanding industries flourished in pre-modern Europe without their practitioners’ engaging in lengthy formal training. These issues cannot be addressed or resolved by appealing to psychology textbooks.

3.2. Can Legislation Show That Training Required Guilds?

The second line of approach of enthusiasts for guilds is to reassert the usability of legislative evidence, claiming that the fact that all guild laws *mentioned* skilled training indicated that

¹⁰⁹ Ogilvie 2003, chs. 3 and 6; Ogilvie 2004a, pp. 289-90, 303-07, 312-14, 319, 323-5; Ogilvie 2004b; Ogilvie 2004c; Ogilvie 2006a.

¹¹⁰ For examples of non-guild apprenticeships in pre-modern England and the Netherlands, see Davids 2003, pp. 3-10; Heaton 1965, pp. 308-11.

¹¹¹ Counter to the claim in Epstein 2008, para. 7 with fn. 26, that I make the ‘assumption that all crafts faced identical requirements in terms of skill’. On the contrary, in Ogilvie 2004a, p. 302, I postulate that crafts *varied* in their skills requirements, with some of them requiring prolonged formal training and others not: ‘there were many pre-industrial crafts and proto-industries that were not highly skilled, hence did not require prolonged formal training, and yet were guilded. This was certainly true of most European wool textile industries, especially after the spread of the worsted “New Draperies” in the later sixteenth century.’ Epstein also claims that I have argued that ‘training was unnecessary in “nearly every part of early modern Europe”’. In fact, in Ogilvie 2004a, p. 303, I carefully restrict my argument to the wool textile industries, writing that ‘Similar direct testimony survives for nearly every part of early modern Europe: most worsted – and even many woollen – wares could be successfully woven, finished, and sold on export markets without formal guild training’.

these were a major guild *concern*. For the reasons already discussed earlier, legislation is an unreliable guide to actual practice. Even as a guide to guild priorities, legislation must be read critically. Guilds had two other incentives – apart from concern for the common weal – to include training regulations in their legislation. One was that training requirements made it easier for established producers to monitor and restrict entry to the industry, thereby protecting themselves from competition and defending their monopoly profits. The other incentive to include training regulations in guild ordinances was rhetorical: skill was unquestionably a good thing, and hence could be used to justify guild restrictions that might otherwise have attracted opposition from governments, merchants, or ordinary citizens.

Rehabilitation theorists altogether fail to address the argument that the presence of training regulations in all guild ordinances can be explained by their utility in enforcing entry barriers. They do address the argument that training provisions could be included in guild ordinances for rhetorical reasons, but solely by denying that guilds had any need to justify their regulations toward the wider world. Thus Epstein claims that there is no need to analyse the rhetorical reasons behind including particular provisions in guild legislation because, he asserts, ‘statutory provisions were addressed to the guild membership and not to the outside world’.¹¹²

This betrays ignorance of the legal basis for the existence of guilds and the regulations governing their operations. Guilds obtained charters from municipal and state authorities precisely so as to give themselves a legal basis for penalizing or prosecuting members who violated regulations and outsiders who infringed on their ‘privileges’. The wording of guild charters was often strongly influenced by guild members themselves since, as demonstrated in archival research carried out by those who have studied guilds in practice, guild legislation typically came into being as a result of petitions and draft ordinances submitted by guild delegations.¹¹³ The imposition by guilds of penalties and prosecutions on members and outsiders, and their denial of permission to learn or practise the economic activities they defined as their own exclusive ‘privilege’, inevitably aroused resentment and resistance. Consequently, guilds needed to provide justifications in order to persuade legislators, town officials, bureaucrats, magistrates, juries, and public opinion that guild regulations benefited the common weal and should be promulgated, enforced, and renewed. Guild charters, ordinances, and statutes were, therefore, unquestionably addressed to the outside world. Had they been addressed solely to the guild membership they would hardly have needed to exist.

The fact that all guild laws mentioned skilled training is thus irrelevant to establishing whether guilds were in practice essential for human capital provision. Legislation does not say anything about what actually happened. Furthermore, since guilds had other strong incentives to include training regulations in their ordinances, legislation cannot even be used to support the view that guilds regarded human capital investment as a priority.

3.3. Can Guilds’ Exclusion of Females Be Dismissed?

As already mentioned, one widespread finding that casts doubt on the necessity of guild training is the evidence that many pre-modern industries could be successfully practised by females, who were legally excluded from guild training. In almost all guilded industries, women were officially prohibited from undertaking apprenticeship and journeymanhood. However, masters’ wives and widows were often (though not always) permitted to practice the craft no matter how short a time they had been married. At the same time, similarly unapprenticed women who had *not* married masters were regarded as a dangerous threat to

¹¹² Epstein 2008, para. 18.

¹¹³ For a discussion, see Ehmer 1998, p. 39; Ogilvie 1997, pp. 39-45; Ogilvie 2004a, pp. 292-3.

guild members.¹¹⁴ This, as has been widely pointed out in the literature on the history of women's work, is a strong indication that guild training requirements functioned as a barrier to entry rather than as an essential instrument for skills transmission.¹¹⁵

Still concerned to defend guilds as economically beneficial despite their having prevented half the population from obtaining industrial skills, enthusiasts for guilds adopt the somewhat contradictory stance that on the one hand guilds did not restrict women's work (since that would imply that guilds were inefficient and inequitable) but on the other hand women were naturally unsuited for skilled craft work because of their domestic responsibilities (so actually their exclusion by guilds was justified).

Enthusiasts for guilds have responded to the embarrassing fact that guilds excluded women from training by seeking to discount the economic significance of this exclusion. Thus, for instance, Crowston has argued that guild restrictions on women did not matter because in eighteenth-century France females worked illegally in the black market and obtained vocational training through alternative institutions such as all-female guilds, charitable schools, female religious communities, or unguilded state manufactures. According to Crowston, this shows that 'there is no essential contradiction between women and guilds'.¹¹⁶ This misses the point. The fact that some women succeeded in getting around guild restrictions through resorting to other institutions or to the black market does not mean that guilds had no effect. Alternative training institutions were scarce and costly. As Crowston herself admits, even in France all-female guilds were few in number and could only admit limited numbers of girls as apprentices; other alternatives only arose through state or church intervention, undertaken precisely to compensate for guild barriers to female training.¹¹⁷ As for the black market, certainly it offered excluded groups such as women opportunities better than those they were offered by formal institutions such as guilds. But, as research on modern developing economies shows, the opportunities offered by the informal sector are still poorer than those which excluded individuals would have enjoyed had they been allowed to train and work in the formal sector. In the informal sector, risks are high, information is poor, violence and theft are common, time-horizons are short, workers are unprotected, and investments in physical and human capital are limited. Any institution that forces workers into the informal sector not only harms those workers but imposes inefficiencies on the whole economy.¹¹⁸ Institutions that encourage the informal sector may also block change. As Partha Dasgupta has trenchantly observed, informal institutions may bring benefits in less developed economies, but one should not be 'distracted from asking if their continued existence could prevent more productive social arrangements from becoming established, say, in the shape of formal markets'.¹¹⁹

Other enthusiasts for guilds deal with the problem of guild discrimination against women by denying the evidence. Thus guild restrictions on women did not matter, according to Epstein, since masters' daughters 'did earn an income from craft work'.¹²⁰ This is untrue, as shown in

¹¹⁴ For a full-length discussion of guild constraints on women's work in Württemberg and more widely across pre-industrial Europe, see Ogilvie 2003. For further European evidence, see Crowston 2001; Hafter 1995; Hafter 1997; Hafter 2001; Quataert 1985; Simon-Muscheid 1998; Van den Heuvel 2007; Van Nederveen 2006a; Van Nederveen Meerkerk 2006b; Wiesner 1990; Wiesner-Hanks 1996.

¹¹⁵ Bandhauer-Schoeffmann 2006; Coffin 1994; Crowston 2001; Eibl 1995; Hafter 1995; Hafter 2001; Jacobsen 1998; Ogilvie 2003; Quataert 1985; Simon-Muscheid 1998; Vámos 1987; Van Nederveen Meerkerk 2006a; Van Nederveen Meerkerk 2006b; Vicente 1996; Wiesner 1990.

¹¹⁶ Crowston 2006, p. 28.

¹¹⁷ Crowston 2006, pp. 14-18.

¹¹⁸ See De Soto 1989; Schneider 2006; International Labour Office Mission 1989; Ogilvie 2007, Section IX.

¹¹⁹ Dasgupta 2003, p. 310.

¹²⁰ Epstein 2008, para. 33.

a series of my publications, including several cited by Epstein.¹²¹ The only women who could legally engage in all aspects of a guilded craft were wives and widows of masters.¹²² Daughters of masters were excluded from guild apprenticeship and forbidden many forms of work, not just in worsted production but in nearly all other guilded industries.¹²³ Epstein adds that ‘non-guild related women also worked as spinners’.¹²⁴ He carefully omits to mention that spinning was the *only* type of worsted work which women other than masters’ wives and widows were legally allowed to do, and that spinners’ wages were capped by the weavers’ guilds, pushing these women into poverty and dependency.¹²⁵ Similar attempts by weavers’ guilds elsewhere in Europe to coerce female spinners into working for below-market wages were only prevented by diminishing the regulatory powers of the guilds.¹²⁶ Women other than masters’ wives and widows who sought to carry out any other work in the worsted industry except for spinning were prosecuted by the guilds.¹²⁷ Only by ignoring or denying the empirical findings in this way can one dismiss the damage which guilds inflicted on human capital investment through their discrimination against women.

Another tactic is to claim that women’s productivity in the labour market was so low that it did not *matter* that guilds prevented them from increasing that productivity by obtaining industrial skills. Thus Epstein contends that my criticism of guilds’ prohibition on female training is based on the mistaken ‘assumption that female labour productivity was equivalent to male’.¹²⁸ This echoes his statement in an earlier publication that ‘women were mostly restricted to activities learned informally at home’ and hence had no demand for guild apprenticeships.¹²⁹ Such biological arguments, seeking to justify guilds’ exclusion of women from training on the grounds that women’s labour productivity was naturally low because of their domestic role, echo arguments used by guild masters at the time, concerned to defend their privileges against female competition.¹³⁰ But Epstein’s argument is unsustainable. It is false to claim that I assume female labour productivity to be equal to male: on the contrary, detailed analysis of this precise question is provided in my book on women’s work published in 2003.¹³¹ It is also false to claim that guilds’ exclusion of women can be justified in terms of low labour productivity or domestic responsibilities. Analyses of women’s craft work by myself and others has refuted the claim that that pre-modern women had naturally low labour productivity or were necessarily attached to domestic responsibilities, and therefore had no demand for vocational training and no desire to do craft work.¹³² For one thing, in most western European societies, women married in their late twenties, 10-20 per cent of them never married at all, and at any one time more than half of all females of prime working age were not married. These demographic realities gave women strong incentives to invest in vocational skills and to practise them for long phases of their life-cycles. For another, females without guild licenses were regarded as dangerous competitors by male journeymen and masters, and persecuted when they encroached on tasks reserved for male guild members.

¹²¹ Ogilvie 1990; Ogilvie 1997, pp. 139-40, 354-5, 452, 473; Ogilvie 2003, ch. 3; Ogilvie 2004a, pp. 304-07, 312; Ogilvie 2004b; Ogilvie 2004c; Ogilvie 2006a.

¹²² Ogilvie 2003, chs. 4-5.

¹²³ Ogilvie 2003, ch. 3; Ogilvie 2004a, pp. 304-07, 312.

¹²⁴ Epstein 2008, para. 33.

¹²⁵ Ogilvie 1990; Ogilvie 2003, ch. 6-7; Ogilvie 2004a; Ogilvie 2004b; Ogilvie 2004c; Ogilvie 2006a.

¹²⁶ See, e.g., Finkenwirth 1910, pp. 13, 15-16, 20, 33.

¹²⁷ Ogilvie 2003, esp. ch. 6; Ogilvie 2004a, pp. 304-5, 325-6.

¹²⁸ Epstein 2008, para. 33.

¹²⁹ Epstein 1998, p. 687 fn 10.

¹³⁰ As, for instance, in the argument by one seventeenth-century German worsted-weavers’ guild ordinance that ‘unmarried daughters and other persons’ should be forbidden to engage henceforth in certain auxiliary craft activities, ‘in order that such daughters shall be kept to other and necessary domestic tasks and business’ (see ‘Engelsattweberordnung’, article 20, repr. in Troeltsch 1897, p. 446).

¹³¹ Ogilvie 2003, pp. 111-14, 127-8, 286-95, 322-6.

¹³² Ogilvie 2003, ch. 3; Van den Heuvel 2007; Van Neederveen Meerkerk 2006a; Van Neederveen Meerkerk 2006b.

That is, women did not have such low labour productivity that they were ‘mostly restricted to domestic activities’, but rather had the desire and ability to work in guilded sectors. By excluding women from legally learning and practising most craft work, therefore, guilds were not simply reflecting women’s ‘naturally’ low labour productivity or their natural taste for domestic activities, but were deliberately enforcing institutionalized sex discrimination in the labour market.¹³³

A final argument employed by enthusiasts for guilds is to claim that guild restrictions on women’s training did not matter because pre-modern societies also contained other sources of sex discrimination. Thus Epstein dismisses guilds’ systematic exclusion of women by saying that ‘pre-modern gender discrimination was not invented by, and certainly not restricted to, guilds’.¹³⁴ If this is intended to argue that *other* economic institutions in pre-modern Europe were *also* manipulated by male interest-groups in such a way as to obtain monopoly rents for themselves by excluding female competition in factor and product markets, it is true – as I have shown in detail, strong communal and seigniorial institutions were used in the same way as strong guilds.¹³⁵ But this hardly exonerates the guilds from their enthusiastic participation in this systematic discrimination. If Epstein’s statement is intended as a ‘cultural’ argument that patriarchal beliefs were universal in pre-modern Europe and hence the institutional framework did not matter, the empirical findings suggest otherwise. Patriarchal beliefs may have been universal, but they had much less economic impact in the absence of institutional structures to give them practical expression. This is shown by the fact that women moved into almost any economic activity in pre-modern Europe as soon as guild regulations loosened sufficiently to stop keeping them out.¹³⁶ Recent research on women’s work in the early modern Dutch Republic, for instance, has shown that in sectors unregulated by guilds, such as specialized spinning, female and male wages were equal.¹³⁷ In sectors of the Dutch economy where guild rules were more liberal, such as retailing, female participation was significantly higher than in sectors where guilds were more restrictive, and when guild restrictions were relaxed female participation immediately increased.¹³⁸ Institutions did matter, as they enabled individuals to organize themselves to work together in different ways, whether for efficient or inefficient purposes – enthusiasts for guilds would surely not claim that because beliefs in ‘skilled training’ were universal in pre-modern Europe it did not therefore matter what institutions were available to ensure that such training actually occurred. Even if patriarchal beliefs were universal, the institutions to implement these beliefs varied. Strong guilds gave male masters the institutional capacity to act as a cartel to exclude women and to penalize free-riding by individual masters who would otherwise have wished to train and employ female workers.

Institutions that exclude females from work and training do not just harm women; they also damage the wider economy. Recent studies provide striking estimates of the extent to which discrimination against women in human capital investment and labour force participation reduces GDP in modern developing economies. Thus, for instance, a 2007 United Nations report estimates that gender discrimination costs the Asian and Pacific region \$43-\$47 billion a year by keeping women out of the labour market, and another \$16-\$30 billion a year by restricting their access to education and training. If India’s female labour force participation rate reached parity with that of the United States, India’s GDP would increase by 4.2 per cent a year and its GDP growth rate would increase by 1.08 percentage points a year. Achieving US female labour force participation rates would increase the Malaysian GDP growth rate by

¹³³ See Ogilvie 1990; Ogilvie 2003, esp. ch. 7; Ogilvie 2004a; Ogilvie 2004c.

¹³⁴ Epstein 2008, para. 33.

¹³⁵ Dennison / Ogilvie 2007; Ogilvie / Edwards 2001; Ogilvie 2004b; Ogilvie 2005a.

¹³⁶ Ogilvie 2003; Smith 2006.

¹³⁷ Van Neederveen Meerkerk 2006a; Van Nederveen Meerkerk 2006b.

¹³⁸ Van den Heuvel 2006; Van den Heuvel 2007.

0.77 of a percentage point and the Indonesian rate by 0.56 of a percentage point.¹³⁹ For the Asian and Pacific region as a whole, a 1 per cent increase in female education would increase GDP growth by 0.2 per cent, an estimate paralleled in a number of other studies of modern developing economies.¹⁴⁰ Institutions, such as guilds, that restrict women's access to training and employment therefore seem likely to reduce economic well-being more widely.

3.4. Can the Evidence on Apprenticeship Be Reinterpreted?

A fourth approach adopted by scholars who wish to maintain a favourable view of guilds' role in skilled training is to challenge the case-study evidence on guild apprenticeship in pre-modern Europe. This includes the finding that many crafts did not need long training; that industries without compulsory guild training were successful; that many guild apprentices found training useless and quit early when not legally prevented from doing so; and that guilds used apprenticeship regulations to restrict entry.

A first important finding about guild apprenticeship that casts doubt on the human capital view of guilds is the evidence that many pre-modern crafts could be successfully practised by new entrants after a short period of training that did not involve any formal guild apprenticeship. This was the case in many English and Dutch worsted textile industries, as pointed out in my publications.¹⁴¹ In the West Riding of Yorkshire in the eighteenth century, contemporaries observed that 'every man that wolde had libertie to be a clothier'.¹⁴² In eighteenth-century Somerset, contemporaries complained that of the several thousand weavers operating in and around Taunton 'not Half of them have served Apprenticeships to the Weaving Trade'.¹⁴³ It was also the case in the Württemberg Black Forest in the 1580s when the worsted industry was just starting up, before the first worsted-weavers' guilds were formed. Thus in 1582, disgruntled masters of an urban guild of woollen-broadcloth-weavers (*Tuchmacher*) complained to the authorities that peasants and men of other crafts, 'here and there also joined by women', were setting up as worsted-weavers (*Zeugmacher*, *Engelsaitmacher*) and selling successfully on export markets, 'after learning combing and weaving for only a few weeks or months'.¹⁴⁴

Such testimony by contemporaries is very awkward for the view that long guild apprenticeships were essential. In his recent reassertion of the importance of guilds' training role, Epstein has claimed that evidence such as this example from Württemberg demonstrates not that prolonged guild training was not necessary, but rather 'the effect of poor quality work on the craft's reputation'.¹⁴⁵ But there is no evidence for this claim. As is explained clearly in literature Epstein himself cites, at this period worsted production was just starting up in Württemberg.¹⁴⁶ Worsteds were not regarded as part of the legal monopoly of the woollen-weavers' craft, and had not yet formed its own guild. This petition of 1582 cannot have anything to do with 'the craft's reputation', therefore, since the worsted-weaving craft did not yet exist as an entity to *have* a reputation and the woollen-broadcloth-weaving craft had a reputation in a completely different set of wares and markets.

A second empirical finding that undermines the human capital case for guilds is the proliferation of non-guild-trained workers all over Europe wherever guilds ceased to exist or

¹³⁹ United Nations Economic and Social Commission for Asia and the Pacific 2007, pp. 104-5.

¹⁴⁰ Knowles et al. 2002; United Nations Economic and Social Commission for Asia and the Pacific 2007, pp. 105-6.

¹⁴¹ Ogilvie 2004a, p. 303.

¹⁴² Heaton 1965, p. 102.

¹⁴³ 'Petition of serge, worsted and other woollen weavers', Journals of the House of Commons, 4 Dec. 1702 [<http://www.bopcris.ac.uk/bop1688/ref1506.html>].

¹⁴⁴ Troeltsch 1897, pp. 10-11

¹⁴⁵ Epstein 2008, para. 17.

¹⁴⁶ Ogilvie 1997, ch. 4; Ogilvie 2004a, pp. 289-92; Troeltsch 1897, ch. 1.

to enforce their apprenticeship regulations. Epstein seeks to dismiss this evidence by asserting that non-guilded labour could not substitute for guilded labour: ‘the more likely alternative’, he claims, was ‘that most formally untrained laborers were either lower- or semi-skilled workers who lacked the masters’ all-round expertise’.¹⁴⁷ Epstein’s sole support for this conjecture is a footnote to Heaton’s study of the Yorkshire woollen and worsted industries which, on investigation, actually makes the contrary case. Heaton shows that insofar as apprenticeship survived in the *woollen* industry (where it was legally mandated) it was not enforced by guilds but rather undertaken through private agreements. In the *worsted* industry, apprenticeship was not legally mandated, so it was a matter of voluntary choice and was widely ignored (‘every man that wolde had libertie to be a clothier’¹⁴⁸). At no point does Heaton refer to guild masters’ all-round expertise; rather he describes how the advancing division of labour and the increasing specialization of worsted workers progressively made apprenticeship obsolete for the vast majority of worsted producers.¹⁴⁹ Heaton’s evidence for Yorkshire thus provides no support for Epstein’s view that guild apprenticeships were essential for ensuring industrial skills or that non-guild-trained workers could not substitute for guilded labour. Nor does Epstein’s unsubstantiated assertion account for the many guilded industries throughout Europe in which untrained ‘encroachers’ were regarded by guild masters as skilled enough to produce wares that were indistinguishable from their own. If these non-guild-trained competitors had lacked relevant ‘all-round expertise’, guild masters would not have needed to bother excluding them.

A third finding about apprenticeship that casts doubt on the human capital case for guilds is the fact that in many guilded crafts apprentices complained of receiving poor training from their masters and quit their apprenticeships early, even though this disqualified them from subsequent mastership. My 2004 article provided several illustrative examples of such apprentices in early modern Württemberg.¹⁵⁰ Epstein bizarrely takes these examples to show not that guilds failed to guarantee training but rather that ‘these apprentices had a ... sophisticated understanding of weaving skills’.¹⁵¹ This is absurd. Quitting apprenticeship before completing the legal training period was a serious decision, implying a calculation that the expected value of continuing guild training was less than the foregone earnings and disutility of remaining in service. An apprentice who quit may or may not have had a sophisticated understanding of the importance of craft skills, but he certainly had reached a clear conclusion that guild apprenticeship was not providing him with skills of value. Nor was this pattern unique to Württemberg. Examples of runaway apprentices can be found in many other European crafts and industries.¹⁵² Farr, for instance, has conjectured that interrupting one’s guild apprenticeship was the norm rather than the exception in pre-modern crafts.¹⁵³ Wallis adduces high quit-rates by early modern English apprentices as evidence that guild apprenticeships were neither necessary nor sufficient for providing training even in highly skilled urban crafts.¹⁵⁴ Epstein’s argument is thus not only farfetched but at odds with the research literature on pre-modern craft apprenticeship.

A fourth finding about apprenticeship that casts doubt on rosy views of how guilds guaranteed human capital investment is evidence that guilds had an alternative motivation for requiring apprenticeship – it helped them restrict entry. My publications have substantiated this argument, presenting quantitative and qualitative evidence showing how Württemberg

¹⁴⁷ Epstein 2008, para. 19.

¹⁴⁸ Heaton 1965, p. 102.

¹⁴⁹ Heaton 1965, pp. 308-11.

¹⁵⁰ Ogilvie 2004a, p. 311.

¹⁵¹ Epstein 2008, para. 16.

¹⁵² For evidence of low apprenticeship completion rates in medieval and early modern England, see Ben-Amos 1991, p. 167; Boulton 1987, p. 104; Heaton 1965, pp. 306-7; Rappaport 1989, pp. 311-13; Smith 1973, pp. 196-8; Unwin 1995, p. 197; Wallis 2005.

¹⁵³ Farr 2000, p. 34.

¹⁵⁴ Wallis 2005.

weavers' guilds used apprenticeship regulations to restrict entry and protect monopoly rents.¹⁵⁵ Enthusiasts for guilds seek to sweep such evidence under the carpet. Thus, for instance, Epstein claims on several occasions that the guild in my German case study cannot have used apprenticeship to ration entry because 'masters set no limits to the number of apprentices a master could take'.¹⁵⁶ This is simply untrue. The standard works on this industry, including my own study, document the apprenticeship quotas imposed by Württemberg worsted guilds, beginning in 1611 and becoming progressively more severe thereafter.¹⁵⁷ Epstein tries to explain away the decline in the number of outside masters admitted to this industry after 1650 by claiming that it was not so much guild exclusivism as a lack of demand by outsiders to obtain mastership locally.¹⁵⁸ This is also false. My case study presents unambiguous evidence showing that the guild imposed higher entry requirements on outside applicants, evinced outrage at the discovery that some masters from a neighbouring district had taken on 'outsiders' as apprentices without special state dispensation, and opposed settlement of outside weavers on the grounds that 'the craft was overfilled'.¹⁵⁹ Epstein claims that the guild cannot have become more exclusive after 1650 because the number of masters grew and average output fell, so the entry by outsiders declined simply because no outsider wanted to set up business locally.¹⁶⁰ This too is false. My study presents evidence that the number of masters grew through internal increase since guild members often had more than one son who wanted to join the craft, enhancing the guild's motivation to exclude outsiders.¹⁶¹ Average output fell after 1650 not because of weak demand for guild masterships but because legal output quotas were fixed at lower levels.¹⁶² Epstein claims that guild output quotas cannot have impeded production since the guild quota was 50 cloths per annum but average output only 30-35.¹⁶³ This is also false. My case study, as well as the standard nineteenth-century study of this industry, explains clearly that the guild output quota was renegotiated at intervals between the weavers' guilds and the merchant-dyers' association, and therefore fluctuated over time. For extended periods in the seventeenth and eighteenth centuries, these negotiated legal output quotas lay well below 50 cloths per annum, as shown by evidence presented in the standard works on the industry.¹⁶⁴ Though Epstein footnotes the relevant literature, his factual assertions often depart from it without explanation or contrary evidence.¹⁶⁵

In a further attempt to shore up the case for guilds' training role, Epstein seeks to reinterpret the evidence on guild output quotas in the Württemberg worsted industry by claiming that they show labour productivity to have been higher in the guild-regulated town than in the non-guild-regulated countryside. He begins with a misquotation, claiming that I state that 'labour productivity "should have been higher in the countryside, where corporative regulation might be expected to be weaker"'.¹⁶⁶ In fact, what I write is that 'Standard assumptions about proto-industrialization would predict higher output quotas in the countryside, where corporative regulation might be expected to be weaker'.¹⁶⁷ Epstein's

¹⁵⁵ Ogilvie 2004a, pp. 307-10.

¹⁵⁶ Epstein 2008, para. 17 fn 28, paras. 31-2.

¹⁵⁷ Troeltsch 1897, pp. 76-80; Ogilvie 1997, pp. 140-3; Ogilvie 2004a, p. 310.

¹⁵⁸ Epstein 2008, paras. 31-2.

¹⁵⁹ Ogilvie 1997, pp. 49-51, 139-79; Ogilvie 2004a, pp. 309-10.

¹⁶⁰ Epstein 2008, paras. 31-2.

¹⁶¹ As is made clear in Ogilvie 1997, pp. 139-79.

¹⁶² Ogilvie 1997, pp. 188-216.

¹⁶³ Epstein 2008, paras. 31-2.

¹⁶⁴ Ogilvie 1997, pp. 188-216, see esp. Tables 7.1 and 7.2; Troeltsch 1897, pp. 112-3, 116, 184, 202, 454.

¹⁶⁵ The standard works are Ogilvie 1997 and Troeltsch 1897, both of which discuss apprenticeship quotas, the former on pp. 139-43 and the latter on pp. 13, 26, 43. Both works are extensively footnoted in Epstein 2008 and appear in its bibliography.

¹⁶⁶ Epstein 2008, para. 20.

¹⁶⁷ Ogilvie 1997, p. 204.

misquotation introduces three separate inaccuracies. First, he quotes me as writing ‘should have been’, whereas what I wrote was ‘Standard assumptions about proto-industrialization would predict’. Second, he ascribes the prediction to me, instead of to the standard theory of proto-industrialization, a theory that I show to be in error, since the evidence for Württemberg worsted guilds demonstrates that corporative regulation was equally strong in town and countryside. Third, Epstein substitutes the words ‘labour productivity’ for ‘output quotas’.

This triply inaccurate quotation emboldens Epstein to advance the claim that my evidence shows that ‘26 of the top 27 weavers by output lived in the more regulated Wildberg towns [sic], suggesting that labour productivity was significantly higher where guild regulations on apprenticeship were strongest [sic] than in the less regulated countryside’.¹⁶⁸ This statement contains multiple inaccuracies. First, the evidence in Table 7.1 of my book, from which Epstein takes these numbers, is for *guild output quotas*, not *labour productivity*. This is explicitly indicated in the sentence which Epstein misquotes (where he substitutes ‘labour productivity’ for ‘output quotas’), in the text of my book, and in the title of Table 7.1.¹⁶⁹ As clearly discussed there, weavers in both town and country desired to produce, and were capable of producing, larger numbers of cloths than they produced in practice. They produced so few cloths in practice because they were prevented from producing more by guild output quotas, which were legally fixed at lower levels for rural than for urban masters. Guild output quotas thus provide no information about labour productivity. Second, the countryside was *not* ‘less regulated’ than the town, as indicated by a wide array of evidence discussed in my book, including the fact that the guild actually imposed *stricter* output quotas on rural than urban weavers. Third, no material either in this passage or anywhere else in my book (or in any other work on the Württemberg worsted industry) provides support for the statement that ‘guild regulations on apprenticeship’ were stronger in towns than in villages. On the contrary, quantitative evidence from the sections of my book relating to apprenticeship shows unambiguously that guild regulations on apprenticeship were enforced equally strictly in towns and villages.¹⁷⁰

Epstein’s final attempt at creative reinterpretation is directed at my evidence concerning guild limitations on the number of young men admitted to training. My study showed that high apprenticeship fees were imposed by guilds as barriers to entry, and that they were effective in excluding even those candidates whose other characteristics (gender, father’s occupation, community citizenship, religion, legitimate birth, etc.) might otherwise have entitled them to become apprentices.¹⁷¹ Epstein advances a convoluted argument that begins with a rhetorical question: ‘If lengthy apprenticeships were unnecessary, the only rationale for paying the fee would have been to provide an apprentice with a lucrative rent stream; but then, why spend 6 useless years as an apprentice and not immediately become a master instead?’ Since it was not rational to make the latter choice, he claims, apprenticeship must have been ‘the chief available means to acquire scarce skills’ and hence the apprenticeship fee ‘would have acted as a bond on future performance, given asymmetric information about the apprentice’s ability and willingness to repay his training costs in full’.¹⁷²

This ignores several key aspects of guild apprenticeship. It was not *open* to a young man ‘to immediately become a master’ without putting in the compulsory period of apprenticeship and journeymanship required by guild regulations. Without presenting one’s guild apprenticeship certificate one could not obtain employment as a journeyman, without presenting one’s journeyman tramp-book and master-piece one could not obtain one’s

¹⁶⁸ Epstein 2008, para. 20. The error of wording in the quoted passage is Epstein’s own. Although Epstein refers to ‘towns’ there was only one town in the administrative district of Wildberg.

¹⁶⁹ Ogilvie 1997, pp. 204-05 with Table 7.1.

¹⁷⁰ Ogilvie 1997, pp. 155-79.

¹⁷¹ Ogilvie 1997, ch. 6; Ogilvie 2004a, pp. 307-10.

¹⁷² Epstein 2008, para. 28.

mastership certificate, and without a mastership certificate one could not set up in business as a master in any jurisdiction in which guild regulations were enforced.¹⁷³ Epstein's rhetorical question thus falls flat: the rationale for paying the apprenticeship fee and spending a given number of 'useless years as an apprentice' was that guilds, community jurisdictions, and state officials required this as a prerequisite for working independently as a master.

Epstein's attempted reinterpretation of guild apprenticeship fees falls equally flat. Not only was there a very good reason to pay the fee and serve one's 'useless years' as an apprentice (the guild required it of anyone who desired ultimately to enjoy the benefits of guild mastership), but there is not a scintilla of evidence to support the view that the apprenticeship fee was 'a bond on future performance' to ensure that an apprentice would repay his training costs. Indeed, this interpretation of apprenticeship has attracted criticism in recent scholarship on guilds.¹⁷⁴ For one thing, although Epstein describes apprentices as 'children', they were not.¹⁷⁵ Here, as in most other pre-modern European crafts, apprentices were young men in the second half of their teens and the first half of their twenties (aged 14-24 years, according to the Wildberg censuses of 1717 and 1722).¹⁷⁶ Youths of this age were regarded by contemporaries as productive enough to cover their consumption costs, and often had prior employment history, so they were already of utility to their masters from the beginning of the apprenticeship.¹⁷⁷ Studies of apprentices in England and other European societies reveal the same to be true in other pre-modern crafts.¹⁷⁸ These findings have begun to evoke scepticism about whether it is justified to regard guild apprenticeship fees and longer-than-necessary apprenticeship periods as bonds on future performance rather than as barriers to entry.¹⁷⁹

The evidence on guild apprenticeship does not, therefore, support the view that guilds were either necessary or sufficient for human capital investment. Contemporary testimony that guilded crafts could be practised effectively without guild apprenticeship cannot be dismissed by claiming that non-guild-trained practitioners were damagingly unskilled, since many crafts were guilded in some European societies and unguilded (but successful) in others, and non-guild-trained practitioners competed successfully with guild masters. Moreover, guild apprentices themselves complained about receiving poor training and often voted with their feet by quitting apprenticeship early. Guild apprenticeship existed not because it was efficient for human capital investment but because it helped guilds defend their members' profits by restricting entry, as shown by exclusion of outsiders by strong guilds. Guild apprenticeship fees were not bonds on performance by unproductive child workers but entry barriers imposed on productive young men who were already of utility to their masters. Apprentices were willing to pay high fees not because they valued guild training but because they valued the guild license without which they were not allowed to practise the craft legally.

3.5. Was It Only in the Worst Industry that Guild Training was Unnecessary?

A fifth approach adopted by scholars who wish to maintain a favourable view of guilds' role in training is to claim that contrary evidence derives solely from the industry analysed in my

¹⁷³ As made clear by the discussion in Ogilvie 1997, pp. 139-55, and in Troeltsch 1897, ch. 4.

¹⁷⁴ See, for instance, Wallis 2005.

¹⁷⁵ Epstein 2008, para. 28.

¹⁷⁶ Author's calculations from HSAS A573 Bü. 6965 (1717); HSAS A573 Bü. 6966 (1722).

¹⁷⁷ On the age at which youths of both sex in this economy were regarded as covering their consumption costs, see Ogilvie 2003, pp. 99-102.

¹⁷⁸ On the fact that apprentices were not children but rather young men who often had previous work experience and useful skills, see Wallis 2005. For further data on apprentices' ages in pre-modern Europe, demonstrating that they were not unemployable children but potentially productive young men, see Hanawalt 1993, p. 113; Davis 1971, pp. 41-75; Nicholas 1995, pp. 1108. On how apprentices in the Yorkshire worsted industry had 'a practical acquaintance with some phases of the industry' before taking their indentures, see Heaton 1965, p. 305.

¹⁷⁹ See, for instance, Wallis 2005.

own case study, namely worsted textile production.¹⁸⁰ My 2004 article certainly focuses on the early modern European worsted textile industry, since the debate about guilds is still sadly lacking in rigorous empirical analyses.¹⁸¹ But the arguments presented there have a wider relevance. Textiles were by far the largest branch of pre-modern industry, as recently pointed out by Soly: ‘the most important export-oriented industry with respect to capital investment, employment, and profits was textile manufacturing’.¹⁸² Worsteds – also called ‘New Draperies’ – were a rapidly expanding, mass-market branch of the early modern European textile industry.¹⁸³ Although there were branches of textile production that were more highly skilled – particularly silk and high-quality broadcloth production – the greatest expansion in the textile industry in early modern Europe took place not in these luxury branches but rather in the low-quality, mass-market branches of worsteds, lighter woollens, linens, and cottons – sectors that expanded so fast in export-markets that they have often been called ‘proto-industrial’.¹⁸⁴ Findings for the worsted industry thus refer to a large and rapidly expanding component of by far the largest branch of industry before and during the first Industrial Revolution.

Furthermore, evidence undermining the human capital interpretation of guilds is not restricted to the worsted sector. As my publications have documented, worsted production was only one of many early modern industrial activities that were guilded in some parts of Europe and unguilded in others. Other examples include linen weaving, cotton weaving, scythe making, trimmings making, lace making, and the making of small iron goods. These industries were guilded in many parts of Germany, Austria, Italy, Spain, Bohemia, Serbia, Bulgaria, and Greece, but unguilded in most parts of England, Flanders, Scotland, Switzerland, and Ireland.¹⁸⁵ In an article of 2005, I present evidence from a range of industries, including high-quality urban crafts, that undermines the claim that guilds were necessary for skilled training.¹⁸⁶ There is thus copious evidence from other sectors than worsted textiles that guilds were not necessary to provide levels of skilled training sufficient to power the dynamism of long-lived and successful pre-modern industries. This suggests that the detailed analysis of the institutional requirements for human capital investment provided in my case study of the European worsted sector is likely to find many parallels in pre-modern industry. As discussed below in Section 7, such rigorous, comparative empirical studies of particular industries are an important desideratum for future research, as only they can advance the debate about guilds’ importance for human capital investment.

3.6. Can European Evidence Be Reinterpreted to Rehabilitate Guilds’ Role in Training?

A final approach adopted by scholars who wish to reassert the human capital interpretation of guilds is to dispute the evidence from cross-European comparisons. As I have previously pointed out, the fact that one and the same industry could be subject to compulsory guild apprenticeship in some European economies and free of guild apprenticeship in others casts doubt on the view that guild apprenticeship was economically essential. Further doubt is cast by the fact that some of the dynamic and successful textile industries in the centuries before the industrial revolution developed in rural regions of England where guild apprenticeship played little or no role. Epstein has sought to dismiss such European comparisons on the grounds that that apprenticeship was widespread in England into the mid-eighteenth century.¹⁸⁷ There are three reasons why this claim is irrelevant.

¹⁸⁰ Epstein 2008, para. 16.

¹⁸¹ Ogilvie 2004a, p. 302.

¹⁸² Soly 2006, p. 2.

¹⁸³ Coleman 1969; Harte 1997; Heaton 1965.

¹⁸⁴ Jenkins 2003; De Vries 1976.

¹⁸⁵ Ogilvie 2004a, p. 313; see also Ogilvie 1996a, pp. 30-3; Ogilvie 1997, pp. 412-37.

¹⁸⁶ Ogilvie 2005b.

¹⁸⁷ Epstein 2008, para. 17 with fn. 26.

First, apprenticeship does not require guilds, as Epstein himself admits when he acknowledges that in Yorkshire apprenticeship contracts were monitored by Justices of the Peace (public magistrates) rather than guilds.¹⁸⁸ The Yorkshire woollen and worsted industries were phenomenally successful, and have been estimated to account for 60 per cent of British output in the wool textile sector by the eighteenth century.¹⁸⁹ Furthermore, as I have pointed out, and as confirmed by the Heaton study to which Epstein refers, non-guild apprenticeship was widespread in the English worsted and woollen industries from the sixteenth century on.¹⁹⁰ The prevalence of non-guild apprenticeship in a whole range of pre-industrial crafts has been emphasized by recent work on England,¹⁹¹ the Low Countries,¹⁹² France,¹⁹³ Italy,¹⁹⁴ Russia,¹⁹⁵ the United States,¹⁹⁶ and Canada.¹⁹⁷ Thus, for instance, Mocarelli finds that in an Italian database of over one thousand guilds, ‘in most of the guilds recorded (677) apprenticeships were not officially recognised ... increasingly a private contract between the parties was adopted. A contract was signed between the master craftsman and the parents of the young person who wished to learn the craft.’¹⁹⁸ Likewise, for the Netherlands, Davids points out that

it was evidently possible in Amsterdam to conclude formal arrangements concerning occupational instruction between a individual master and the parents or guardians of a prospective pupil even if there was no corporate institution which could test and certify its outcome. Guilds were not necessary agencies for the enforcement of apprenticeship contracts. If one of the parties defaulted, the aggrieved person could always have recourse to the courts.¹⁹⁹

The widespread evidence of non-guild apprenticeships undermines earlier claims that guilds were essential for enforcing apprenticeships because (as had previously been argued) they prescribed masterpieces, solved free-rider problems, guaranteed contract enforcement, or ensured apprentices were optimally distributed among masters.²⁰⁰ It also casts more general doubt on the idea that guilds were necessary to ensure human capital investment, even in activities where prolonged training was important. Much of the English apprenticeship to which Epstein refers took place in a non-guild framework, and hence the existence of English apprentices does not tell us anything about the importance of guilds.

Second, guild apprenticeship was also widespread in crafts for which skilled training was *not* economically necessary, as shown by the evidence for the worsted and woollen industries all over early modern Europe.²⁰¹ This is because guild apprenticeship served other purposes than economic efficiency. In particular, as discussed in detail above, guild apprenticeship requirements constituted a barrier to entry erected for the purpose of creating monopoly profits for guild members. Thus the prevalence of guild apprenticeship in any given economic sector did not show that the sector required skilled training, but merely that its guilds were in a position legally to require guild apprenticeship.

¹⁸⁸ Epstein 2008, fn 26.

¹⁸⁹ Deane 1957, pp. 203-15.

¹⁹⁰ Ogilvie 2004a, p. 313; Heaton 1965, pp. 308-11.

¹⁹¹ Simonton 1991; Snell 1985; Wallis 2005.

¹⁹² Davids 2003, pp. 3-10.

¹⁹³ Crowston 2005.

¹⁹⁴ Mocarelli 2006, p. 10.

¹⁹⁵ Dennison 2004.

¹⁹⁶ Jacoby 2001.

¹⁹⁷ Hamilton 1995; Hamilton 2000.

¹⁹⁸ Mocarelli 2006, p. 10.

¹⁹⁹ Davids 2003, p. 7.

²⁰⁰ For examples of such arguments, see Epstein 1998; Humphries 2003; Van Zanden 2004a; Van Zanden 2004b.

²⁰¹ Ogilvie 2004a, pp. 312-14.

Third, apprentices could be numerous in *absolute* terms even in a society (such as early modern England) in which guilds were being circumvented or being compelled to relax their regulations in order to survive. What is relevant to assessing the importance of guilds is not the absolute numbers of apprentices, nor even the absolute numbers of *guild* apprentices, but rather the *relative* number of men and women practising a craft with and without apprenticeship. Contemporary documents attest to a large proportion of non-apprenticeship-trained practitioners in eighteenth-century English woollen and worsted industries – c. 50 per cent in Taunton in 1702, c. 90 per cent in the West Riding of Yorkshire c. 1800.²⁰² Thus a particular sector or an entire economy could have large absolute numbers of apprentices without this demonstrating that a majority of practitioners pursued apprenticeships, and hence without providing any support for the view that apprenticeship (whether guild-mandated or privately agreed) was necessary for successful industrial practice.

The attempts of enthusiasts for guilds to reinterpret international comparisons in support of their views thus backfires, partly as a result of a failure to disentangle the various theoretical issues at stake. Until a clear distinction is drawn between the issues of how much training was needed, whether it was of a type that could only be provided through formal apprenticeship, and whether guilds were needed for apprenticeship, enthusiasts for guilds will continue to make little useful contribution to the debate about human capital accumulation in pre-modern economies.

4. Did Guilds Favour Technological Innovation?

A third theory advanced by enthusiasts is that guilds facilitated technological innovation. This runs counter to contemporary complaints – and historical evidence – that guilds frequently opposed the introduction of new techniques. But enthusiasts for guilds argue that such evidence has been misunderstood for centuries: according to this view, many industrial innovations were adopted without guild opposition; guilds only opposed labour-saving and capital-intensive innovations, while favouring labour- and skill-intensive ones; many innovations opposed by guilds were impractical in any case; and even when guilds did oppose innovations it did no harm since innovators simply evaded the regulations.

The most extreme enthusiasts for guilds have gone so far as to argue that guilds positively *encouraged* innovation. In 1998, Epstein put forward ‘a theory of guild innovation’,²⁰³ claiming that guilds ‘produced and adopted innovations’,²⁰⁴ and ‘increased the supply of technology systematically’.²⁰⁵ He postulated four mechanisms by which guilds did this: they offered monopoly rents to innovators, overcoming disincentives to innovation created by the difficulty of charging people to use a public good such as information; they promoted spatial clustering, easing technology transfer; they required apprenticeships, guaranteeing smooth transmission of technical expertise across generations; and they compelled journeymen to travel, overcoming barriers to diffusion of new techniques.²⁰⁶ Through these four guild mechanisms, he argued, ‘craft-based invention ... came close to resembling an ideal market structure for innovation’.²⁰⁷ In more recent elaborations of this view, Epstein claims that craft guilds ‘lowered the costs of absorbing technical information from immigrant technicians’,²⁰⁸ ‘devised institutional arrangements that sustained craft mobility and raised the potential rate of technological innovation’,²⁰⁹ and ‘promoted collective knowledge sharing and

²⁰² Ogilvie 2004a, p. 303.

²⁰³ Epstein 1998, p. 695.

²⁰⁴ Epstein 1998, p. 701.

²⁰⁵ Epstein 1998, p. 701.

²⁰⁶ Epstein 1998, pp. 701-04.

²⁰⁷ Epstein 1998, p. 704.

²⁰⁸ Epstein 2004c, p. 3.

²⁰⁹ Epstein 2004c, p. 29.

invention'.²¹⁰ Technological leadership moved from the European continent to Britain after c. 1675, he argues, 'largely thanks to skilled individuals trained by guilds'.²¹¹ His conclusion is that 'the main *direct* source of pre-modern technical innovation was the craft guild'.²¹²

There is a theoretical incoherence, however, at the heart of the claim that guilds facilitated technological innovation. On the one hand, guilds are supposed to have been too weak to enforce harmful regulations, but on the other they are supposed to have been strong enough to enforce beneficial ones. The argument that guilds were too weak to enforce regulations blocking innovations is inconsistent with the claim that they were strong enough to enforce regulations encouraging innovations, e.g. by offering monopoly rents to inventors, requiring journeymen to travel, enforcing apprenticeship, or promoting spatial clustering. One can defend guilds, at least in theory, *either* by arguing they were so weak they were harmless *or* by claiming they were so strong they were beneficial – but not both at the same time.

Empirically, the claim that guilds were too weak (or too well-meaning) to oppose innovations can be refuted on all counts. First, while it is true that some industrial innovations were adopted without detectable guild resistance, this was only true if that innovation did not threaten the well-being of established guild masters. The same guilds bitterly resisted other innovations that they did perceive as endangering their interests, as shown by evidence from practically every pre-modern craft – the reason guilds came to be seen as technophobic.

Second, it is false to claim that guilds only opposed innovations that were labour-saving and capital-intensive, but favoured ones that were labour- and skills-intensive. Thus, as showed by my German case study, Württemberg weavers' guilds opposed the introduction of innovative, skills-intensive worsted and hybrid textiles throughout most of the seventeenth and eighteenth centuries. Furthermore, even if guilds *had* only opposed labour-saving innovations, that would still have reduced efficiency by compelling people to produce at higher cost.

Third, it is illogical to argue that guilds only opposed 'impractical' innovations. If a technique was no good there would be no reason to oppose it, and if guild masters viewed opposition to it as worth investing in, then they believed it practical enough to harm them.

Fourth, guild opposition to innovations did not always fail because of illegal adoption, threats of emigration, or competition from more liberal regimes. Illegality is costly, as shown by studies of the informal sector in modern developing economies; this deterred the marginal innovator. Emigration is costly, too, as shown by studies quantifying the non-trivial transaction costs and loss of social capital incurred by migrants; these costs, too, deterred the marginal innovator. The existence of more liberal regimes elsewhere does not inevitably lead to liberalization locally. Inefficient institutions can be protected from competition by a wide variety of factors, including political coercion, trade protection, market segmentation, transportation costs, and migration restrictions. Their redistributive importance to powerful interest groups alone can enable inefficient institutions to survive for generations, sometimes for centuries, despite coexisting with more efficient institutional frameworks – an issue discussed below in Section 7.²¹³

The argument that strong guilds positively encouraged technological innovation is even more questionable. For one thing, the claim that strong guilds' monopoly rents could have encouraged innovators is simply a theoretical proposition for which neither economic theory nor empirical studies provide support. Even those economic models postulating that monopoly might favour innovation require there to be no barriers to entry in order for the

²¹⁰ Epstein 2006, p. 15.

²¹¹ Epstein 2006, p. 28.

²¹² Epstein 2004c, p. 34.

²¹³ Ogilvie 2007; Acemoglu / Johnson / Robinson 2005.

monopolist to have good incentives to innovate – a condition violated by pre-modern guilds. Guilds did certainly generate monopoly rents, but there is no evidence that these rents rewarded innovation.²¹⁴

Second, guilds were neither necessary nor sufficient for enforcing the spatial clustering which might have favoured horizontal transmission of technical expertise. Industrial agglomeration is widely observed in most economies, including modern ones, because it brings a whole array of advantages that have been quite thoroughly analyzed by economists; it does not require guilds. Conversely, guilds arose in many early modern crafts where there were not enough guild members in the same locality to bring about any industrial agglomeration.²¹⁵

Third, guild apprenticeship and journeymanship were neither necessary nor sufficient for transmitting technical expertise smoothly between generations. As already discussed in the preceding section of this paper, masters who failed to train their apprentices were not punished and widows who never had any formal guild training practised legally. Conversely, ‘encroachers’ who had been denied a guild training somehow managed to learn the relevant technical expertise without it. Furthermore, many successful European industries evidently ensured that techniques were transmitted successfully while dispensing with guild apprenticeships.

Fourth, guild tramping requirements were neither necessary nor sufficient for diffusing innovations geographically. Young workers in pre-modern Europe were highly mobile even in unguilded crafts, proto-industries, agriculture, and labouring. The Netherlands, where guilds did not compel journeymen to tramp, enjoyed legendary labour mobility and technological innovation.

Furthermore, regulations guilds imposed for other reasons could exert unintended negative effects on innovation. Guild production regulations were imposed to control quality (and monitor unlicensed production), but stipulating precisely how a product was supposed to be made could deter innovation by ossifying production methods and excluding even desirable deviations. Guild price regulations were imposed to enhance social solidarity (and restrict competition), but could also deter innovators by denying them profits from underselling competitors. Guild admissions restrictions were imposed to ensure craft skills (and exclude entrants), but could also deter innovation by compelling a limited number of practitioners to spend many years investing in learning a particular set of techniques. Guild prohibitions on occupational mobility were imposed to ensure that skills were required (and to exclude entrants), but they endowed masters with a heavy investment in human capital specific to a particular technique and set of products, creating incentives to resist any technical change that threatened the value of their investment. Guild demarcations between different crafts were imposed to maintain product quality and labour skills (and to protect monopoly rents), but could also deter innovation by preventing the productive exchange of ideas between adjacent bodies of knowledge.

Cross-European comparisons cast serious doubt on claims that guilds encouraged technological innovation. In the worsted textile sector, for instance, many strongly guilded industries (e.g. in German-speaking central Europe) were technologically backward, while many weakly guilded industries (e.g. in the Netherlands and England) were highly innovative. The West Riding of Yorkshire was as close as possible to being wholly unguilded, yet its worsted industry was the most successful in eighteenth-century Europe, partly because of its exceptional receptiveness to technological innovations. Many other crafts, as we have seen, were strongly guilded in some European societies, weakly guilded in others, and wholly unguilded in still others; and there is no evidence whatsoever that technological innovation

²¹⁴ Ogilvie 2004a, pp. 317-18.

²¹⁵ Ogilvie 2004a, pp. 319.

was greater in the strongly guilded ones. Guilds were thus neither necessary nor sufficient for innovation. On the contrary: in many cases unguilded or weakly guilded industries were at the forefront of inventing, adopting, and diffusing new techniques.

The scholar who has most forcefully advocated the view that guilds favoured innovation, Epstein, has recently sought to defend it against these arguments. First, he has reiterated the pronouncement that guild opposition to innovations was harmless (or even beneficial) because many innovations opposed by guilds were impractical or dangerous, and because guilds could be circumvented anyway. Second, while disavowing his previous claims that guilds *directly* favoured innovation through monopolies and industrial clustering, he has repeated with still greater conviction that guilds *indirectly* created positive externalities for innovation through apprenticeship and journeymanhood. Third, he has sought to discredit evidence that contradicts the ‘innovation’ view of guilds by seeking to reinterpret the empirical findings in my German case study. Finally, he attempts to dispute cross-European comparisons, claiming that they support the idea that guilds favoured technological innovation.

4.1. Was Guild Opposition to Innovation Harmless?

Did guild opposition to innovations not matter? Earlier versions of this view had claimed that although guilds did undeniably sometimes oppose innovations, this was harmless because many new techniques were economically impractical. But, as I have asked in previous publications, if an innovation was impractical why oppose it? The fact that a guild invested resources in opposing a technique suggests that its members regarded it as practical enough to harm them.²¹⁶

The recent restatement of the ‘technological’ case for guilds by Epstein now disavows ever having sought to justify guild opposition to innovation on the grounds that the techniques they opposed were impracticable.²¹⁷ Instead, Epstein claims, the techniques opposed by guilds were *harmful*, so guilds positively benefited the economy by prohibiting them. Guild opposition to innovations was justified, according to Epstein, because innovations ‘could cause serious harm to high quality cloth’, ‘might be untested technically and commercially’, or ‘relied on tacit knowledge that was expensive to learn and diffuse’. So innovations were only opposed in order ‘to defend the guild’s reputation for quality and prevent undercutting by free-riding masters’.²¹⁸

These claims are absurd. If a new technique could cause ‘serious harm’ to high-quality cloth, then merchants and customers would refuse to buy it, no weaver would introduce it, and the guild would have no need to oppose it. If a new technique reduced the quality of the product but customers demanded it anyway (e.g., because it was less expensive or had other desirable characteristics), then opposing its introduction would harm those customers as well as the producers who wanted to shift to a lower quality-price combination. If the defects produced by the new technique were hidden, then according to enthusiasts for guilds, guild quality

²¹⁶ Ogilvie 2004a, p. 316.

²¹⁷ The disavowal is disingenuous. The ‘impracticability’ argument has been widely advanced by enthusiasts for guilds. Epstein 1998, p. 695, for instance, criticized the view that guilds opposed innovations since it assumes – wrongly, in his view – ‘that all applications that were refused were better than current practice’. Reith 1986, pp. 38-41, likewise sought to dismiss guilds’ opposition to innovations such as the multiple-band ribbon-making loom and the new stocking-knitting frame by claiming that their benefits were ‘mostly exaggerated’; guild prohibitions on these innovations were justified by ‘technological arguments’ showing that they did not increase productivity as much as was claimed. Rehabilitation arguments thus have explicitly justified guild opposition to innovations in terms of the supposed technological ‘impracticability’ of the innovations in question – inconsistent though this is with the desire of pre-modern craftsmen to adopt them.

²¹⁸ Epstein 2008, para. 25.

controls would prevent any wares with defects from reaching the market anyway. (In practice, of course, as we saw in Section 3, early modern European industries possessed a rich variety of institutional arrangements for monitoring quality independently of guilds.) If a new technique was ‘untested’, then the craftsman introducing it would be incurring all the costs and risks, and the guild would have no reason to oppose it. If a new technique ‘relied on tacit knowledge that was expensive to learn and diffuse’, there is no clear reason why a guild should oppose it, since all its members would have the same tacit knowledge and hence would be able to copy and benefit from the new technique.

These claims are not only logically absurd, but empirically unsubstantiated. Epstein himself phrases them in terms of ‘could’, ‘might be’, and ‘seems plausible that’.²¹⁹ He presents no evidence that the new techniques so widely opposed by guilds throughout pre-modern Europe were ones with such ‘harmful’ characteristics. The footnotes attached to his speculations consist of one reference to an unpublished 2005 Ph.D. thesis (supervised by Epstein) and one to an unpublished 2006 working paper by Epstein himself which simply makes the same assertions as his 2008 paper, often in precisely the same words.²²⁰

A final justification for viewing guild opposition to innovations as harmless is that, according to Epstein, craft guilds ‘could not forbid non-members from innovating’.²²¹ If ‘non-members’ refers to persons seeking to produce within the same locality as the guild, this statement is untrue. Every guild charter in Europe explicitly prohibited local non-guild-members from producing the wares legally defined as the exclusive ‘privilege’ of that guild. If ‘non-members’ refers to non-guilded producers in the countryside surrounding an urban guild, then this implies that guild opposition to innovations was only harmless where guilds were too weak to prevent non-guild competition, as in many English and Dutch textile regions; however, this cannot be what is meant, since Epstein rejects the standard characterization of English and Dutch guilds as ‘weak’, a view this paper assesses below in Section 6.²²² If by ‘non-members’, Epstein refers to guilded producers in other localities, and is thus postulating that European guilds efficiently competed each other into permitting technological innovation, then the empirical record decisively refutes this view. Practitioners in the weakly guilded or unguilded worsted industries of the Netherlands and England adopted innovations that were opposed by worsted guilds in other European regions such as Württemberg, yet English and Dutch competition failed to compete the technological conservatism of Württemberg guilds out of existence. The technologically stagnant Württemberg worsted guilds survived for centuries by selling to markets protected by trade barriers, transport costs, and political coercion.²²³

Guild opposition to innovation was not harmless. Contemporaries’ urgent desire to adopt these innovations in the teeth of guild opposition undermines the view that the new techniques were either impracticable or harmful. Competition from other guilds was ineffectual in preventing guilds from implementing damaging restrictions on innovation, as shown by cross-European comparisons within the same branch of industry. Competition from unguilded rural producers was more effectual in reducing the damage caused by guild opposition to innovations – but only by bringing about a fundamental weakening of the whole guild regime, as in the Netherlands and England.

²¹⁹ Epstein 2008, para. 25.

²²⁰ Epstein 2008, para. 25 fn 44 and 45. The references are to Feldman 2005, p. 149 and n. 3; and to Epstein 2006 (no page reference given).

²²¹ Epstein 2008, para. 25.

²²² Ogilvie 2004a, esp. pp. 320-2.

²²³ Ogilvie 1997, pp. 187-8; Troeltsch 1897, pp. 172-3, 177-9, 181-4, 186, 194-9.

4.2. Did Guilds Encourage Innovation through Apprenticeship?

Faced with my comprehensive refutation of the theoretical and empirical basis for the notion that guilds directly encouraged technological innovation through monopolies and or industrial clustering,²²⁴ enthusiasts for guilds have now seemingly abandoned these views. As the scholar most closely associated with them, Epstein has recently denied ever having held them.²²⁵ His only remaining argument, repeated with ever greater conviction, is that guilds *indirectly* created positive externalities for innovation through enforcing guild training, particularly apprenticeship, but also through journeymanship.²²⁶

The view that guild apprenticeship created positive externalities for technological innovation is untenable. As discussed in detail in Section 3 of this paper, many pre-modern crafts did not require formal apprenticeship; in those that did, apprenticeship did not need guilds. Even strong guilds often did not enforce training, since they were only interested in apprenticeship as an entry barrier. Non-guild-trained ‘encroachers’ learned technical expertise without guild training. Many of the most technologically innovative and economically successful industries in pre-modern Europe did not require guild apprenticeships.²²⁷ Epstein’s reassertion of the view that apprenticeship created ‘positive externalities’ for technological innovation does not even seek to address these arguments.

Nor can one maintain the argument that guilds favoured the diffusion of technological innovations through journeymanship which led to migration. As my publications have discussed, although guild journeymen often did migrate, so too did many non-guilded young workers. Many technologically innovative European industries did not require journeymen to migrate, and some did not have guild journeymen at all.²²⁸ Epstein has sought to dispute these arguments by asserting that guild-trained journeymen migrated ‘independently from and frequently in opposition to organized guilds’ and that tramping by journeymen ‘emerged as a means to diffuse information about labour markets and to share tacit knowledge’.²²⁹ Both of these statements are false. Most guilds *obliged* journeymen to go ‘on the tramp’ for a minimum number of years, journeymen who failed to do so were penalized, and Dutch guilds are explicitly singled out in the historiography as having been more liberal than other European guilds because they did not oblige journeymen to travel.²³⁰ The tramping of journeymen thus did not emerge spontaneously as a means to ‘diffuse information’ and ‘share tacit knowledge’ but rather was part of the complex framework of barriers to entry imposed by guild masters in order to sustain their monopoly profits. Labour migration, with any attendant technological diffusion that came in its train, was already high in pre-modern Europe without guild journeymanship, as discussed in my previous publications,²³¹ and as demonstrated by the Dutch case.²³²

Enthusiasts for guilds have thus tacitly abandoned previous exaggerated claims about the technological benefits created by guilds through monopoly rents or industrial clustering. The new, reduced-form version of the ‘innovation’ case for guilds now merely claims that guild-mandated apprenticeship and journeymanship indirectly favoured technological innovation. But even these more modest arguments fail to hold up to theoretical or empirical examination.

²²⁴ Ogilvie 2004a, pp. 317-19.

²²⁵ The denial is disingenuous, since Epstein 1998, pp. 701-04, explicitly stated that guilds ‘increased the supply of technology systematically’, not just through apprenticeship, but through the tramping of guild journeymen, industrial clustering of guild masters, and monopoly rents for guild masters.

²²⁶ Epstein 2008, para. 26.

²²⁷ Ogilvie 2004a, pp. 317-19; and Section 3 of the present article.

²²⁸ Ogilvie 2004a, p. 318.

²²⁹ Epstein 2008, para. 26.

²³⁰ Lourens / Lucassen 1999, pp. 73-9.

²³¹ Ogilvie 2004a, p. 318.

²³² Lourens / Lucassen 1999, pp. 73-9.

Neither guild apprenticeship nor guild journeymanship were necessary for technological innovation, there is no evidence that they favoured innovation, and many of the most technologically innovative and economically successful industries in pre-modern Europe had other institutional arrangements.²³³

4.3. Can the Württemberg Evidence Be Reinterpreted to Show Guilds Favoured Innovation?

A third approach adopted by Epstein in the attempt to maintain the innovation case for guilds is to advance a creative reinterpretation of the evidence in my German case study. First, he tries to claim that Württemberg worsted-weavers' guilds might have opposed technological innovations after 1650 because they were oppressed by merchants, but did not do so before this date.²³⁴ This is false. These weavers' guilds already opposed technological innovations in the period before 1650, as shown by an example I discuss from 1619-21, when an Italian merchant invited by the Württemberg prince to introduce new French and Dutch techniques into the primitive Black Forest worsted technology encountered such vehement opposition from local merchants', dyers', and weavers' guilds that he departed and refused all invitations to return.²³⁵ There is no evidence of a switch in the guilds' strategy in 1650. Guilds sometimes opposed new techniques and sometimes let them pass. If an innovation could be adopted without threatening the well-being of established guild masters, they had no incentive to resist it. But the same guilds bitterly resisted other innovations that they perceived as endangering their interests.²³⁶

Building on this alleged strategy switch in 1650, Epstein then seeks to explain away these guilds' opposition to innovation in terms of 'linked contractual charges imposed by the merchants' in the post-1650 period.²³⁷ Not only was there no strategy switch. But this argument ignores the fact that the merchants were guilded craftsmen as well – merchant-dyers – who themselves *also* opposed technological innovation, and used their guild-like association to enforce this preference.²³⁸ The technological sclerosis of the industry *intensified* after 1650 not because of 'charges imposed by the merchants' but because of the malign interaction between the rent-seeking incentives created by multiple interlocking sets of guild privileges.²³⁹

A final inaccuracy on which Epstein seeks to build a creative reinterpretation of the Württemberg evidence relates to output and productivity. Epstein claims that per capita output in the Württemberg worsted industry rose from c. 35 per annum in the period 1650-1730 to c. 50 per annum 1730-80. This, he claims, demonstrates a 'near 50 percent increase in labour productivity ... [which] must have been the result of endogenous improvements' caused by guilds.²⁴⁰ This is a wildly inaccurate misinterpretation of data presented in my book.²⁴¹ Table 7.3, to which Epstein refers, shows the changing *legal quota* of worsteds which the merchant-dyers' association formally agreed to accept from each weaver. This quota was fixed *institutionally* through inter-guild negotiations; it did not reflect economic realities such as labour productivity or technical capability. Each local weaver was technically *capable* of producing well in excess of 50 cloths per annum, as I discuss in my study; it was only because

²³³ See, e.g., Davids 2000; Davids 2003.

²³⁴ Epstein 2008, para. 22.

²³⁵ Ogilvie 2004a, p. 315.

²³⁶ Ogilvie 2004a, pp. 314-5.

²³⁷ Epstein 2008, para. 22.

²³⁸ This is explicitly stated in my publications and other standard works on this industry, including those footnoted by Epstein. See Ogilvie 1997, pp. 357-60; Ogilvie 2004a, pp. 320-1; Troeltsch 1897, pp. 163, 167-9.

²³⁹ This is made clear in my own analysis and that of other scholars footnoted by Epstein: see Ogilvie 1997, pp. 357-60; Ogilvie 2004a, 319-21; Troeltsch 1897, pp. 163-9.

²⁴⁰ Epstein 2008, para. 22.

²⁴¹ Ogilvie 1997, p. 213, Table 7.3.

of guild output quotas that weavers produced below this level, as shown by complaints by the weavers themselves. The guild output quota changed at intervals over the two centuries during which the industry remained in being.²⁴² The quota did not move in any clear direction, but rather fluctuated upwards and downwards throughout the entire history of the industry in response to the changing political balance between merchant-dyers' and weavers' guilds, among different districts' weavers' guilds, and among different sub-groups of weavers who secured different legal quotas. Epstein thus bases his claim that labour productivity increased 'endogenously' on data which have nothing to do with productivity but rather reflect guild regulations. There is thus no evidence for any productivity increase.

4.4. Can European Evidence Be Reinterpreted to Rehabilitate Guilds' Role in Innovation?

A final line of approach in the attempt to maintain the innovation view of guilds is to dispute the evidence from cross-European comparisons. As I and others have pointed out, technological innovations were developed and adopted very rapidly in the Netherlands during its 'Golden Age' (1550-1670) and in England after c. 1600, precisely the period when Dutch and English guilds were losing many economic powers. Many of the most technologically innovative textile industries in Europe arose and flourished in societies, regions, or locations where guilds were weak or non-existent. Alternative institutional frameworks provided more favourable incentives than guilds to invent and diffuse innovative industrial techniques.²⁴³

Epstein, however, claims – without evidence – that 'virtually all technical knowledge' in pre-modern Europe was generated by crafts (which were guilded), while few innovations were generated in 'proto-industrial' locations (which he implies were non-guilded).²⁴⁴ His sole footnote is to a single article on patents (which does not address this issue) and his own past papers (which provide no evidence on it).²⁴⁵ If anything, the evidence on patents casts doubt on the notion that guilds were essential for technological innovation in early modern Europe. In the Dutch 'Golden Age', as Davids has pointed out, the patent represented an effective alternative to the guild in providing incentives for the invention and diffusion of innovations.²⁴⁶ Important innovations in the pre-modern European worsted industry, as demonstrated in my own publications, were invented by unguilted female spinners and unguilted rural weavers, but were opposed by guild masters who feared the new practices would endanger their own rents.²⁴⁷ Insofar as technological innovations were introduced in a guild framework, this was simply because many craftsmen in pre-modern Europe were legally compelled to operate in guilds – not because the guild framework was favourable to innovation.

Epstein then makes the equally unsupported assertion that unguilted forms of industrial organization were 'comparatively marginal and not particularly progressive'. He explains away the case of England, where an increasing number of important and successful industries after c. 1550 were weakly guilded or guild-free, by claiming – again, without evidence²⁴⁸ – that before the later seventeenth century England got most of its innovations via guild-trained migrants from the Continent.²⁴⁹ In fact, unguilted forms of industrial organization were often found in putting-out systems, which were widespread throughout pre-modern Europe,

²⁴² Ogilvie 1997, pp. 188-92.

²⁴³ Davids 2000; Davids 2003; Mokyr 1999; Mokyr 2002; Ogilvie 1997; Ogilvie 2004a.

²⁴⁴ Epstein 2008, para. 45.

²⁴⁵ The reference is to Moser 2005.

²⁴⁶ Davids 2000; Davids 2003.

²⁴⁷ See e.g. Ogilvie 2004a, pp. 320-2.

²⁴⁸ Epstein refers primarily to his own past articles, most of them unpublished papers in which the material is simply repeated word-for-word from his own previous papers; see the lengthy passages of identical wording and examples in Epstein 1998; Epstein 2004a; Epstein 2004b; Epstein 2004c; Epstein 2005; and Epstein 2006.

²⁴⁹ Epstein 2008, para. 46.

expanded rapidly, and often surpassed the size of urban guilded crafts.²⁵⁰ Epstein's dismissal of centralized manufactories is disingenuous, since it was often opposition from craft guilds that held them back, where they did not stagnate as merchant-guild monopolies or state-owned enterprises.²⁵¹ Unguilded proto-industries and manufactories were not 'progressive', in Epstein's view. But they often introduced new products, working processes, and techniques that were resisted by guilds.²⁵² Patents, premia, and legal enforcement of personal trademarks were successful in economies such as England and the Netherlands, where (as discussed below in Section 6) guilds' ability to enforce their regulations and privileges began to loosen at a relatively early date.²⁵³ England is certainly known to have derived many technological innovations from the European continent.²⁵⁴ This does not demonstrate that English industries failed to generate new techniques of their own, but rather that they were exceptionally open to new techniques from anywhere. Indeed, as Mokyr has discussed, new techniques that had been invented in continental Europe were often put into business use for the first time in England, precisely because of the superior institutional flexibility of English factor markets, in which the limited influence of guilds was one component.²⁵⁵ This was recognized by contemporaries, such as the Swiss calico-printer who in 1766 quoted a popular saying to the effect that 'for a thing to be perfect it must be invented in France and worked out in England'.²⁵⁶

Little of substance is provided by attempts to resuscitate the case for guilds as a source of technological innovation – whether direct or indirect. The claim that guild opposition to technical innovations was beneficial is theoretically incoherent and empirically unsubstantiated. The idea that guilds favoured technological innovation through monopoly rents and industrial agglomeration has now been abandoned even by the most devoted enthusiasts for guilds. The notion that guild apprenticeship was essential for transmitting technical knowledge falls afoul of findings concerning the many innovative and successful unguilded industries in early modern Europe, as well as the evidence in Section 3 on the widespread irrelevance of apprenticeship for training. The idea that guild journeymen were essential for diffusing innovations is undermined by findings on labour mobility and journeymanship across Europe. Attempts to reinterpret my German case-study and cross-European comparisons provide no support for the view that guilds encouraged technical innovation.

5. Was Guild Rent-Seeking Beneficial?

Some enthusiasts claim that guilds benefitted pre-modern economies by making politics work better. Thus Putnam et al. argue that guilds in medieval Italian cities generated a 'social capital' of shared norms and collective action that made governments more responsive to the general welfare.²⁵⁷ Persson postulates that guilds in early modern European towns enabled conflicting groups to negotiate towards agreements that benefitted all.²⁵⁸ Epstein contends that alliances between early modern rulers and powerful interest-groups such as guilds provided the centralized 'coordination' necessary to correct market failures.²⁵⁹

²⁵⁰ See the many examples provided in Kriedte / Medick / Schlumbohm 1977.

²⁵¹ See the examples discussed in Forberger 1962; Freudenberger 1966; Freudenberger 1997; Gayot 1995; Hofmann 1920; Ogilvie 1997; and Troeltsch 1897.

²⁵² For examples from the Württemberg worsted industry alone, see Ogilvie 2004a, pp. 315, 320, 321. For additional examples from other pre-modern European economies, see Forberger 1962; Freudenberger 1966; Freudenberger 1997; Gayot 1995; Hofmann 1920.

²⁵³ On the Netherlands see Davids 2000; and Davids 2003. On England see Stolte 2006.

²⁵⁴ Epstein 2008, para. 45 fn 73.

²⁵⁵ Mokyr 2005c, esp. pp. 14, 50.

²⁵⁶ Wadsworth / Mann 1931, p. 413.

²⁵⁷ Putnam et al. 1993.

²⁵⁸ Persson 1988, pp. 50-4.

²⁵⁹ Epstein 2008, para. 30.

My previous publications have pointed out problems with this beneficent view of the political role of guilds. Guild-ruler interactions in pre-modern Europe were dominated by rent-seeking, through which guilds offered favours to officials and princes in return for legal privileges that would secure their monopoly rents, at the expense of other social groups and the wider economy.²⁶⁰ Evidence for most pre-modern guilds confirms that they devoted considerable resources to influencing the political process. The guilded weavers in my German case study, for instance, allocated substantial quantities of guild funds, personal resources, time, and effort to lobby the Württemberg state with the aim of securing and expanding their own privileges and attacking those of others.²⁶¹ European comparisons suggest that it was where the political authorities were incapable of offering enforcement of corporate privileges, or gained greater economic and political benefit from permitting their evasion, that guilds weakened, metamorphosed, or disappeared.²⁶²

Evidence of costly guild lobbying, and the favours the state granted in return, casts doubt on the view that guilds made politics work in ways that benefited the common weal. Well-organized corporate groups such as guilds were in a position to offer – or deny – political cooperation and fiscal support to rulers in exchange for policy favours. Such favours often seemed harmless or even – if guild rhetoric was to be credited – generally beneficial, and had the inestimable benefit of being costless to the ruler, at least in the short term. It is difficult even for modern governments to resist limiting trade now in return for a lump-sum payment from a producer interest group, even though this undermines economic growth and thus tax revenues in future. The favours which guilds obtained from pre-modern rulers reduced economic efficiency, and the favours which rulers obtained from guilds reduced political efficiency. The interaction between guilds and rulers was malign rather than beneficent.²⁶³

Epstein denies this. He claims that any welfare loss from guild rent-seeking must have been quantitatively insignificant. He then contradicts himself by claiming that guild rent-seeking did have significant effects, but that they were positively beneficial. Guild rent-seeking, he claims, generated political externalities that enabled early modern states to ‘coordinate’ the behaviour of ‘decentralized agents’, thereby making economies work more efficiently.

5.1. Was the Welfare Loss from Guild Rent-Seeking Trivial?

To make plausible his denial that the welfare loss from guild rent-seeking can have been quantitatively significant, Epstein disputes the findings of my German case study. His claim is that the deadweight losses inflicted by the worsted-weavers’ guild of the District of Wildberg on the Württemberg economy must equal the monopoly rent enjoyed by the guild members, which in turn can be measured by the annual per capita expenditure of this guild on lobbying. Since the per capita annual lobbying expenditure did not equal a large percentage of an average weaver’s per capita annual income, Epstein argues, this implies that the deadweight loss to the economy must have been low.²⁶⁴

This is seriously confused. First, the deadweight loss a guild monopolist inflicts on the economy is quite distinct from the monopoly rents of guild members, and may be either larger or smaller than them.²⁶⁵ The relative size of the deadweight loss and the monopoly profits depend upon the shape of the demand curve over the range of prices and quantities traded

²⁶⁰ Ogilvie 1995; Ogilvie 1997; Ogilvie 1999a; Ogilvie 1999b; Ogilvie 2007.

²⁶¹ Ogilvie 1997, pp. 366-78; Ogilvie 2004a, pp. 290, 312, 321, 326-8.

²⁶² See the discussion in Ogilvie 1997, pp. 438-46; Ogilvie 1999a.

²⁶³ For further discussion of these issues, see Ogilvie 1992; Ogilvie 1999a; Ogilvie 1999b; Ogilvie 2007.

²⁶⁴ Epstein 2008, para. 35.

²⁶⁵ Kay 1983, p. 328.

under the monopoly. Thus we learn nothing about the size of deadweight loss imposed by a guild monopoly by measuring the monopoly rents enjoyed by the guild members.

Second, lobbying costs will only equal monopoly profits if there are many competing lobbyists trying to secure those monopoly profits by lobbying. If this condition is not met, then the lobbying costs incurred will typically be lower, and possibly very much lower, than the monopoly profits. This condition was not, of course, met in the case of a craft guild, since it was the only entity claiming a particular monopoly in a particular jurisdiction. Since in the District of Wildberg there was only a single lobbyist (the Wildberg guild) trying to secure that set of monopoly profits by lobbying, it was in a position to offer a much smaller amount to purchase the monopoly, which the monopoly-granting body (in this case the Duke of Württemberg) would be willing to accept since he would receive no competing offers to drive the price up.²⁶⁶

5.2. Was Guild Rent-Seeking Positively Beneficial?

Having thus established, to his satisfaction, that the quantitative effect of guild rent-seeking was trivial, Epstein turns around to claim that it was far from trivial – but *good*. Guild rent-seeking, he says, produced political externalities that enabled early modern states to ‘coordinate’ the behaviour of ‘decentralized agents’, thereby making ‘thin’ markets work better.

He begins by denying that ‘all rent-seeking causes a net welfare loss’.²⁶⁷ Let us consider this possibility. Monopolies not only *transfer* resources from consumers to monopolists; they cause *deadweight* losses – resources that no-one can enjoy – by reducing the total amount that is produced and traded. This is the classic welfare loss due to monopoly. But on top of that, there is an additional welfare loss that arises because of efforts to *obtain* the monopoly – i.e. from rent-seeking. First, there are the efforts and expenditures of the potential *recipients* of the monopoly – in this case, the guild masters. Second, there are the efforts and expenditures of *rulers and officials* to obtain or react to the expenditures of the potential recipients of the monopoly. Third, there are *third-party* distortions induced by the monopoly itself or by the government as a consequence of rent-seeking activity. An example of the latter would be if granting the monopoly brought extra tax revenue to the government, and this led to a competition among other interest-groups in the economy to capture some of these resources for themselves, e.g. through subsidies or tax breaks. The welfare loss from monopoly therefore consists not just of deadweight loss because less is produced and traded, but of resources which are expended in seeking to capture a share of the monopoly rents or to react to their existence in some other way.²⁶⁸

The only way to wriggle out of the inescapable logic whereby rent-seeking *does* cause a net welfare loss is to claim the existence of special conditions whereby rent-seeking creates some sort of positive externality to compensate for welfare losses due to deadweight costs and rent-seeking. This may be what Epstein is trying to claim. To impose some coherence on his somewhat jumbled argument, it appears to consist of the following four propositions. First, early modern markets were ‘thin’ which, Epstein says, meant that ‘decentralized agents’

²⁶⁶ Even within his irrelevant exercise, Epstein commits factual errors. Thus he states that there were 600-650 active masters in the District of Wildberg at any one time (Epstein 2008, para. 35). This is false: the actual number ranged between 100 and 250, as I document in the book he footnotes (Ogilvie 1997, p. 136). He assesses lobbying costs in terms of money expenditures by the guild (Epstein 2008, para. 35). This is false: lobbying costs also included substantial outlays of weavers’ time and the private resources of guild members, particularly guild officers, as I document in the book he footnotes (Ogilvie 1997, p. 370-8). He asserts that I quantify the ‘social cost’ of the guild ‘in terms of the craft’s outlay for lobbying’ (Epstein 2008, para. 35). I do nothing of the sort.

²⁶⁷ Epstein 2008, para. 30.

²⁶⁸ See the discussion in Mueller 2003, pp. 333-58.

needed to be ‘coordinated’. Second, this centralized coordination required state intervention in the form of ‘fiscal, political, military and economic policy’. Third, the early modern state could only intervene by striking bargains with rent-seeking groups such as guilds. And fourth, the benefits of these interventions constituted a positive social externality which made up for the welfare loss from guild monopolies and rent-seeking.²⁶⁹

Epstein offers no evidence for this unlikely scenario, however, nor does he even attempt to define key terms such as ‘thin’. And of course he neglects the countervailing impact of rapacious taxation, devastating warfare, oligarchical confiscation, and blundering mercantilism. Were states that granted rents to guilds particularly effective coordinators? Did the benefits of state coordination outweigh the costs of monopolies and rent-seeking? An example would have been helpful.

If granting rents to guilds had created a positive institutional externality, then industries with guilds should have performed better than industries without. Instead, those worsted textile industries with alternative institutional structures flourished, while those regulated by guilds stagnated or declined. Further doubt is cast by evidence on the growth of the state in early modern Europe. Broadly speaking, Europe shows two distinct patterns of state formation. In the ‘particularist’ or ‘corporatist’ pattern, pursued by most central and southern European states, rulers accomplished the fiscal, military, bureaucratic and regulatory revolutions by granting privileges to rent-seeking interest-groups. In the ‘universalist’ pattern of state growth, pursued by the Dutch before c. 1670, by the English, and gradually by other emerging early modern states in the course of the eighteenth and early nineteenth century, governments increased their powers by breaking down the privileges of rent-seeking interest groups.²⁷⁰ When it came to mobilizing economies of scale, increasing the costs of collusion, and enforcing clearer rules and procedures for contract enforcement – all required for the economy to work better – the ‘particularist’ pattern of state formation systematically failed compared to the ‘universalist’ pattern. This is reflected in the empirical outcome. If the ‘particularist’ pattern whereby states granted rents to guilds had created the positive externalities posited by Epstein, German economies in which guilds obtained state enforcement of their rent-seeking privileges over nearly every branch of industry and services should have been the richest, fastest-growing, and most innovative in Europe. Instead, German economies were economic backwaters compared to England and the Netherlands, where guild rent-seeking largely failed, many industries were unguilded, guilds in other branches were forced to metamorphose to survive, and ‘decentralized agents’ pursued most of their economic activities without centralized ‘coordination’, making use of impersonal market and legal mechanisms rather than the ‘personalized’ privileges accruing to corporate interest groups.²⁷¹

There is thus no support for the claim that guilds benefited the pre-modern European economy by improving economic policy and making the political system work more efficiently.

6. Do European Comparisons Show that Strong Guilds Meant Strong Economies?

The desire to associate strong guilds with economic success has motivated enthusiasts for guilds to seek to reverse prevailing views of guild strength across different European societies. England and the Netherlands are usually regarded having experienced a gradual weakening of guild regulation from the mid-sixteenth century onward, with some guilds disappearing altogether while others were compelled to relax their economic regulations and metamorphose into primarily cultural or social associations in order to survive. Guilds in

²⁶⁹ Epstein 2008, para. 30.

²⁷⁰ Brewer 1989; Ogilvie 1999a; North et al. 2006.

²⁷¹ Ogilvie 1996b; Ogilvie 1999a; Ogilvie 2005b.

eastern Europe are also thought to have been comparatively weak because their ability to enforce their economic regulations was constrained by the power of the great feudal landlords under serfdom. Guilds in central and southern Europe, by contrast, are viewed as having been relatively strong, and as having maintained or even increased enforcement of their economic privileges and regulations into the late eighteenth or even the nineteenth century.

But this picture is inconvenient to the case for guilds as economically beneficial institutions, which must then explain why guilds were strong in the comparatively stagnant economies of central and southern Europe but relatively weak in the ‘miracle economies’ of England and the Netherlands. This has led enthusiasts for guilds to seek to overturn the accepted picture. A first approach is to claim that the strong guilds observed in stagnant central European economies – such as those analyzed in my German case study – were ‘atypical’. A second strategy is to claim that English and Dutch guilds *were* after all ‘strong’, and can therefore be associated with economic success. Both these approaches, however, since they find themselves unable to change the facts, proceed by redefining ‘strong’ and ‘weak’.

6.1. Were the Strong Württemberg Guilds Atypical?

In order to associate strong guilds with strong economies, enthusiasts for guilds seek to argue that the strong guilds of central and southern Europe – one example of which was analyzed in my Württemberg case study – were ‘atypical’ and hence can be discarded from European comparisons. This is done by re-defining ‘strong’ so that it can equally describe an English or a Dutch guild. ‘Strong’ has traditionally been taken to mean ‘exerting political influence’. Soly, for instance, writes that ‘Guilds are often described as “powerful” or “weak”, based primarily on their measure of political influence ... in conjunction with the extent to which the members of these organizations could regulate the occupation; “powerful” guilds could impose penalties on those who violated the regulations’.²⁷² My own writings follow this usage. Thus my 2004 article defines guild weakness explicitly as follows: ‘It was where the political authorities were incapable of offering enforcement of corporate privileges, or gained greater economic and political benefit from permitting them to be evaded, that guilds weakened, metamorphosed, or disappeared.’²⁷³ Epstein, however, takes exception to this standard usage, calling it an ‘underdetermined and misunderstood’ concept of guild ‘weakness’. But then he also gets it wrong. He claims that I adopt a definition of guild weakness according to which ‘innovative (and thus in [Ogilvie’s] view ‘weak’) guilds were subordinated to powerful merchants and clothiers’.²⁷⁴ In fact, as the above quotation illustrates, I follow the traditional usage.²⁷⁵

Falsely claiming that I define ‘weak’ as ‘subordinated to merchants’, Epstein then falsely denies that the Württemberg guilds can have been strong, since they were ‘very much under the thumb of the Calw merchants’.²⁷⁶ But an industry with a craftsmen’s guild that was *not* weak (in the sense that it could enforce its economic privileges and regulations) could easily have merchants who were *also* not weak. Indeed, in most strongly guilded European economies – including, but not restricted to, Württemberg – both craftsmen *and* merchants possessed guild organizations. Strong craftsmen’s guilds and strong merchant guilds were more likely to coexist than to exterminate one another.²⁷⁷ Indeed, as Soly has pointed out, ‘Merchants did not ordinarily oppose setting up formal craft guilds, provided that these

²⁷² Soly 2006, p. 4.

²⁷³ Ogilvie 2004a, p. 328.

²⁷⁴ Epstein 2008, para. 24.

²⁷⁵ I consistently define guild ‘weakness’ as consisting of the inability to enforce their economic regulations and privileges: see Ogilvie, 2004, pp. 287, 300, 317, 321, 322. On no occasion is guild ‘weakness’ defined in terms of subordination to powerful merchants and clothiers.

²⁷⁶ Epstein 2008, para. 24.

²⁷⁷ Ogilvie 1997, pp. 431-436; Ogilvie 1999a; Dessí / Ogilvie 2004.

organizations served their purposes. Restricting commercial competition was a constant concern of all those who traded export goods....²⁷⁸ Although Epstein claims that ‘a “weak” guild is an oxymoron, since craft guilds would have had no reason to exist once they lost their rent streams to merchants and clothiers’,²⁷⁹ the argument is untenable: two well-organized interest groups can readily collude to share a pool of monopoly rents which they obtain through legal privileges, at the expense of outsiders and the wider economy. The Württemberg guilds were thus ‘strong’ according to the definition adopted in the wider historiography: they were able to enforce their economic regulations and to penalize those who violated them.²⁸⁰ They cannot be dismissed as examples of strong guilds merely by redefining the term ‘strong’.

A second strategy pursued by enthusiasts is to dismiss the strong Württemberg guilds – and their dysfunctional economic activities – as ‘atypical’. Epstein, for instance, asserts that the Württemberg guilds were ‘fundamentally atypical’ and ‘seemingly singular’.²⁸¹ Soly states that the guilded Württemberg worsted region cannot have been ‘typical of many European proto-industrial regions’.²⁸² No specification provided of which features of Württemberg guilds are supposed to disqualify them from being a relevant test of the economic benefits of guilds, but the implication is that it is connected with the fact that their regulation extended to villages as well as towns.²⁸³

This ignores the recent European historiography on guilds, however, which has revealed that there is nothing particularly unusual about urban guild regulation of rural producers. In most European industries, urban guilds in finishing occupations (e.g. dyers, fullers, shearers) or in marketing occupations (e.g. clothiers, merchants) had the power to compel rural producers in upstream occupations (e.g. weavers) to sell exclusively to urban guild members and to comply with some or all urban guild regulations. In many cases, urban guilds themselves extended partial or full guild regulation over practitioners of that craft in surrounding rural areas, compelling them to obey guild regulations or even obtain associate membership. Across broad regions of central and southern Europe, it was common for urban and rural producers to be combined into the same ‘regional’ guild. A final variant was the formation of exclusively rural guilds whose members were all villagers – the least frequently observed pattern, although by no means infrequent in central and southern Europe, and even occasionally observed in the Netherlands.²⁸⁴

Guilds in most early modern European economies resembled those of Württemberg, therefore, in regulating craftsmen in rural as well as urban areas, either by including them as full members or by regulating their activities despite not requiring (or permitting) them to obtain guild membership. Urban guild regulation of rural craft production did not begin to wane in Switzerland until the mid-seventeenth century, in Scotland until the late seventeenth century, in France and Saxony until the early eighteenth century, in Spain, Austria and many German territories until the later eighteenth century, and in Sweden until the early nineteenth century. Urban guilds monopolized some (or all) stages of production in rural crafts in Switzerland, northern and central Italy, Catalonia, France, Sweden, Austria, Bohemia and Moravia – and this includes only industries for which detailed case studies are available. Finally, ‘regional’ (urban-rural) guilds or purely rural guilds were formed to regulate rural craft production in central and northern Italy, Spain, Austria, Bohemia, Bulgaria, Greece, and

²⁷⁸ Soly 2006, p. 19.

²⁷⁹ Epstein 2008, para. 24.

²⁸⁰ Ogilvie 2004a, p. 328.

²⁸¹ Epstein 2008, para. 39.

²⁸² Soly 2006, p. 14.

²⁸³ See, e.g., Soly 2006, p. 14 n. 43.

²⁸⁴ Ogilvie 1997, pp. 412-37.

many German territories.²⁸⁵ The recent guilds historiography has consequently begun increasingly to recognize the importance of guild regulation over the rural areas surrounding towns.²⁸⁶ What *was* atypical was the pattern observed in England and the Low Countries, where urban guilds were generally unable to exercise any regulation over craft producers in surrounding suburbs or villages.

Nor do enthusiasts specify what it was about guilds that regulated rural as well as urban craftsmen that might disqualify them as a test case for guilds. It cannot have been spatial dispersion of guild members. For one thing, some scholars have argued that it was precisely the difficulty of monitoring spatially dispersed producers that made guilds particularly *beneficial* in rural craft production.²⁸⁷ For another, many rural industries were actually characterized by denser spatial agglomerations of practitioners than were traditional crafts, because they addressed an export demand that enabled larger numbers of producers to earn a living in one place than if they had sold only to local customers.²⁸⁸ Contemporaries did not view guilds which regulated partially rural crafts as being any different, either institutionally or economically, from those in locally-oriented, exclusively urban crafts.²⁸⁹ There is thus no analytical reason why a guild that regulated rural as well as urban craftsmen should not constitute a relevant test case for guilds. If guilds were economically beneficial, then guilds that were stronger and extended their powers spatially and demographically should surely have been even more beneficial.

To dismiss all guilds other than the exclusively urban organizations of the northwest corner of Europe as ‘fundamentally atypical’ is convenient for guild enthusiasts, since it makes it possible to define the circumscribed guilds of England and the Netherlands as ‘typical’. But it is not justified by what we know from empirical research about the pattern of guild strength and weakness across pre-modern Europe. Guilds that were able to extend their regulatory capacities beyond traditional urban centres into the surrounding countryside were by no means atypical when we examine the guild landscape across the continent as a whole. Indeed, the ability of guilds to extend their reach beyond the town walls constituted an important enhancement to their ‘strength’, in the accepted sense of their ability to enforce their regulations and punish violations of them. Neither ‘strength’ nor ‘typicality’ can be redefined in such a way as to dismiss the vigorous and numerous guilds of economically stagnant regions of central, southern, and eastern-central Europe as ‘weak’ or ‘atypical’.

6.2. Were English and Dutch Guilds Strong?

These findings do not deter enthusiasts from proclaiming that it was actually the English and Dutch guilds that were ‘typical’ and ‘strong’. Admittedly, this runs into problems with the prevailing historiography, which regards English and Dutch guilds as having begun to relax their economic regulation in the sixteenth century, a long-drawn-out and regionally various process that took at least two centuries to complete. In England, around the middle of the sixteenth century, guilds disappeared altogether in some towns, failed to form at all in a large number of emerging ‘new towns’, proved unable to extend their powers into the countryside to regulate the rapidly proliferating rural industrial producers, and even in the old ‘incorporated’ towns gradually lost their ability to conduct quality inspections, regulate production techniques, compel apprenticeship, prevent women’s work, or enforce entry restrictions. In the Netherlands, beginning in the 1560s, guilds began to be abolished and replaced with alternative institutions in some cities, failed to extend their regulation to the

²⁸⁵ Ogilvie 1997, pp. 412-31.

²⁸⁶ See Ehmer 1998, pp. 36-7; Kaplan 1988; Medick 1996; Pfister 1998, pp. 11-14; Prak 2006, pp. 14-15; Ward 1997.

²⁸⁷ Pfister 1998.

²⁸⁸ Mendels 1972; Ogilvie / Cerman 1996.

²⁸⁹ Medick 1982; Medick 1996; Ogilvie 1996a.

burgeoning rural industries, and in those cities where they survived gradually found themselves compelled to relax their regulation of quality, techniques, apprenticeship and entry restrictions in order to remain in existence. After c. 1670, Dutch guilds are regarded as having recouped some of their powers, but still remained liberal compared to those elsewhere in Europe, in the sense that they were more open to immigrants, more liberal toward women's work, more flexible in regulating apprentices and journeymen, and even sometimes – uniquely in Europe – admitted Jews.

In seeking to overturn this picture, enthusiasts for guilds have overstated the prevailing historiography on English and Dutch guilds in order to oppose it more plausibly. Thus Epstein accuses me of claiming that 'English craft guilds had disappeared' by 1700.²⁹⁰ In fact, my article merely states that in England and the Low Countries 'guilds remained limited to urban crafts, were generally weakened and circumvented even in towns from the sixteenth century onwards, and were often faced with a stark choice between metamorphosis and extinction'.²⁹¹ There is no claim that English and Dutch guilds 'disappeared', but simply that they did not regulate rural production and gradually relaxed their controls over urban production. The process of gradual weakening began in the sixteenth century, but was by no means complete before 1700.

In order to claim that English and Dutch guilds were 'strong', enthusiasts for guilds have focussed on surviving guilds and guild activities that continued, while turning a blind eye to guilds that were abolished, guild activities that died out, and the signs of decline already manifested by some sixteenth-century guilds. On England, for instance, Epstein claims that 'most early modern economic historians' agree that guilds declined in the seventeenth century, or in the 1720s or 1730s, or in the second half of the eighteenth century.²⁹² He fails to refer to the large number of case studies which present findings on English guilds that began to weaken in the sixteenth century.²⁹³ The highly variegated chronology of guild decline that can be found in different strands of the English historiography reflects the fact that different English guilds declined at different paces, and that decline manifested itself earlier in some guild activities (e.g. outlawing rural industry, carrying out workshop 'searches', enforcing universal apprenticeship) than in others (e.g. collecting dues from masters, registering those who chose to undertake apprenticeships).

Closer investigation reveals that enthusiasts for guilds have exaggerated even the two works – by Snell and Walker – to which they most often appeal to support their idea that English guilds remained strong in the eighteenth century. Snell's 1985 book, for instance, states explicitly that 'there has been considerable disagreement among historians' about when guild apprenticeships and guilds went into decline in England. Lack of knowledge about the regional diversity of guilds, the differing chronology of guilds' relaxation of monopolistic restrictions, and the highly various enforcement of guild apprenticeship, according to Snell, mean that 'the debate is indeed in a chaotic state'. Snell himself makes no claim to settle all these disagreements, setting out solely to 'make clearer some of the major chronologies and components of change affecting the apprenticeship system'. That is, Snell does not argue that *guilds* continued strong throughout England into the later eighteenth century, but rather that in parts of provincial England outside London *apprenticeship* did not fully decline until that period.²⁹⁴ As we have seen, much apprenticeship, especially in England, took place outside the guild framework. Guild regulation disappeared in this period from many important and expanding industries, even while non-guild apprenticeship survived as a voluntary contract

²⁹⁰ Epstein 2008, para. 17 with fn 26.

²⁹¹ Ogilvie 2004a, p. 287.

²⁹² Epstein 2008, para. 4.

²⁹³ Clark / Slack 1976, pp. 29, 108-09, 116; Coleman 1977, pp. 73-5; Hill 1964; Holderness 1976; Kellett 1958; Kramer 1905; Kramer 1927; Power 1919; Thrupp 1942; Unwin 1908.

²⁹⁴ Snell 1985, pp. 238-69, quotations from pp. 228, 230, 232.

between individuals or a coercive contract imposed by welfare authorities on pauper children and unwilling masters. Snell admits explicitly that his work addresses the issue of apprenticeship decline in the eighteenth and early nineteenth centuries, but not the question of what happened in the sixteenth century: ‘debate may continue on the century after 1563 ... These earlier changes do not concern me here, but it may be that there was an earlier stage of decline, and that this has contributed to the muddled historiography’.²⁹⁵

The other English study most often cited by enthusiasts for guilds is Walker’s unpublished doctoral dissertation of 1985, on which Snell also relies. Counter to the claims of enthusiasts, Walker’s dissertation does not establish that eighteenth-century English guilds were strong compared either to guilds elsewhere in Europe or to their sixteenth-century predecessors. On the contrary, he states explicitly that he does not compare English guilds with those in other European countries and that he does not have any empirical findings for England in the period before his own primary research starts in 1660.²⁹⁶ The few undisputed facts that emerge from Walker’s brief literature survey for the pre-1660 period²⁹⁷ confirm that many components of the English guild system did begin to weaken in the sixteenth century. As Walker explicitly admits,

Urban guilds and trading companies were increasingly by-passed during and before our period of study by the growth of industries in the countryside, and of new industrial or dockyard towns. Guilds were extant in incorporated towns of the older urban order. Usually these were larger towns. There were many smaller unincorporated towns and mere villages without a guild structure. Not all industry or trade was guild-controlled by any means.²⁹⁸

Walker also acknowledges that even those guilds that survived in the ‘incorporated towns of the older urban order’ were compelled to metamorphose in order to survive, and refers repeatedly to ‘guild flexibility and a continual process of degeneration and regeneration’.²⁹⁹

Walker’s own data for the 1660-1820 period are too weak to support the conclusion that English guilds remained strong into the eighteenth century. For one thing, by their nature his data are biased in favour of towns with strong guilds, since many English towns have few or no surviving guild records. In order to carry out his analysis, Walker had to select towns with better than average surviving guild records, but that made it likely that they were towns in which guilds themselves survived longer than average.³⁰⁰ For another, Walker’s data relate almost exclusively to numbers of masters and apprentices.³⁰¹ What matters for the issue of guild decline is not whether people went on being members of guilds, but what those guilds *did*.

Studies that do analyse what English guilds did demonstrate that in most relevant respects they began to diminish enforcement of their economic regulations and privileges from the later sixteenth century on, even though they remained formally in existence and continued to organize charitable, sociable, and cultural activities into the eighteenth century. This is the finding that emerges from the work of Kellett on the decline of the London Livery Companies,³⁰² Randall on the woollen weavers of Gloucestershire,³⁰³ Heaton on the woollen and worsted weavers of Yorkshire,³⁰⁴ Smith on the openness of the York Merchant Taylors’

²⁹⁵ Snell 1985, p. 239 n. 27.

²⁹⁶ Walker 1985, p. 4.

²⁹⁷ Walker 1985, ch. 3.

²⁹⁸ Walker 1985, p. 5.

²⁹⁹ Walker 1985, p. iii.

³⁰⁰ Walker 1985, pp. 8-9, tries to claim that his chosen towns are representative but provides little evidence in support of this claim.

³⁰¹ Walker 1985, p. 3, chs. 6-7.

³⁰² Kellett 1958.

³⁰³ Randall 1988.

³⁰⁴ Heaton 1965.

Company to female membership,³⁰⁵ and Wallis on control of quality and apprenticeship in the London Livery Companies,³⁰⁶ among many other admirable case studies. The English historiography – whether traditional or more recent – shows clearly that many (if not all) English guilds reduced the intensity of their economic regulation from the sixteenth century on, even while many (though not all) of them continued to pursue a diminished range of activities and remain formally in existence into the eighteenth century.

The same can be said for guilds in the Low Countries, although the historiography is more complex for two reasons. First, as already mentioned, guilds developed differently in the Northern and Southern Netherlands after the Dutch Revolt of the 1560s. Second, the weakening of guilds during the Dutch Golden Age (c. 1550 - c. 1670) was followed by a degree of tightening after 1670, the period during which the Northern Netherlands, while remaining wealthy, moved gradually into slower economic growth, culminating in stagnation in the eighteenth century and a surprisingly late onset of industrialization in the nineteenth.³⁰⁷ Nonetheless, many aspects of the relaxation of guild controls in the sixteenth century remained in being and were not reversed after 1650. These included the abolition of guilds in much of the textile industry, the lack of guild control over rural producers, the absence of tramping requirements for journeymen, the openness to immigrants, and the extraordinary liberality toward women.

All that enthusiasts for guilds can present to counter these many indications of loosening, which were not reversed after 1670, is the fact that new guilds continued to be formed in the Netherlands in that period. Epstein, for instance, claims that in the Netherlands ‘a strong expansion in the number and significance of guilds coincided with economic growth and innovation in the seventeenth century’.³⁰⁸ But the references cited in the footnote to this statement merely provide evidence on the *number* of guilds that existed,³⁰⁹ not what degree of economic regulation those guilds could enforce, the relevant issue in assessing their strength or weakness. This is acknowledged by other scholars such as Soly, who points out that in the Northern Netherlands in the sixteenth century ‘spectacular urban growth coincided with an equally impressive rise in the number of corporative organizations, but primarily outside the export trades, and, except for towns in the eastern provinces, master artisans did not have direct political input anywhere’.³¹⁰ Anyone who has read the *content* of Dutch guild studies will be aware that their economic regulation was comparatively ‘weak’ by European standards, especially after the 1560s. Furthermore, even if there had been an association between growth in the numbers of guilds and growth in the economy,³¹¹ it does not imply that guild foundations led to economic growth. The converse could as easily be the case, with prosperity attracting rent-seeking aiming to redistribute more of the gains of prosperity toward guild masters.³¹² Guilds in the Dutch Republic were so much more liberal than those of its nearest competitors that the Dutch economy could remain prosperous even as it gradually moved, after 1670, toward a greater degree of politically licensed rent-seeking than had occurred during its Golden Age.

The extraordinarily liberal regulatory regime operated by early modern Dutch guilds emerges from all aspects of their operations. Dutch guilds were well known for admitting more female

³⁰⁵ Smith 2005.

³⁰⁶ Wallis 2002; Wallis 2005.

³⁰⁷ The activities and role of guilds during this prolonged period of economic slowdown are discussed in De Vries / Van der Woude 1997, esp. pp. 162-3, 293, 298, 301-02, 340-1, 357, 582, 634, 638.

³⁰⁸ Epstein 2008, para. 4.

³⁰⁹ Epstein 2008, para. 4 fn 6.

³¹⁰ Soly 2006, p. 15.

³¹¹ As claimed by Epstein 2008, para. 4 fn 6, citing De Munck / Lourens / Lucassen 2006, p. 64, to the effect that ‘economic prosperity and the guild system went hand in hand’.

³¹² As argued in De Vries / Van der Woude 1997, esp. pp. 162-3, 293, 298, 301-02, 340-1, 357, 582, 634, 638.

entrants and permitting more women's work than most European guilds, even many in England.³¹³ Some Dutch guilds even admitted Jews, a liberality perpetrated by no other guilds in Europe. Dutch guilds were relatively open to non-citizens of the urban community. Dutch guilds did not require journeymen to tramp. Dutch guilds rarely regulated producers in the surrounding countryside, and only 4 per cent of Dutch guilds were rural. And in some of the most important and innovative industrial cities – particularly the key textile centre of Leiden – guilds were abolished in the 1560s and replaced (a generation later) by organs of the municipal government called 'neringen' which regulated whole branches of industry in ways that dispensed with many of the entry restrictions enforced even by the relatively open Dutch guilds.³¹⁴

Especially in the textile industry – the most important industry in the early modern Dutch economy, and one of the most successful and innovative in Europe – guilds were either altogether abolished or significantly weakened from the 1560s onward, and did not recover their strength or autonomy after 1670. Thus Soly's recent account of the Dutch textile industry explicitly emphasizes its lack of guild regulation:

The overwhelming majority of the textile producers in the United Provinces, employers and employees alike, operated outside the corporative context. Only a tiny minority of the thousands of manual artisans working for the new drapery in Leiden, the most important textile centre, belonged to a craft guild. Nor were the wool weavers and silk weavers in Amsterdam, the linen bleachers in Haarlem, the cloth weavers in Delft, or the producers of serges and fustians in Gouda organized in guilds. ... Nearly the entire textile industry in Leiden was organized in neringen (trades). All persons involved in manufacturing a certain product automatically belonged to these neringen: there was no regular membership, with conditions for joining and the right to withdraw. The same or similar institutions existed in Amsterdam, Haarlem, Delft, and Gouda and were supervised by the municipal authorities there as well.³¹⁵

According to Soly, even in those Dutch textile industries that did remain guilded, the guild organizations were very weak, with little autonomous economic control for the guilds themselves and most decisions being taken by the urban authorities:

Wherever branches of the textile industry were guild-based, the master artisans had no real decision-making authority. They would be consulted, and in most cases their recommendations would be taken (especially concerning technical matters), but the local authorities were in full control. The authorities used the corporative organizations, where they appointed those in charge, as instruments for protecting economic and/or fiscal interests that did not necessarily top the agendas of the master artisans.³¹⁶

Despite evidence such as this, some enthusiasts for guilds continue to portray Dutch guilds as 'strong' by European standards and as responsible for Dutch economic success. Epstein is forced to admit that Leiden's innovative and successful textile industry was not guilded, but then tries to argue that this does not weaken the case for guilds since Leiden's industry was regulated by the municipal organizational framework of the 'nering'.³¹⁷ But as the Dutch historiography makes abundantly clear, 'neringen' were not the same as guilds.³¹⁸ 'Neringen' were administrative organs established in each branch of industry by the Leiden city council

³¹³ Van den Heuvel 2006; Van den Heuvel 2007; Van Neederveen Meerkerk 2006a; Van Nederveen Meerkerk 2006b.

³¹⁴ Davids 1996; Davids 2003.

³¹⁵ Soly 2006, p. 15.

³¹⁶ Soly 2006, pp. 15-16.

³¹⁷ Epstein 2008, para. 24 fn 42.

³¹⁸ For detailed descriptions of how 'neringen' actually worked, see Posthumus 1937, pp. 1908-39; Davids 1996; Davids 2003.

around 1585, nearly a quarter of a century after the abolition of the drapers' guild in 1561. Unlike guilds, 'neringen' included everyone (including non-citizens): they did not strictly speaking have any 'members', but rather regulated *all* persons concerned in a particular industrial branch (including non-masters). 'Neringen' were not administered by craft masters but by 'governors' appointed by the political authorities, often assisted by merchants and entrepreneurs. The prevalence of 'neringen' in many important Dutch textile industries is certainly interesting, but for precisely opposite reasons to those adduced by Epstein. They show that innovation and training were provided in highly successful industries from the sixteenth century onward through 'impersonal' institutions administered by the public authorities rather than 'personalized' institutions such as guilds. This is precisely the lesson drawn by mainstream Dutch scholars:

technological innovation in the Dutch Republic would – other things being equal – not have taken a much different course if there had been no craft guilds at all, because the role of guilds in technological advance could also be fulfilled by other sorts of institutions and arrangements. There were sufficient alternatives available.³¹⁹

To summarize, although guilds continued to exist in some sectors of the English and Dutch economies until the end of the eighteenth century, they weakened significantly in the sixteenth century and remained weaker than in most other European economies thereafter. Guilds did not even exist in all English and Dutch towns. Those urban guilds that did exist in England and the Northern Netherlands had little or no power over rural producers, and there were almost no rural or 'regional' guilds. Even in the towns in which they persisted, English and Dutch guilds had to metamorphose in order to survive. Although guilds varied across different towns within England and the Netherlands, in general guilds began to relax their entry barriers progressively from the sixteenth century on. English and Dutch guilds began to admit women, non-citizens and other outsiders to a much greater extent than those in most other European societies. They were forced to tolerate widespread evasion of their apprenticeship regulations. Trademark and quality disputes were increasingly submitted to the ordinary public law courts rather than to guild jurisdiction. Industrial regulation – including of quality, training, and technology – was increasingly a matter of private decision-making by individual producers, within a regulatory framework provided by impersonal public institutions. English and Dutch guilds consequently were forced to act liberally – compared to those in many other European economies – in permitting both members and outsiders to introduce new products, new techniques, and new practices. Most historians describe how English guilds gradually shifted from economic regulation to cultural display and sociability from the sixteenth century on. Thus even though guilds continued to exist in parts of the English and Dutch economies, they cannot be characterized as 'strong', compared either to their sixteenth-century predecessors or to their contemporary cognates in most other parts of Europe.

7. What Approaches and Methodologies Are Best for Understanding the Role of Guilds?

What most distinctly characterizes the approach adopted by enthusiasts for guilds is its willingness to assume a kind of universal teleology: whatever existed must have been there because it was economically beneficial. Thus 'the extraordinary longevity of the craft guild' arose from its beneficial functions in solving information asymmetries, controlling quality, and ensuring human capital investment.³²⁰ Guilds, according to their enthusiasts, 'prospered for more than half a millennium because they sustained specialized interregional labour markets and contributed to technological invention'.³²¹ The 'extraordinarily long persistence'

³¹⁹ Davids 2003, p. 16. See also Davids 2000.

³²⁰ Epstein 2008, para. 2.

³²¹ Epstein 1998, p. 684.

of the craft guild arose from the fact that consumers, communities, and governments recognized its benefits and promoted its existence.³²²

This teleological view of guilds is an example of a wider approach to economic institutions increasingly popular among certain groups of economists and economic historians – what is known as the ‘efficiency’ theory of institutions. According to this view, an institution exists to address the economic needs of a society. It is a solution to some problem that is preventing people from achieving higher production and consumption. Typically, this is a problem with transaction costs – ‘search and information costs, bargaining and decision costs, policing and enforcement costs’.³²³ If these costs are too high, potentially profitable activities will not take place. So individuals and societies experiment with institutional arrangements to solve these problems.³²⁴ They choose those arrangements that most efficiently solve problems of transaction costs because such institutions ‘yield a stream of benefits which makes it profitable to undergo the costs of innovating this new organizational form’.³²⁵ As social scientists, all we have to do is identify the particular economic problem that needs to be solved, and we will understand why that institution exists. Any society, this view holds, will get the institutions that are most efficient in addressing its requirements. When these requirements change, institutions will also change.

This approach was first popularized in economic history in the 1970s with North and Thomas’s model of the ‘Rise of the Western World’, according to which serfdom was ‘an efficient solution to the existing problems’ in medieval economies – a voluntary contract between peasants who provided labour services to lords in exchange for ‘the public good of protection and justice’.³²⁶ But the efficiency approach was soon applied by other scholars to other historical institutions. McCloskey postulated that the medieval village – particularly its open field system – was an efficient institution for diversifying risks in the absence of markets for insurance, given peasant risk-aversion.³²⁷ Greif, Milgrom and Weingast hypothesized that medieval merchant guilds, by threatening collective boycotts of rulers who failed to provide commercial security, sustained ‘the efficient level of trade’.³²⁸ Carlos and Nicholas claimed that the monopolistic chartered trading companies of the seventeenth and eighteenth centuries were efficient institutions for solving information asymmetries and principal-agent problems in early modern long-distance trade.³²⁹ Nugent and Sanchez reinterpreted the Spanish Mesta, a guild-like association of shepherds and sheep-owners, as an efficient solution to the high cost of building fences to define property rights.³³⁰ Volckart argued that the medieval noble feud was an institution for enhancing economic efficiency by turning ‘the one-shot Prisoner’s Dilemmas posed by non-simultaneous transactions between strangers into iterated games where the cheated party had the chance to punish the defector’, thereby securing property rights and contract enforcement in long-distance trade.³³¹ Even vigilante justice and lynching have been rehabilitated by some scholars as efficient solutions to inadequate contract enforcement in pre-modern societies.³³² By now, enthusiasts have reinterpreted pretty well every pre-modern institution in terms of efficiency – as beneficial solutions to one or more obstacles to possible transactions. When economic conditions changed so that these

³²² Epstein 2008, para. 47.

³²³ Dahlman 1979, p. 148.

³²⁴ See North 1990, p. 6; Williamson 1998, p. 37.

³²⁵ North 1971, p. 119.

³²⁶ North / Thomas 1970; North / Thomas 1971; North / Thomas 1973, p. 21.

³²⁷ McCloskey 1976; McCloskey 1991.

³²⁸ Greif / Milgrom / Weingast 1994, pp. 748, 749-50, 772.

³²⁹ Carlos / Nicholas 1988; Carlos / Nicholas 1990.

³³⁰ Nugent / Sanchez 1989, pp. 261-2, 277-81.

³³¹ Volckart 2004, esp. pp. 283, 296.

³³² For surveys, see Carrigan / Webb 2003, pp. 415-16; Hine 1998, pp. 1230-47; Little / Sheffield 1983, pp. 796-7, 806-07.

institutions were no longer efficient, they were replaced by new institutions that were once again efficient under the new conditions.

The proliferation of such theoretical approaches to economic institutions seems to have persuaded enthusiasts that they can rehabilitate the pre-modern craft guild on the grounds that any long-lasting institution must be efficient. That conclusion, they appear to think, is self-evident and needs no further argument or evidence to support it. We are told that there is now a ‘modern consensus’ about the economic benefits of guilds, from which no-one may now deviate. According to Epstein, ‘a large body of modern literature’ regards European craft guilds as having generated aggregate economic benefits.³³³ To criticize guilds, he claims, is to misrepresent ‘modern international scholarship’.³³⁴ The ‘modern research and consensus on craft guilds’, he claims, is that they were economically beneficial solutions to underdeveloped factor markets.³³⁵ But surely a ‘modern consensus’ that assumes economic efficiency to be the only possible explanation for institutions deserves to be questioned.

There are at least three other ways to explain institutions.³³⁶ Some historians think *chance* played the main role: incidental occurrences and individual actions, magnified by path dependency, shape institutional development – as in the case of non-European economies whose modern legal systems reflect the accident of which European power first colonized them.³³⁷ Other historians rely more on *cultural* explanations: societies hold different beliefs and values, and these motivate people to follow different institutional rules – which can therefore be very difficult to transplant from one culture to another.³³⁸ And third, some historians think institutions tend to develop so as to serve the interests of those who wield the most *power* in their societies. Institutions affect both the size of the total economic pie and who gets how big a slice. Most people in the economy might well want the pie to be as big as possible – the assumption of the efficiency theorists. But people will typically disagree about how to share out the slices, and thus differ about which institutions are ‘best’. This causes conflict. Which institution (or set of institutions) results from this conflict will be affected not just by its efficiency but by its distributional implications for the most powerful individuals and groups.³³⁹ I have argued that this approach can best explain why craft guilds were widespread in Europe for many centuries – not because they were good for the entire economy, but because they benefited well-organized interest groups. They made the pie smaller, but dished out large slices to established male masters, with fiscal and regulatory side-benefits to town governments and princes.³⁴⁰

There is no self-evident, *a priori* reason to assume any of these explanations in advance of any empirical evidence – let alone a teleological ‘efficiency’ view that believes any institution must have existed to benefit the whole economy. Only evidence can decide among these possible explanations. And what kind of evidence can reveal the specific role of an institution in its overall social and economic context? For this, we must be able to see the institution at work on the local level, at the point of contact. We need, in other words, to focus on a specific

³³³ Epstein 2008, para. 2.

³³⁴ Epstein 2008, para. 3.

³³⁵ Epstein 2008, paras. 39-40.

³³⁶ For detailed criticisms of ‘efficiency’ theories and a thoroughgoing discussion of alternative economic approaches to institutions, see Ogilvie 2007, esp. Sections I-V.

³³⁷ Djankov et al. 2007, pp. 510-11.

³³⁸ Some prominent efficiency theorists have shifted in recent years to cultural (or ‘cultural efficiency’) accounts of institutions: see, e.g., North 1990; North / Wallis / Weingast 2006; Greif 2006. See the discussion of these approaches in Ogilvie 2007, Sections IV and XI.

³³⁹ For different expositions of the ‘conflict’ approach, see Knight 1992; Acemoglu / Johnson / Robinson 2005; Ogilvie 2007, esp. Section V. The insight that institutions arise through conflict and serve powerful social groups is, of course, also central to the Marxist tradition.

³⁴⁰ For more detailed exposition, see Ogilvie 2003; Ogilvie 2004a; Ogilvie 2005b; Ogilvie 2007, Section V.

economy, region, or industry in which a particular institution played a role, searching out all possible documentary sources recording how that community worked, combining quantitative and qualitative data on it into an interlinked database, building only concepts licensed by direct evidence.³⁴¹ The detailed findings for that particular region or industry can then be compared with those from other empirical case studies of this kind, preferably some with and some without the institution in question, or a range of cases in which the institution under analysis was stronger, weaker, or altogether absent.

Some enthusiasts for guilds object to this approach. Epstein seeks to discredit my more critical view of guilds by claiming it is based on ‘a single (arguably singular) case study’.³⁴² He also criticizes my method of comparing findings for a specific worsted industry with those for other worsted industries across Europe, describing it as ‘analytical confusion’, without revealing what he has in mind.³⁴³ And yet he complains that we do not know much about total guild numbers, membership, income distribution, productivity, incidence of apprenticeship, features of apprenticeship, cost of lobbying, returns to lobbying, cooperation between guilds and the state, and technological innovation.³⁴⁴ But what sort of knowledge does he imagine? A substantial number of case studies across Europe (including my own) provide detailed information about these precise issues. Thus my study documents changes over time in the precise numbers of guilds in the Württemberg worsted industry,³⁴⁵ the size of membership of each guild at different periods in the industry’s history,³⁴⁶ the annual per capita output of guild masters and the constraints on it,³⁴⁷ the incidence of apprenticeship,³⁴⁸ the institutional and technological features of apprenticeship,³⁴⁹ the costs of lobbying and its returns in terms of favourable legislation,³⁵⁰ the relationship between guilds and the state,³⁵¹ and the relationship of the guild with technological innovation.³⁵² If enthusiasts for guilds know of other kinds or sources of evidence about the actual (rather than an imagined) role of institutions in European societies, they owe us a description of these sources, and some hints about where to find them.³⁵³

Nor is even their ‘modern consensus’ very widespread, as even the most cursory glance at empirical work in adjacent fields shows – the history of technology,³⁵⁴ women’s work,³⁵⁵

³⁴¹ This methodology is that of the ‘micro-exemplary approach’ discussed in detail in Carus / Ogilvie 2005 and Carus / Ogilvie 2008. Earlier scholars have sometimes termed it the ‘micro-historical’ approach; see Medick 1996, esp. chapter 1. It could also be called the ‘microcosmic approach’, after an aperçu of M. M. Postan, quoted by Wrigley 1985, p. 1., distinguishing between the legitimate ‘microcosmic’ study of medieval village society, which discerns the general in the local, and the merely ‘microscopic’ preoccupation of the antiquarian.

³⁴² Epstein 2008, para. 3.

³⁴³ Epstein 2008, para. 5.

³⁴⁴ Epstein 2008, para. 44.

³⁴⁵ Ogilvie 1997, pp. 132-3.

³⁴⁶ Ogilvie 1997, pp. 131-9.

³⁴⁷ Ogilvie 1997, pp. 181-224.

³⁴⁸ Ogilvie 1997, pp. 139-80.

³⁴⁹ Ogilvie 1997, pp. 139-80.

³⁵⁰ Ogilvie 1997, pp. 364-78.

³⁵¹ Ogilvie 1997, pp. 43-4, 79-85, 118, 175-9, 222, 438-43, 445-6, 454-5, 475.

³⁵² Ogilvie 1997, pp. 352-60.

³⁵³ Insofar as Epstein’s claims about the supposed ‘modern consensus’ are provided with footnotes, these refer largely to his own previous work, which upon inspection consists of a single article of 1998 and numerous subsequent working papers which repeat the material in that article. Thus careful reading reveals long passages of Epstein 1998, Epstein 2004a, Epstein 2004b, Epstein 2004c, Epstein 2005, and Epstein 2006 whose wording, examples, and references are identical to their predecessors.

³⁵⁴ Casado Alfonso 2004, pp. 323-5; Clark 1936; David 2004; Mokyr 1999; Mokyr 2002; Mokyr 2005a; Mokyr 2005b; Mokyr 2005c; Mokyr 2007.

migration,³⁵⁶ Jewish occupations,³⁵⁷ illegitimacy,³⁵⁸ or economic marginalization,³⁵⁹ to name just a few – where guilds are assessed in more sober terms. Rigorous research into what guilds actually did, often using precisely the local case-study approach dismissed by Epstein, not only fails to confirm that guilds were beneficial, but comprehensively refutes it. Guilds were neither necessary nor sufficient for quality control, skills transmission, or technological innovation in pre-modern industry. Guilds encouraged a pernicious form of oligarchic rent-seeking that caused welfare losses to the broader society, and there is no evidence that they generated any positive political externalities to compensate. Guilds were both economically inefficient and socially inequitable. They not only reduced the size of the economic pie, but distributed large shares to well-off male guild masters at the expense of consumers, employees, women, migrants, Jews, and other marginal groups whom they excluded from full participation in the pre-modern economy.

We must not project our nostalgia for more ‘communitarian’ social arrangements – or a teleological belief in the economic efficiency of long-lasting institutions – on the European past or the modern Third World. This is both anachronistic and condescending. It also distracts from our fundamental challenge – that of understanding the economic foundations of human well-being. We should make no assumptions about these foundations – whether of efficiency or inefficiency. Instead, we should try to find out by detailed, painstaking research at the local level how things actually worked in practice.

³⁵⁵ Bandhauer-Schoeffmann 2006; Coffin 1994; Crowston 2001; Hafter 1997; Hafter 2001; Jacobsen 1998; Ogilvie 2003; Quataert 1985; Simon-Muscheid 1998; Vámos 1987; Van den Heuvel 2007; Van Nederveen Meerkerk 2006a; Van Nederveen Meerkerk 2006b; Vicente 1996; Wiesner 1990.

³⁵⁶ Esser 2006; Goose / Luu 2005; Lee 1999; Luu 2005, esp. ch. 4; Yildirim 2006, esp. pp. 6-8, 16.

³⁵⁷ Botticini / Eckstein 2003; Penslar 2001; Wischnitzer 1965.

³⁵⁸ Boes 2003; Kuehn 2002; Ogilvie 1986.

³⁵⁹ Boes 2003; Stuart 1999.

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