

# Central Europe's way to a market economy, 1000–1800

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This article presents a model of the transformation of the Central European economy between the years 1000 and 1800. On the basis of assumptions about the social environment, the actors, and the relations between them, deductions are made that are compared to actual historical developments. The model explains why competitive markets emerged in the high Middle Ages, why anti-competitive corporations and states developed in the period up to the seventeenth century, and why institutions safeguarding market exchange began to be introduced in the course of the eighteenth century.

## 1. Introduction

In recent years, the view has been repeatedly advanced that the development of growth-generating market economies in Europe was to a large extent due to the continent's political fragmentation (Chirot 1985; Jones 1987, pp. 109, 115f; Crone 1989, pp. 161ff; Hall 1995; Landes 1998, pp. 36ff; Diamond, 1999, pp. 411ff). In the present article, a model is introduced which aims at testing this hypothesis using Central Europe – that is, roughly the German-speaking regions belonging in premodern times to the Holy Roman Empire – as a case in kind. These regions are an interesting object of study because on the one hand, their political fragmentation mirrored the fragmentation of the continent on a smaller and more extreme scale. Consequently it should be expected that if there were effects at all like those postulated by the hypothesis mentioned above, they should be obvious here. On the other hand, while Central Europe's political fragmentation dated back at least to the high Middle Ages,<sup>1</sup> in most regions a market economy in the strict sense of the word did not emerge before the eighteenth or even early nineteenth centuries. There were markets, of course, and exchange played an important part in the economy, but there were no

<sup>1</sup> As even the emperors of the tenth and eleventh centuries were unable to control the use of force by their subordinates, the country had in fact never been effectively united. As late as the middle of the seventeenth century, Germany consisted of more than 2,000 autonomous political units. At the close of the eighteenth century, there were still more than 1,700 autonomous polities (Möller 1989, p. 68; Boldt 1990, p. 289).

universally valid institutions which protected property rights, regulated their transfer by consent, and ensured compliance with obligations (Hume 2000 [1740], p. 337). Any model which is to explain long-term economic change in Central Europe must be able to account for the fact that for many centuries, political fragmentation did not trigger the emergence of such institutions.

The presentation of the model follows methodological suggestions made by Max Weber (1978, p. 6ff; cf. Watkins 1953) in regard to the construction of ideal types and later worked out more fully, for instance, by Hans Albert (1973, pp. 129–62; 1984, pp. 39–61).<sup>2</sup> Firstly, the premises are specified, that is, the actors in the model, the relations between them, and the environmental conditions. Secondly, some conclusions are deduced, in other words, I analyse which institutional changes follow from the conditions initially specified. In order to make sure that the model is robust, these conclusions are tested in two different ways. First, the institutions deduced in the model are compared to institutional developments which historically took place. If both match, this already indicates that the model is correctly constructed. However, a second test is needed in order to determine whether the institutions deduced from the premises and found in actual history were just local peculiarities of overall little influence, or whether they were typical for the historical epoch in question. Such a test can be carried out because institutions are important for economic performance as mirrored by changes in productivity, population, or standard of living (see, for example, Kasper and Streit 1999, pp. 17f). Linking quantitative data with institutional changes is notoriously difficult (Tilly 2001, pp. 162f), but in view of the long period of time covered by the model, the impressionistic evidence we have from the premodern era is sufficient to make a second comparison possible. If, on the basis of the institutions generated by the model *and* found in actual history, a certain development of population or productivity is to be expected, and if a corresponding development really occurred, this indicates that the institutions were not peripheral, but typical phenomena, and had decisive importance. That is as far as explanations based on the model method can go.<sup>3</sup>

<sup>2</sup> For the role of models in economic history, especially in cliometrics, see McClelland (1975). See also Topolski (1972, 1981). A non-cliometric model whose theoretical approach is compatible to the one used here is found in North and Thomas (1971).

<sup>3</sup> This is of course no definite proof that the institutions were of decisive importance. However, like the hypotheses of all sciences, historical hypotheses cannot be definitely proven or verified in any way, having always a provisional character. They are acceptable as long as they are not falsified by the discovery of new sources or by new insights into how causal links function in society (Popper 1969, pp. 191ff).

## 2. The premises

Their social environment presented the historical actors with data which, at least in the short run or on their own, they themselves were often unable to change. Hence it is first necessary to specify what the environmental conditions may have been like in the initial stage of the model. This stage represents actual historical conditions as they were during the chaotic period following the collapse of the Carolingian Empire – a good starting point, as the following paragraphs explain.

One obvious circumstance shaping life at the turn of the first millennium was the lack of basic security services, that is, of the protection of personal integrity and property rights in material resources. Violent conflicts were endemic: think of the wars between the successors of Charlemagne, of the incursions of Magyars, Vikings and Saracens, of clashes between local warlords and so forth. Bloch (1997, pp. 3ff) gave a forceful description of these conditions in the initial chapters of his great work on feudal society; while contemporary sources sometimes describe them in terms reminiscent of Hobbes' idea of anarchy (Hobbes 1960 [1651], p. 82). For most people insecurity was a datum, a condition which on their own they could not change in the least.

Another social condition individuals could not change (at least not in the short run) was the small size of population which was due not only to the high mortality but also to the low productivity of agriculture (Duby 1975, p. 195). Extant sources allow only rough estimates of how large the population actually was, but research is unanimous that at the beginning of the second millennium only a few million people lived in Central Europe. Cipolla (1980, p. 4), for example, mentions 3m, Russell (1975, p. 36), which includes Scandinavia, 4m. As will be shown below, the scarcity of population was an important factor shaping social conditions in the emerging feudal system.

Apart from the low density of population and the large degree of insecurity, there was a third environmental condition which was partly due to these factors, partly to the lack of literacy. In fact, in about the year 1000 literacy was confined to very few persons who were mostly members of the church (Wendehorst 1986). Under these circumstances, transaction costs – that is, the costs of arranging, formulating and enforcing contracts were comparatively high (Coase 1960, p. 16). Finding potential partners for interaction was costly because most information spread by way of mouth, being therefore often rather unreliable and not up to date. The problem was aggravated by large distances between the actors – due to the low density of population – and by military insecurity. Also, the lack of writing made negotiating and fixing the terms of contracts relatively cumbersome, and hampered their enforcement because *ex post* it was difficult to determine who had agreed to what. Altogether it is plausible to assume that at about

the turn of the millennium transaction costs were much higher than in later times. It therefore suggests regarding them as an environmental condition of central importance.

Regarding the actors who are to be included in the model, in about 1000 the high degree of insecurity gave outstanding importance to suppliers and demanders of military protection. Still, insecurity did not always have the same intensity. Sometimes, dangers appeared which could be averted by simple means, while at other times defence required sophisticated preparations. Under these conditions, there was a broad spectrum of suppliers of security which reached from actors who provided only a low quality of this good to others who could offer effective protection against serious dangers as well. Most individuals were not lastingly confined to one market position. Somebody who acted as a supplier of security at one instant, could, on another occasion, himself demand protection of a higher quality than he could produce on his own. Usually though, a single actor would not have been able to avert dangers or military threats. To ensure protection, the co-operative efforts of several individuals were needed. Showing how these came about requires specifying the relations between the actors in the model.

The central assumption is that these relations were based on various forms of exchange. Because the contracts relevant here were relational – that is, valid for a certain period of time – and determined that one partner should transfer the right to control certain aspects of his behaviour to another actor, they constituted organisations (Williamson 1975, pp. 71f; Coleman 1990, p. 66). In the present context, three types of contract were of particular importance. The first concerned the exchange of the protection of one partner's personal integrity and property rights in land against agricultural labour services; this constituted manors (North and Thomas 1971, p. 778; Bloch 1997, pp. 241f).<sup>4</sup> The second type of contract was basically similar, the most important difference being that the protected partner did not render agricultural, but military services. Such contracts established feudal organisations (Ganshof 1964, p. 16; Bloch 1997, pp. 145f). Finally, there was a type of contract which differed considerably from the other two. This was concluded when mobile individuals, such as travelling merchants, for example, committed themselves to support each other in case of need, thereby transferring the right to control part of their actions not to a single individual who became their superior, but to the group as a whole which in turn provided them with protection. Multilateral contracts like these constituted merchant guilds (Planitz 1940, p. 27; cf. Coleman 1990, pp. 188f). In the model, the function of organisations formed in a corresponding way is the production of security.

<sup>4</sup> North and Thomas (1971, pp. 789f) explain the fact that security is exchanged for labour services instead of dues in money or in kind with high transaction costs which make it relatively more costly to measure the value of goods as compared to services.

The contractual interpretation of relations between historical actors is sometimes disputed, particularly so where the manorial system is concerned. Sceptics point out that relations between peasants and landlords rather resembled protection rackets where the demand for security was produced through the threat of violence (Kahan 1973, p. 95; Fenoaltea 1975; Algazi 1996, pp. 224f; Zmora 1997, p. 105f). Thus, there could be no talk of reciprocity; instead, what counted was coercion. This criticism can be countered by pointing to the fluid transition from social relations based on coercion to relations based on consent and voluntary exchange. Fundamentally, to coerce somebody means to manipulate his alternatives – for example by threatening him with sanctions – in such a way that the course of action he chooses appears to him to be the least costly (Hayek 1960, p. 133). Still, attempts to reduce the attractiveness of other individuals' alternatives are commonplace in social interaction, the question 'coercion' or 'voluntary exchange' being a question of 'more or less' rather than of 'either-or' (Vanberg 1982, p. 57). How voluntary exchange between medieval suppliers and demanders of protection actually was depended on the imminence of military insecurity, on the mobility of the partners, and on their respective ability to provide security themselves. If, for example, a peasant had specialised in agriculture, being hardly able to defend himself, and was urgently in need of protection, his bargaining position tended to be weak. In such cases, his contract might be so disadvantageous for himself that his relation with his landlord gives the impression of having been based on coercion. Nevertheless, the exchange paradigm is still suitable for analysing this relationship.

One last premise needs to be included in the model. Whereas in England or France military security seems from an early date to have been supplied within territorial monopolies, this was not the case in Central Europe. Here, constitutional conditions were characterised by a lack of territorial monopolies of force (Quaritsch 1970, pp. 397ff; Reinhard 1992, p. 59f). Economically, this was due to the high transaction costs mentioned above. High costs of information were of particular importance because they prevented the heads of security organisations from monitoring what use their subordinates made of their coercive potential. Moreover, they compensated the increasing returns to scale which are usually connected with the production of protection and make it a natural monopoly (Lane 1958, p. 402; Volckart 2002).<sup>5</sup> For these reasons, none of the actors in the model –

<sup>5</sup> This lack of territorial monopolies of force is not only a major difference between actual constitutional conditions in Central and Western Europe, but also between the model of feudal society presented here and the one put forward by North and Thomas (1971, 1973, pp. 19f; North 1981, pp. 126ff). Of course, the North–Thomas model applies mainly to England where – probably due to the remains of Roman infrastructure, a higher rate of literacy, and higher exit costs – rule seems to have been territorial at all times (see Volckart 2000a).

whether he is a lord of a manor, a feudal lord, or a merchant guild – has a territorial monopoly for his supply of protection.

### 3. Deductions and comparisons

#### 3.1. *Competition and productivity growth*

In its present stage, which represents the time around the year 1000, the model consists of several kinds of actors who supply security of different qualities and none of whom has a territorial monopoly. The actors are linked by contracts which constitute protective organisations. All this takes place in an environment characterised by a large degree of insecurity, a low density of population, and high transaction costs. What conclusions can be drawn from these premises?

Given the abundance of land (which is worthless without people who cultivate it) and high transaction costs (which make it virtually impossible completely to monitor the activities of peasants and to tie them to the soil),<sup>6</sup> the lack of territorial monopolies of military security implies that suppliers are forced to compete for labour, in other words, that there is a market for security. Such a market evolves in spite of the fact that the model does not contain a superior authority with the ability to shape and enforce institutions regulating exchange. This is the case because the scarcer labour is, the greater is the interest of suppliers of security in concluding contracts. In view of the low density of population and of the correspondingly high probability of meeting the same actors again, having a reputation as trustworthy is a decisive advantage. Thus, interest in their reputation explains why suppliers of protection tend to comply with the terms of the contracts they conclude. Demanders of security are also interested in complying; the more so, the less they themselves are able to provide protection on their own. Put briefly: under the conditions specified above, contracts concluded in the market for security are self-enforcing.

In the present context, it is helpful to analyse this market from the point of view of the Austrian School of economics where competition is interpreted as a procedure for the discovery of new knowledge and new abilities helpful to overcome scarcity (Hayek 1978). Seen from this perspective, it seems obvious that one option suppliers of security have is to improve their positions *vis-à-vis* their competitors by offering their potential partners new and attractive terms of contract. Here, both the price and the quality of the security provided may be modified. As the price for security consists of

<sup>6</sup> This seems to be another difference between conditions in Central and Western Europe. In England, for instance, control costs were probably lower; consequently, high medieval serfdom was more intensive (Persson 1991, p. 75). Another factor which gave English landlords more power over their peasants was the higher exit costs, England being of course an island.



labour, competition leads to a reduction in the services demanded. Alternatively, the quality of the security provided may be improved without changing the price. Apart from this, there is the option of harming competing suppliers by using force, for example by killing their clients. However, given a low supply of labour this option is relatively unattractive, as it not only tends to injure one's reputation, but also further reduces the supply of labour. Thus, competition leads to the discovery of new terms of contract which allow demanders of security to make more efficient use of their productive abilities. In fact, given the lack of governments or of landlords' organisations able to prevent competition for labour, the land-labour ratio would even give rise to a free peasantry (Domar 1970, p. 21), if transaction costs were not positive.

Considering the fact that under the condition of high military insecurity productive incentives are weak – producers must always expect to be robbed of all their products (Tullock 1974) – it becomes evident that competition in the market for security causes a change in incentives. The better personal integrity and property rights are protected, the stronger productive incentives become. All other things being equal, this should lead to a rise in productivity which allows a growth of population. Productivity growth, moreover, enables an increasing number of producers to take up non-agricultural occupations. This in turn implies the spread of markets where food is exchanged for industrial products and where, in the absence of restrictive institutions, competition is intensive. Here, the guilds come into the picture, providing travelling merchants with security, thereby lowering transaction costs, and allowing an expansion of trade and further gains from specialisation and from the division of labour (Greif *et al.*, 1994, p. 772). Also, actors in these markets soon recognise the benefits of literacy: providers of security can protect the property rights of their clients better when written records help them to make sure who entered into which obligations. Therefore, the model does not only predict an increase in security but also a growth of productivity and population, the spread of towns and economic markets,<sup>7</sup> and a fall in transaction costs. It does not, however, predict the emergence of a market economy in the modern sense of the word: universally valid institutions which protect property rights, regulate their transfer by consent, and guarantee compliance with obligations are still lacking.

Were there corresponding developments in actual history? The sources show that high medieval landlords and feudal lords indeed intensively competed for labour. An early instance is the agreement reached between archbishop Frederick I of Hamburg and settlers from the Netherlands between 1106 and 1113. The peasants left their former lords and now

<sup>7</sup> In spite of the fact that security is a good whose production requires the use of scarce resources – that is, economic decisions – for simplicity's sake only markets for agricultural and industrial products are here called economic markets.

received attractive property rights in land along the lower reaches of the river Weser (Franz 1974, p. 171). Similar contracts were not only concluded by other ecclesiastical princes – for example by the archbishop of Mainz who settled peasants from Flanders near Erfurt in Thuringia – but also by secular princes like Duke Henry the Lion and Margrave Albert the Bear (Lütge, 1967, p. 66f). The colonising movement of the high Middle Ages, that is, the migration of German peasants into regions east of the river Elbe, was probably not due to the overpopulation of western Germany that forced the inhabitants to emigrate (Lütge 1967, p. 111; Kuhn 1973, p. 229), but rather to the fact that in the less densely settled regions of East Central Europe feudal lords and landlords had to make attractive offers in order successfully to compete for labour. This colonising movement has never been considered from the point of view of competition (survey: Backhaus 1998, pp. 17–38). Competition, however, provides a conclusive explanation of why the property rights of peasants in the East were generally more attractive than in the West which was settled more densely and where the supply of labour was larger. Still, as every emigrating peasant strengthened the bargaining position of those who stayed behind, the situation of peasants west of the Elbe improved, too (Lütge 1967, p. 63). Just as predicted by the model, in the high Middle Ages older distinctions between freedom and various forms of serfdom lost much of their traditional importance (Irsigler 1976/77, p. 10).

Many historians point to a growth of agricultural productivity during the high Middle Ages. Duby (1975, p. 195), for example, estimates yields of the eighth and ninth centuries to have been only about twice the amount needed as seed. For the high Middle Ages, he mentions yield ratios of 1:3 to 1:4, while Rösener (1992, p. 75) talks of ratios of 1:5 to 1:7. The change can be convincingly explained with the stronger productive incentives due to the improvement in the protection of property rights brought about by competition in the market for security. The consequence of this development was a quick growth of population. In the early fourteenth century, probably about 11.5 to 12m people lived in Central Europe, as compared to the 3 to 4m who had survived there 300 years before (Russell 1975, p. 36; Cipolla 1980, p. 4). At the same time, markets proliferated and towns spread to the regions east of the Rhine and north of the Danube (Postan, 1987 [1952], p. 209). Guilds played an important role in long distance commerce. They did not only provide military protection for their travelling members, but contracted for security services with local feudal lords whose ability to play merchants off against each other they reduced, thus making it more difficult to expropriate traders (Greif *et al.* 1994, p. 765). The guild of the ‘Merchants of the Roman Empire visiting Gotland’, for example, made trade in the Baltic more secure and more profitable and established commercial links with the kingdom of England (Kattinger 1999). It became a forerunner of the Hanse which in the late Middle Ages united merchants



from almost 200 towns in North Germany and along the south coast of the Baltic. Literacy, too, became more common in the course of the high Middle Ages and began to be used in accounting and business (Jenks 1992). All in all, actual historical developments correspond well to developments predicted by the model which so far appears to be robust.

### *3.2. Corporatism and the restriction of competition*

These are by no means all the conclusions which can be deduced from the premises of the model. Up to now, the model has not only led to the emergence of a competitive market for security but to the development of economic markets, as well. Starting out from this basis, further deductions are possible. If human beings maximise their utility, it must be assumed that every single actor is interested in reducing the competitive pressure lying on him: agricultural and industrial producers want to restrict competition in economic markets, while suppliers of security want to do the same in the market for protection. In both types of markets restricting competition allows for profits in excess of those which can be made under competitive conditions; in other words, it becomes possible to acquire monopoly rents. Below, efforts to reduce competition in economic markets are analysed first.

As in the case of producing security, here, too, individual actors usually need to co-operate with others. Security, however, is a good that allows the exclusion of individuals from its consumption (Fenoaltea 1975, p. 388).<sup>8</sup> Thus, its producers have a means of sanctioning unco-operative partners: they just need to deny them protection, for example by excluding them from their fortification or from their guild. In contrast to this, monopoly rents are a collective good. Once it is provided, no supplier remaining in the market can be excluded from its consumption, regardless of whether he takes part in its production or not. Collective goods allow free-riding, which in this case means benefiting from higher prices achieved by a cartel without complying with the restrictions necessary to bring about the rise in prices. Therefore, eliminating competition by forming a cartel poses a problem of collective action.

The theoretical analysis of such problems goes back to Olson (1965), whose basic insight was that the ability to act collectively largely depends on the size of the group whose members are interested in the existence of the collective good. The smaller a group is, the more important is every single member's contribution, and the greater his or her interest in taking part in collective action. Conversely, the larger the group is, the more difficult does it become to monitor potential free-riders who do not participate in providing the collective good, and the less likely it is that this good is produced at all (Olson 1965, pp. 49ff). The hypothesis that there is such a direct link

<sup>8</sup> Today, military security is regarded as a standard example of a public good. In the high Middle Ages, however, it rather had the characteristics of a private good. Why this was the case, and why the character of security changed, is analysed in Volckart (2000b).

between group size and ability to act collectively has been criticised,<sup>9</sup> but the fact that social control of free-riders becomes more difficult when the group grows is not disputed (Udén 1993, p. 242).

Considering these insights, it becomes obvious that only very small groups of actors in the model can reduce competition without acting collectively. In small groups, the additional profit every single member can make by restricting the quantities of goods he or she supplies to the market is so large that he or she is prepared to accept this restriction even when no other member follows suit. However, in order for larger groups to be able to act collectively, so-called selective incentives are needed (Olson 1965, p. 49ff). Such incentives are either provided by sanctions threatening free-riders, or by goods which allow exclusion from consumption (Oliver 1980). To monitor potential free-riders and to punish them in one way or the other, an organisation is needed the formation of which, in turn, requires a political entrepreneur who is prepared to carry the costs arising here (Hardin 1982, p. 35). When it is possible to increase one's social standing by forming an organisation – which is the case when this organisation generates monopoly rents for its members – such political entrepreneurs can be found.

Thus, on the basis of the assumption that the actors in the model are self-interested utility maximisers, a restriction of competition can be expected, and Olson's theory of collective action shows why organisations are needed to reach this aim. Furthermore the model predicts that these organisations do not only provide the collective good – that is, the monopoly rent – which is at the centre of interest of the group members, but other goods, too, which serve as selective incentives for collective action. Given the lack of states and the ability of the actors of the model to use force themselves, it is also to be expected that the cartels will be able to employ coercive means against free-riders.

Comparable organisations did really emerge in the course of the high Middle Ages. The village communities which at that time everywhere became an important part of the social structure are a case in kind (survey: Wunder 1986, pp. 141ff; Scribner 1996, pp. 291ff). What was characteristic for them was the so-called *Flurzwang*, a system of self-created and self-enforced rules, many of which prevented competition among the peasants of the village. Rules which limited the number of livestock every peasant was allowed to keep, or which made it illegal to employ additional farmhands in order to increase production, are typical instances of anti-competitive institutions (examples: Schumm and Schumm 1985, pp. 50, 190, 194, 496; Rheinheimer 1999, pp. 60, 116).

Selective incentives like those predicted by the model also existed. Here,

<sup>9</sup> Among other things it was pointed out that Olson stresses the non-excludability from consumption. If the collective good is characterised by non-rivalry in consumption, individual utility does not diminish when the size of the group grows. Consequently, a growth of the group does not make it harder to provide the collective good (Udén 1993, p. 241).

communal buildings like baths and bakeries were important (van Dülmen 1999, p. 45). Additionally, many corporations offered their members economic support in the form of credits; these were paid out of the community's strong-box where court fees and fines were kept (Wunder 1987, p. 37). Still, exclusion from such goods and services does not seem to have been used as a sanction very often. It occurred, for example, in the Mosel valley where peasants who violated communal institutions were forbidden to use certain facilities provided by the corporations (Nikolay-Panter 1989, p. 76). However, most village courts imposed short prison sentences, sanctions like the pillory, and fines (van Dülmen 1999, p. 51). The dominance of this kind of sanction seems to have been due to the difficulty in effectively controlling the exclusion of lawbreakers from communal facilities, while fines were attractive for fiscal reasons.

Though hardly anything factual is known about the formation of village communities, research frequently suggests that there was a causal link between their emergence and the spread of open-field farming in the high Middle Ages (Franz 1976, p. 52; Wunder 1986, pp. 30f; Rösener 1992, p. 80; Scribner 1996, pp. 298f). The argument is that the communities developed to enforce the *Flurzwang*, whose institutions served to internalise the external effects of the close neighbourhood of the peasants' plots in the open fields: they saved the costs of individual counter-measures against inadvertent damages and mutual obstructions (Abel 1978, p. 80). Doubtless many institutions of the *Flurzwang* really had this function. Still, village communities were by no means absolutely necessary to avoid mutual obstructions. Even given the technical standard of agricultural implements used at that time (see Abel 1978, pp. 45ff; Ennen and Janssen 1979, pp. 156ff), it would, for example, have been possible to put together every peasant's various plots of land. In this way, the external costs of a too close neighbourhood could have been avoided as well.<sup>10</sup> The traditional explanation of the emergence of rural corporations not being absolutely conclusive, there is no reason why these organisations should not be interpreted as cartels.

Village communities were not the only organisations which employed selective incentives in order to achieve compliance with their self-created institutions. The many other corporations which emerged in the high Middle Ages did not act any differently, regardless of whether they were craft guilds which monopolised markets for industrial products (Ennen 1971), or corporations of landlords who began to exclude outsiders from economically or politically relevant property rights.<sup>11</sup> Sometimes it was

<sup>10</sup> Then, every peasant could have divided his share into three fields and could have practised crop rotation. He could just as well have experimented with other methods of production. This would not have affected the other peasants.

<sup>11</sup> Here, preventing entry into exclusive corporations and restricting the choice of potential partners for marriage were particularly important (Fleckenstein 1979, pp. 31ff; Brady 1996, p. 265).

not even necessary to form new anti-competitive organisations, existing ones easily lending themselves to the new function. Thus, merchant guilds became increasingly cartel-like (Greif *et al.* 1994, p. 773), and even the Hanse, which continued to provide a large amount of security for its members, concentrated more and more on excluding outsiders, such as for example Dutch and English merchants from the Baltic Sea (Spading 1973, pp. 84ff; Dollinger 1981, pp. 385f). In all cases, the interest in acquiring monopoly rents of one kind or the other – higher prices paid for industrial products were just as possible as larger dowries – was of decisive importance.

Thus, anti-competitive institutions like those predicted by the model can indeed be found in history. However, were they peripheral phenomena or typical of the period of time analysed here? Answering this question requires comparing the development of productivity which is to be expected on the grounds of the institutions predicted by the model with productivity as it developed in actual history.

Cartels are based on institutions which prevent competition between their members. Such institutions have two important effects. First, because the cartels generate rents, the price system becomes distorted. As prices depend no longer on supply and demand, being instead fixed arbitrarily, they do not mirror changes in the consumers' preferences, in the availability of resources and in production techniques. Consequently the allocation of resources is increasingly distorted, too. Moreover, the cartels' stability depends on no producer being able to gain a competitive advantage over the others. Therefore, cartels – or rather, their leading committees – must be interested in preventing all members from experimenting with production methods which do not benefit all other members, too. Consequently, when agriculture is riddled by cartel-like organisations like the village communities analysed here, this severely hampers the spread of technical or organisational innovations. In late medieval and early modern Germany, this was a common effect of the *Flurzwang* (Wunder 1986, p. 51). To be sure, there were innovations which were probably triggered by trial and error in repeated productive processes and by regional specialisation (Persson 1988, pp. 7–10). Altogether, however, productivity growth visibly slowed down: according to Slicher van Bath (1963a, pp. 28of), in Germany high medieval yield ratios were seldom surpassed between the sixteenth and eighteenth centuries.<sup>12</sup> Just like corresponding modern developments attributed by Olson (1982) to the activities of special interest groups, this result can be convincingly explained by the anti-competitive institutions generated in the model and found in

<sup>12</sup> On the basis of information collected from a large number of sources from Central Europe, Slicher van Bath (1963b, p. 16) calculates average yield ratios of just over 1:4 for the sixteenth and seventeenth centuries, and of over 1:6 for the eighteenth and early nineteenth centuries. This corresponds to the ratios Rösener (1992, p. 75) calculates for the high Middle Ages.

actual history. Consequently, everything points to the hypothesis that these institutions were really decisive. The model passes the test here, too.

### *3.3. State building by restricting competition*

As shown above (Section 3.1), not only economic markets, but markets for security develop within the model. In these markets, relatively intensive competition between suppliers of protection causes an improvement in the quality of security at lower prices. Under these conditions – and for the same reasons as in economic markets – suppliers are interested in restricting competition: in both cases this makes it possible to acquire monopoly rents.

How can competition be restricted in the market for security? On the one hand, suppliers can form cartels just as the suppliers to economic markets can do. On the other hand, however, there is a second possibility which in the last resort is due to the fact that the actors in the model have only begun to specialise in certain activities. There are some who primarily engage in agriculture or industry, whereas others put the main stress on the production of security, but in principle all of them are able to use force. How these conditions can foster the emergence of monopolies can be explained by drawing on the theory of regulation as first formulated by Stigler (1971) and expanded by Posner (1974). The theory starts out from the proposition that institutional regulations are not introduced in order to protect the general public but should be interpreted as products whose allocation is determined by supply and demand (Posner 1974, p. 344). Regulations are used to intervene in the market in a way which restricts competition by excluding specific groups of suppliers, by imposing taxes, dues and so on. The fact that the favoured group is able to appropriate monopoly rents suffices to explain why there is a demand for regulations. A supply is created because the organisation with the competence to regulate discovers this as a source of income.

Under modern conditions, organised special interest groups appear as demanders of institutional entry barriers to the market while it is always the government which supplies them. Therefore, the theory needs to be modified in order to be applicable to the stateless conditions of the model. Here, regulations are not the outcome of negotiations between governments on the one side and special interest groups on the other. Rather, providers of protection who act either as individuals or within cartel-like organisations appear both as suppliers and as demanders of institutions which restrict competition. Now, the fall in transaction costs, which competition in the market for security sets off, makes it possible to enter into three different types of agreements (for the following, see Volckart 2000b).<sup>13</sup>

<sup>13</sup> Contracts are of course always concluded in the market for security, as well. However, as these are bilateral contracts, transaction costs are lower than when agreements are to be reached between whole groups of individuals all of whom demand the right to be heard. Such contracts become possible only when transaction costs fall.



First, a cartel may succeed in preventing competition among its members but may still be faced with competition from outsiders. A supplier of security can offer to support this cartel in excluding the outsiders from an economic market. In return, the members of the cartel thus stabilised can abstain from supplying protection themselves. This type of agreement does not directly lead to the formation of a territorial protective monopoly, but rather to a reduction in the number of suppliers and to a concentration in the market. The second type of transaction does not require one of the partners to give up his or her ability to supply protection. Instead, both agree to clearly demarcate their respective competencies and to co-operate in excluding a third party from the market for security. In effect, such a transaction constitutes a cartel which divides the market for security among its members and excludes all others. The third type of transaction leading to the formation of territorial monopolies for the supply of security is also based on agreements which are to the disadvantage of a third party. Here, one organisation can support the other in excluding outsiders from an economic market. In turn, the organisation thus supported does not relinquish its political competencies, as in the first case mentioned above, but grants its partner financial or other means that make it possible forcibly to exclude a third party from the market for security. At least in the two last-mentioned cases, an organisation emerges which, in a given territory, exercises the exclusive right to protect the personal integrity and property rights of the other inhabitants of this territory. In brief: such contracts constitute states.

In Central Europe, state formation really came about in this way. Switzerland, for example, is an instance where the state was built up by a protective cartel. Here, village communities joined together and began collectively to produce security. However, bargaining and transactions between several power groups were more common, Brandenburg-Prussia being a case in kind.<sup>14</sup> State formation was here initiated in 1652–53 by a transaction between Frederick William, the ‘Great Elector’, and his vassals who had formed a corporate social order. The landlords agreed to pay a tax of 530,000 *talers* over a period of six years. In exchange, Frederick William confirmed a number of privileges which his partners claimed (Heinrich 1984, p. 125). Among these privileges, the changes which the landlords had introduced in their relations with the peasants were of particular importance. Already in the sixteenth century, their corporation had restricted peasant mobility, thus eliminating competition in the labour market (Plehn 1904, pp. 104ff). This had allowed the landlords to raise their demand for

<sup>14</sup> For the formation of the Württemberg state which was based on similar transactions see Vann (1984, pp. 19ff). In general, contracts between special interest organisations played a larger role in state formation than assumed by the dominant line of research which stresses the exploitative potential of the emerging states (Tilly 1985, 1990). The role that agreements played in state formation is explored by Spruyt (1994, pp. 86ff) and van Creveld (1999, p. 103).



labour services so far that peasants had almost no chance to act as autonomous producers and to compete with their lords in the grain market (Mylius 1751, pp. 437f; cf. Domar 1970, pp. 21, 27).<sup>15</sup> So far, the agreement corresponded to the third type of transaction mentioned above. However, the contract between the elector and his vassals contained a number of other clauses which concerned the competencies exercised by the landlords in religious, political, and jurisdictional matters (Mylius 1751, p. 436). The fact that Frederick William now explicitly acknowledged these rights meant that he and his partners reached an agreement about competencies which they previously had often exercised in competition with each other. As in the second type of transaction described above, both partners appeared as members of a cartel which divided the market for security among its members.

The final stage on the way to modern statehood was reached in the early eighteenth century. It corresponds to the first type of transaction described above: the competence autonomously to supply security was exchanged for privileges on economic markets. In spite of the fact that the peasants' influence as producers on the grain market had been cut back, many members of the Prussian nobility were still unhappy with the reduction of their political authority and not willingly prepared to support the elector's and, after 1701, the king's efforts at centralisation. However, without any formal contract between king and nobility having been concluded, the latter gained a monopoly of all higher posts in the civilian administration and the army. As up to the rank of major, promotion depended not on merit and ability but on the duration of service, any Prussian nobleman who did not leave the army prematurely and who became the head of a regiment had a good chance of acquiring a considerable fortune (Mittenzwei and Herzfeld 1990, p. 210). Not explicitly in exchange, but in a striking parallel to this development, King Frederick William I ceded the property rights in the manorial fiefs which, as a feudal lord, had remained in his hands, to the landlords. In effect he turned their demesnes into private property. At the same time, he waived his claim on the knightly services which his vassals had to perform (Mittenzwei and Herzfeld 1990, p. 228). Thereby, the Prussian landlords finally gave up their right autonomously to supply military security on their own and in competition with their lord. In spite of the fact that the nobility continued to exercise certain exclusive political rights well into the nineteenth century, the formation of the Prussian state was essentially completed.

<sup>15</sup> It is under dispute how reduced peasant contacts with markets actually were. Schissler (1978, p. 64) believes that in Brandenburg-Prussia, most peasants could sell grain only after exceptionally good harvests, whereas they were forced to buy food when the harvest was bad. Harnisch (1986, pp. 46f), in contrast, points out that peasants had to pay taxes to the government and – at least sometimes – dues to their landlord. This they could not have done without regular contacts with the market.

Further tests and comparisons using other Central European territorial states as case studies are needed in order to establish whether the model is robust in this respect, too. Still, the fact that civic capital here does not play a role in state formation is a point in its favour. After all, there is no clear relationship between urbanisation and state building in Germany, the strongest states emerging where towns were few and weak, namely in the East. The Rhineland, in contrast, though densely urbanised, rather seems to have lagged behind. All in all, therefore, developments found in actual history and predicted by the model match here, too.

### *3.4. Interstate competition and institutional change*

In the stages of the model discussed in Sections 3.2 and 3.3, efforts to restrict competition on both relevant kinds of markets dominate. In economic markets, these efforts lead to the emergence of cartel-like corporations which are able to shape and at least partly to enforce anti-competitive institutions. In the market for security, efforts to restrict competition cause the emergence of territorial monopolies. This development is often based on transactions where the members of the cartels exchange their competence autonomously to use coercion for support in the enforcement of entry barriers to the economic markets they are interested in. Thus, the monopolisation of the market for security and the penetration of the economic order by cartels go hand in hand. In actual history, this phase of the model mirrors the emergence of corporate social orders and of states in the period of time between the high Middle Ages and the eighteenth century.

In the long run, however, the existence of states undermines that of corporate social orders. The further development of the model shows why this is the case. The fact that, by now, suppliers of security have territorial monopolies does not imply that they do not compete for actors who render them services or duties in money or in kind. Still, this kind of competition differs in some important points from the one analysed above in Section 3.1. Most importantly, it is not only based on bilateral contracts between suppliers and demanders of security. Additionally, governments now begin to change the rules valid within their territories, that is, to compete for capital and labour by supplying different systems of institutions (Wohlgemuth 1995, Streit and Kiwit 1999). A necessary condition for the emergence of this kind of competition is, of course, the existence of authorities who have a legislative competence and are able to enforce new institutions against the resistance of groups thereby put at a disadvantage. As by and large the same means are needed to provide security and to enforce law, this condition is given as soon as monopolistic states are formed.

What consequences does interstate competition have for the economy? In the model, economic actors are interested in an institutional supply that allows them to use their assets to their best possible advantage. Within cer-

tain limits they have the chance to replace the supply of one political authority with that of another. This they can do by exiting into a jurisdiction whose institutional system they regard as more advantageous, that is, by practising institutional arbitrage (Hirschman 1970, p. 21ff; Wohlgemuth 1995, p. 283). In this way, economic actors can cause a fall in the government's revenues, in effect exposing it to substitutional pressure. For governments thus affected, an obvious reaction is to modify the institutional system. Because the interest in expanding the tax base by attracting the owners of scarce and mobile resources has the same effect, competition functions as a discovery procedure (Hayek 1978, Wohlgemuth 1999). What is discovered are new institutions which allow economic actors to employ their assets more advantageously.

When states compete whose economic system is characterised by intensive competition in economic markets, it is to be expected that governments primarily offer subsidies and protection against economic competition in order to attract the owners of scarce resources (Streit and Wohlgemuth 1999, p. 9). When, however, the economy of the competing states is riddled with cartels and monopolies – like the one which developed in the model – the results of institutional competition are quite different. Then, capital and labour can only immigrate when exceptions are made for their owners which allow them to compete with the established cartels.

In the model, the creation of such exceptions triggers momentous changes. The traditional cartels have already lost their political power and autonomy in the course of the formation of monopolistic states; now, they are losing their economic power as well. For the members of a cartel, its value is the smaller the more outsiders are able to compete with them. Hence, every exception granted to immigrating investors or labourers reduces the incentives to resist against the creation of more exceptions. Thus, the process of creating exceptions develops an inherent dynamism which leads inadvertently to a system where everybody is free to enter into any market but the one for security which has been monopolised by the state. In the new social order, economic activities are no longer subject to the terms of contracts concluded in an open market for protection or to rules created by cartel-like corporations, but to institutions which apply equally to all members of society. These institutions do not only protect property rights, but moreover ensure open access to economic markets, in effect providing freedom of contract and a means to enforce compliance with obligations. Put briefly, the institutional underpinnings of a market economy begin to emerge.

Developments corresponding to those predicted by the model occurred in actual history. Emperor Maximilian II, for example, began to grant so-called 'liberties of court' to some craftsmen which allowed them to work without becoming a member of a local guild (Zwanowetz 1971, p. 100). After the Thirty Years War, the grant of such privileges was often inspired

by technical innovations which the guilds rejected, but which governments wanted to introduce. In the middle of the eighteenth century, the Austrian government tried to convince foreign merchants to found enterprises that, by using new technologies, were to compete with the guilds (Otruba 1981, pp. 83ff). In a similar manner, whole groups of immigrants were settled, for example the Huguenot refugees in the late seventeenth and eighteenth centuries. In Brandenburg, the elector decreed that guilds should admit Huguenot artisans free of charge, whereas investors did not need to join a guild at all (Wilke 1988, p. 228). In Hesse-Kassel, Huguenot refugees were generally exempted from the obligation to become members of a guild (Zumstrull 1983, p. 186). None of these governments aimed at completely abandoning the established cartel-like organisations, and in most territories they continued to exist, albeit in a much reduced form. Nevertheless, conditions developed in the direction of a greater freedom of trade and of contract.

The actual or threatened emigration of economic actors could have the same effect. In eighteenth-century Leipzig, for instance, the French merchants who had settled there were discriminated against by their Saxon competitors: among other things, they had to pay higher fees and taxes. After the Seven Years War the Saxon government took advantage of the weakness of the Leipzig municipal council – which was deeply in debt – to push through legal equality for the French merchants. It was prompted to this course of action because the governments of Prussia and Brunswick tried to convince the merchants to resettle in their territories (Schlechte 1958, p. 429). On a similar basis trade restrictions were reduced, too. Particularly during the decade after the Seven Years War, Hamburg competed intensively with Danish-governed Altona. This prompted the merchants from Hamburg to suggest to their magistrate that a free port should be established. Their success was only partial, but they achieved considerable tariff reductions (Liebel 1997[1965], pp. 144f).

The liberation of the peasants – that is, the creation of peasant autonomy from landlord and village community which in most German territories was carried through between the middle of the eighteenth and the middle of the nineteenth centuries – was mainly motivated by the discovery of links between the distribution of property rights and incentives for productive activities which governments wanted to strengthen for fiscal reasons (Dipper 1980, p. 46). Nevertheless, property rights and institutional conditions relevant for agriculture were at least influenced by institutional competition. In Prussia, for example, the electors and later the kings had committed themselves to support landlords in enforcing serfdom. Regarding relations with their own peasants, however, they had more leeway. When, in 1708, it was discovered that many peasants emigrated from Prussia to Poland, the government considered an improvement in the peasants' property rights. In the following year, experiments were made in

some districts (Knapp 1887a, p. 3). As it was expected that the peasants would pay for their new rights, this came to nothing (Knapp 1887b, p. 83). Still, evidently concern about the loss of labour led to rethinking the situation of the peasants and to experiments with institutional innovations. After some further attempts, the Prussian government abolished labour dues on the royal demesnes towards the end of the eighteenth century (Schissler 1978, pp. 106f). However, freedom of domicile was not yet granted to peasants (Knapp 1887b, p. 94).

When in 1781–82 serfdom was abolished in all Habsburg territories, this was due to the interest in the creation of stronger incentives for production (Otruba 1981, p. 92). The measure had, however, unforeseen consequences. In south-western Germany, Austrian lands lay scattered among a tangle of other lordships: Württemberg territories, free cities, the lands of the large abbeys, estates of Imperial knights and territories ruled by the margraves of Baden. When serfdom was abolished in Austria, the government of Baden was alarmed: it feared that the measure would create unrest among its own rural population. Therefore, in 1783 Margrave Charles Frederick followed suit and liberated the peasants in Baden as well (Liel 1965, pp. 52f).

Thus, actual history matches the development of the model here, too. State formation deprived the cartels of political power; competition between states deprived them of economic power as well. When, after 1789, the old social order of Germany fell apart under the impact of the French Revolution, this process had by no means come to a close, but it had been well underway for a number of decades. Though some premodern organisations and institutions survived long into the nineteenth century, it is evident that there were forces in eighteenth-century society which facilitated a fundamental change from within. Among these forces, the mobility of capital and labour and the interest of governments in increasing revenues by attracting mobile factors of production had prime importance.<sup>16</sup>

In the model, a growth of productivity and of the economy as a whole should be expected on the grounds of the institutional change analysed above. There are two reasons for this: on the one hand, competition in economic markets becomes more intensive, so that more productivity-enhancing inventions occur which spread more quickly. On the other hand, as the cartels are deprived of their power, individuals are no longer subject to the diverse restrictions of the freedom of contract which these organisations had introduced. Consequently, there are more opportunities for

<sup>16</sup> Thus, Weber's (1978, p. 353f) hypothesis that the competing states' need for capital 'resulted in the memorable alliance between the rising states and the sought-after and privileged capitalist powers that was a major factor in creating modern capitalism' is fully justified by results achieved with the help of the theoretical tools of modern economics.

mutually advantageous transactions and it is easier to realise gains from exchange. However, because individuals need to learn about the new institutions and about the opportunities provided by them – a learning process which involves transaction costs and takes time (Streit 2000, p. 206) – a rapid growth is not to be expected. Rather, the model predicts a transition period characterised by the reorientation of the economic actors, and a slowly accelerating growth rate.

Is it possible to detect corresponding developments in actual history? In eighteenth century industry a number of technical innovations spread which suggest that there was indeed such a growth (Troitzsch 1981). In agriculture, producers experimented with new methods, too, but because institutional change in rural communities was comparatively slow, innovations were mostly adapted on the demesnes of landlords or because of political pressure (Abel 1986, pp. 204ff). However, at least at the present state of research, definite statements about the development of productivity and national product per head are impossible (Metz 1993, p. 462).<sup>17</sup> On the one hand, for example, contemporaries were unanimous that the Prussian population became more prosperous between 1650 and 1800, and at the turn of the nineteenth century Prussia was probably the fourth industrial power in Europe after Great Britain, France and the Netherlands (Heinrich 1983, p. 322; Kaufhold 1994, p. 68). On the other hand, at this time pauperism became a problem of ever greater severity in all Germany (Abel 1970). Thus, there is ample evidence for Borchardt's (1973, p. 93) hypothesis that in spite of all innovations there can have been only a minimal growth of national product per head in the eighteenth century. All this suggests that, at least initially, the institutions emerging because of competition between states had little influence on economic growth. When exactly growth began to accelerate is a much debated question (Fremdling 1995, Tilly 2001, pp. 156f). For the purpose of this article, however, any point in time in the first half of the nineteenth century is sufficient: it shows that here, too, actual developments in history agree with the predictions of the model. Consequently it is plausible that the institutional innovations triggered by competition between the emerging states were of decisive importance.

#### 4. Conclusion

As noted at the beginning of this article, the hypothesis that the emergence of market economies on the European level was to a large measure due to the continent's political fragmentation has gained general acceptance. The Holy Roman Empire, however, presents a puzzle: though being even more fragmented than the neighbouring regions, the institutional underpinnings

<sup>17</sup> The *locus classicus* to refer to for the history of economic trends in premodern Europe is still Braudel and Spooner (1967, pp. 391–430).



of a market economy began to develop only toward the end of the early modern era. The model presented here shows why this was the case. Put briefly, the following are its central hypotheses.

Starting out from a number of premises which mirror actual historical conditions as they were in about 1000, the emergence of two types of markets is deduced in the model. First, a market for security develops. Competition in this market creates conditions which allow the proliferation of economic markets as well. In both types of markets, efforts to restrict competition quickly set in. In economic markets, these efforts lead to the formation of corporate social orders, in the market for security to the emergence of territorial monopolies, that is, of states. After state formation has come to a close, competition between states eliminates the corporate social orders, at the same time creating institutions necessary for a functioning market economy.

Given the premises specified initially, the developments depicted in the model are ‘inevitable’ in the sense that they are the logical outcomes of what rational actors were predictably bound to do under these conditions. Thus, not only feudalism appears to have been inevitable, but also its demise and the emergence of a modern market economy (Persson 1991). In contrast to other models (North and Thomas 1970, 1971), neither technology nor population are here treated as exogenous variables whose changes trigger further developments. Instead, individual self interest is sufficient. As soon as political conditions have deteriorated so far that the last vestiges of a state able to claim monopolistic rule are gone – that is, as soon as the Carolingian Empire has disintegrated under the impact of external attacks and internal strife – the market for security begins to take shape, and everything else follows logically.

Unlike hypotheses which have a long tradition in historical and sociological thought, this model stresses neither the importance of towns nor of the interests of the bourgeois ‘class’ for the emergence of the institutional underpinnings of a market economy (see for example, Chirot 1985, p. 188). Indeed, it is hard to see why, for instance, merchants should have favoured rules which safeguarded competition, every single merchant being rather interested in institutions which granted him a monopoly in some market in which he was trading. The model shows that the emergence of rules establishing a market economy can be explained without using towns and bourgeois interests as arguments. Instead, these institutions are here interpreted as the unplanned and unforeseen outcome of decisions taken by political actors who were primarily motivated by self-interest, that is, by their fiscal needs.

If the self-interest of political actors who were competing for scarce resources brought about the emergence of a market economy, why then did not political fragmentation in Central Europe directly lead to this outcome? The answer to this question is based on the premise that initially – that is,

in the high Middle Ages – states in the sense of political organisations with territorial monopolies in the supply of security did not exist. This premise is essential because without it the difference between premodern corporate social orders and modern rent-seeking organisations remains unclear. The peculiarities of corporate social orders are, in turn, an essential part of the explanation of why in Central Europe institutions safeguarding a market economy began to develop only in the eighteenth century. Modern rent-seekers need to bribe or lobby governments who have legislative monopolies into granting them institutional protection against the effects of competition in economic markets, and this protection is then provided with the help of the state's monopoly of force (Krueger 1974, Tullock 1993). Pre-modern corporate social orders aimed at restricting competition, too. In contrast to modern rent seekers, however, they were themselves able to use coercive means in the enforcement of their anti-competitive institutions. In fact, they were political authorities in their own right.

In the Holy Roman Empire, political actors who were not primarily interested in monopolising economic markets would certainly have liked to attract mobile factors of production just like rulers everywhere else in Europe. For centuries, however, they had to deal with autonomous corporate social orders who regarded immigrants or foreign investors as interlopers and dangerous competitors and were on their own able to close markets against outsiders. Where this was not the case, corporations frequently enlisted a ruler's help in the enforcement of their anti-competitive institutions by supporting his state building efforts. As long as rulers did not succeed in monopolising the means of coercion, they could not force the corporations within their territories to accept outsiders; therefore they were unable to compete for capital and labour. Competition could only begin when the state building process had come to a close in the seventeenth or eighteenth centuries. Then, a market economy quickly began to develop. The hypothesis following from this is that political fragmentation is by no means a sufficient condition for the emergence of institutions supporting growth-generating markets. Competition between political units can contribute to this development only when these units are states whose governments have succeeded in creating territorial monopolies of force.

## References

- ABEL, W. (1970). *Der Pauperismus in Deutschland am Vorabend der Industriellen Revolution*. Braunschweig: Braunschweig-Druck.
- ABEL, W. (1978). *Geschichte der deutschen Landwirtschaft vom frühen Mittelalter bis zum 19. Jahrhundert*, 3. impr. Stuttgart: Eugen Ulmer.
- ABEL, W. (1986). *Agricultural Fluctuations in Europe: From the Thirteenth to the Twentieth Centuries*. London: Methuen.
- ALBERT, H. (1973). Der Gesetzesbegriff im ökonomischen Denken. In Hans K. Schneider and Christian Watrin (eds), *Macht und ökonomisches Gesetz*:

- Verhandlungen auf der Tagung des Vereins für Socialpolitik – Gesellschaft für Wirtschafts- und Sozialwissenschaften in Bonn 1972*, vol. 1 (Halbbd.). Berlin: Duncker & Humblot, 129–162.
- ALBERT, H. (1984). Modell-Denken und historische Wirklichkeit: Zur Frage des logischen Charakters der theoretischen Ökonomie. In Hans Albert (ed.), *Ökonomisches Denken und soziale Ordnung: Festschrift für Erik Boettcher*. Tübingen: Mohr-Siebeck.
- ALGAZI, G. (1996). *Herrengewalt und Gewalt der Herren im späten Mittelalter: Herrschaft, Gegenseitigkeit und Sprachgebrauch*. Frankfurt, New York: Campus.
- BACKHAUS, F. (1998). ‘Das größte Siedelwerk des deutschen Volkes’: Zur Erforschung der Germania Slavica in Deutschland. In Christian Lübke (ed.), *Struktur und Wandel im Früh- und Hochmittelalter: Eine Bestandsaufnahme aktueller Forschungen zur Germania Slavica*. Stuttgart: Steiner.
- BLOCH, M. (1997). *Feudal Society*, vol. 1: *The Growth of Ties of Dependence*. Chicago, IL: University of Chicago Press.
- BOLDT, H. (1990). *Deutsche Verfassungsgeschichte*, vol. 1: *Von den Anfängen bis zum Ende des älteren deutschen Reiches 1806*. 2. impr. München: dtv.
- BORCHARDT, K. (1973). Germany 1700–1914. In Carlo M. Cipolla (ed.), *The Fontana Economic History of Europe*, vol. 4: *The Emergence of Industrial Societies*, Part 1. Glasgow: Fontana.
- BRADY, T. JR. (1996). Economic and social institutions. In Robert W. Scribner (ed.), *Germany: A New Social and Economic History*, vol. 1: 1450–1630. London, New York: Arnold.
- BRAUDEL, F. and SPOONER, F. (1967). Prices in Europe from 1450 to 1750. In E. E. Rich and C. H. Wilson (eds), *The Cambridge Economic History of Europe*, vol. 4: *The Economy of Expanding Europe in the Sixteenth and Seventeenth Centuries*. Cambridge: Cambridge University Press.
- CHIROT, D. (1985). The rise of the West. *American Sociological Review* 50, pp. 181–195.
- CIPOLLA, C. M. (1980). *Before the Industrial Revolution: European Society and Economy, 1000–1700*, 2nd edn. Cambridge: Cambridge University Press.
- COASE, R. H. (1960). The problem of social cost. *Journal of Law and Economics* 3, pp. 1–44.
- COLEMAN, J. S. (1990). *Foundations of Social Theory*. Cambridge MA, London: Belknap.
- CRONE, P. (1989). *Pre-Industrial Societies*. Oxford: Basil Blackwell.
- DIAMOND, J. (1999). *Guns, Germs, and Steel: The Fates of Human Societies*. New York, London: Norton.
- DIPPER, C. (1980). *Die Bauernbefreiung in Deutschland 1790–1850*. Stuttgart: Kohlhammer.
- Dollinger, P. (1981). *Die Hanse*, 3. impr. Stuttgart: Kröner.
- DOMAR, E. D. (1970). The causes of slavery or serfdom: a hypothesis. *Journal of Economic History* 30, 4, pp. 18–32.
- DUBY, G. (1975). Medieval Agriculture 900–1500. In Carlo M. Cipolla (ed.), *The Fontana Economic History of Europe*, vol. 1: *The Middle Ages*, 3rd edn. Glasgow: Collins/Fontana.
- ENNEN, E. and JANSSEN, W. (1979). *Deutsche Agrargeschichte: Vom Neolithikum bis zur Schwelle des Industriezeitalters*. Wiesbaden: Steiner.

- ENNEN, R. (1971). *Zünfte und Wettbewerb: Möglichkeiten und Grenzen zünftlerischer Wettbewerbsbeschränkungen im städtischen Handel und Gewerbe des Spätmittelalters*. Köln, Wien: Böhlau.
- FENOALTEA, S. (1975). The rise and fall of a theoretical model: the manorial system. *Journal of Economic History* 35, pp. 386–409.
- FLECKENSTEIN, J. (1979). Die Entstehung des niederen Adels und das Rittertum. In Josef Fleckenstein (ed.), *Herrschaft und Stand: Untersuchungen zur Sozialgeschichte im 13. Jahrhundert*. Göttingen: Vandenhoeck & Ruprecht.
- FRANZ, G. ed. (1974). *Quellen zur Geschichte des deutschen Bauernstandes im Mittelalter*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- FRANZ, G. (1976). *Geschichte des deutschen Bauernstandes vom frühen Mittelalter bis zum 19. Jahrhundert*. 2. impr. Stuttgart: Eugen Ulmer.
- FREMDLING, R. (1995). German national accounts for the 19th and early 20th centuries. *Scandinavian Economic History Review* 43, pp. 77–100.
- GANSHOF, F. L. (1964). *Feudalism*. 3. impr. London: Longmans.
- GREIF, A., MILGROM, P. and WEINGAST, B. R. (1994). Coordination, commitment, and enforcement: the case of the merchant guild. *Journal of Political Economy* 102, pp. 745–76.
- HALL, J. H. (1995). A theory of the rise of the West. *METU Studies in Development* 22, pp. 231–41.
- HARDIN, R. (1982). *Collective Action*. Baltimore, MD: John Hopkins University Press.
- HARNISCH, H. (1986). Peasants and markets: the background to the agrarian reforms in feudal Prussia east of the Elbe, 1760–1807. In Richard J. Evans and W. R. Lee (eds.), *The German Peasantry: Conflict and Community in Rural Society from the Eighteenth to the Twentieth Centuries*. London: Croom Helm.
- HAYEK, F. A. VON (1960). *The Constitution of Liberty*. Chicago, IL: The University of Chicago Press.
- HAYEK, F. A. VON (1978). Competition as a discovery procedure. In Friedrich August von Hayek (ed.), *New Studies in Philosophy, Politics, Economy and the History of Ideas*. London: Routledge & Kegan Paul.
- HEINRICH, G. (1983). Der preußische Spätmerkantilismus und die Manufakturstädte in den mittleren und östlichen Staatsprovinzen (1740–1806). In Volker Press (ed.), *Städtewesen und Merkantilismus in Mitteleuropa*. Köln, Wien: Böhlau.
- HEINRICH, G. (1984). *Geschichte Preußens: Staat und Dynastie*. Frankfurt, Berlin: Ullstein.
- HIRSCHMAN, A. O. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press.
- HOBBS, T. (1960 [1651]). *Leviathan; or the Matter, Forme, and Power of a Commonwealth Ecclesiasticall and Civil*. Oxford: Basil Blackwell.
- HUME, D. (2000 [1740]). *A Treatise of Human Nature*. Oxford: Oxford University Press.
- IRSIGLER, F. (1976/77). Freiheit und Unfreiheit im Mittelalter: Formen und Wege sozialer Mobilität. *Westfälische Forschungen* 28, pp. 1–15.
- JENKS, S. (1992). Werkzeug des spätmittelalterlichen Kaufmanns: Hansen und Engländer im Wandel von *memoria* zur Akte (mit einer Edition von *The Nouble of Weyghtys*). *Jahrbuch für fränkische Landesforschung* 52, pp. 283–319.

- JONES, E. L. (1987). *The European Miracle: Environments, Economies, and Geopolitics in the History of Europe and Asia*. 2nd edn. Cambridge: Cambridge University Press.
- KAHAN, A. (1973). Notes on serfdom in Western and Eastern Europe. *Journal of Economic History* 33, pp. 86–99.
- Kasper, W. and Streit, M. E. (1999). *Institutional Economics: Social Order and Public Policy*. Cheltenham: Edward Elgar.
- KATTINGER, D. (1999). *Die Gotländische Genossenschaft: Der frühhansisch-gotländische Handel in Nord- und Westeuropa*. Köln: Böhlau.
- KAUFHOLD, K. H. (1994). Preußische Staatswirtschaft: Konzept und Realität, 1640–1806. Zum Gedenken an Wilhelm Treue. *Jahrbuch für Wirtschaftsgeschichte* 2, pp. 33–70.
- KNAPP, G. F. (1887a). *Die Bauern-Befreiung und der Ursprung der Landarbeiter in den älteren Theilen Preußens*, vol. 2: *Die Regulirung der gutsherrlich-bäuerlichen Verhältnisse von 1706 bis 1857 nach den Akten*. Leipzig: Duncker & Humblot.
- KNAPP, G. F. (1887b). *Die Bauern-Befreiung und der Ursprung der Landarbeiter in den älteren Theilen Preußens*, vol. 1: *Überblick der Entwicklung*. Leipzig: Duncker & Humblot.
- KRUEGER, A. O. (1974). The political economy of the rent-seeking society. *American Economic Review* 64, pp. 291–303.
- KUHN, W. (1973). Die Siedlerzahlen der deutschen Ostsiedlung. In Walter Kuhn (ed.), *Vergleichende Untersuchungen zur mittelalterlichen Ostsiedlung*. Köln: Böhlau.
- LANDES, D. S. (1998). *The Wealth and Poverty of Nations: Why Some are So Rich and Some So Poor*. New York, London: W. W. Norton.
- LANE, F. C. (1958). Economic consequences of organized violence. *Journal of Economic History* 18, pp. 401–17.
- LIEBEL, H. P. (1965). Enlightened bureaucracy versus enlightened despotism in Baden, 1750–1792. *Transactions of the American Philosophical Society, New Series* 55, 5, pp. 1–132.
- LIEBEL, H. P. (1997 [1965]). Laissez-faire vs. mercantilism: the rise of Hamburg and the Hamburg bourgeoisie vs. Frederick the Great in the crisis of 1763. In Oliver Volckart (ed.), *Frühneuzeitliche Obrigkeiten im Wettbewerb: Institutioneller und wirtschaftlicher Wandel zwischen dem 16. und 18. Jahrhundert*. Baden-Baden: Nomos.
- LÜTGE, F. (1967). *Geschichte der deutschen Agrarverfassung vom frühen Mittelalter bis zum 19. Jahrhundert*. Stuttgart: Eugen Ulmer.
- MCCLELLAND, P. D. (1975). *Causal Explanation and Model Building in History, Economics, and the New Economic History*. Ithaca, NY: Cornell University Press.
- METZ, R. (1993). Probleme der statistischen Analyse langer historischer Zeitreihen. *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 80, pp. 457–86.
- MITTENZWEI, I. and HERZFELD, E. (1990). *Brandenburg-Preußen 1648–1789: Das Zeitalter des Absolutismus in Text und Bild*. 3. impr. Berlin (Ost): Verlag der Nation.
- MÖLLER, H. (1989). *Fürstenstaat oder Bürgernation: Deutschland 1763–1815*. Berlin: Siedler.
- MYLIUS, C. O. (1751). *Corpus Constitutionum Marchicarum, Oder Königl. Preussis. und Churfürstl. Brandenburgische in der Chur- und Marck Brandenburg, auch*



- incorporirten Landen publicirte und ergangene Ordnungen, Edicta, Mandata, Rescripta [et]c.: Von Zeiten Friedrichs I. Churfürstens zu Brandenburg, [et]c. biss ietzo unter der Regierung Friderich Wilhelms, Königs in Preussen [et]c. ad annum 1736. Inclusive*, vol. 6: *Von Miscellaneis und Supplementis derer vorhergehenden fünf Theile bis 1736*. Berlin, Halle: Buchladen des Waysenhauses.
- NIKOLAY-PANTER, M. (1989). Die bäuerliche Gemeinde im Moselraum im Spiegel ländlicher Rechtsquellen vornehmlich des Spätmittelalters. *Jahrbuch für westdeutsche Landesgeschichte* 15, pp. 67–83.
- NORTH, D. C. (1981). *Structure and Change in Economic History*. New York, London: W. W. Norton.
- NORTH, D. C. and THOMAS, R. P. (1970). An economic theory of the growth of the Western world. *Economic History Review* 23, pp. 1–17.
- NORTH, D. C. and THOMAS, R. P. (1971). The rise and fall of the manorial system: a theoretical model. *Journal of Economic History* 31, pp. 777–803.
- NORTH, D. C. and THOMAS, R. P. (1973). *The Rise of the Western World: A New Economic History*. Cambridge: Cambridge University Press.
- OLIVER, P. (1980). Rewards and punishments as selective incentives for collective action: theoretical investigations. *American Journal of Sociology* 85, pp. 1356–1375.
- OLSON, M. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.
- OLSON, M. (1982). *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities*. New Haven, CT: Yale University Press.
- OTRUBA, G. (1981). Die Wirtschaftspolitik Maria Theresias und Josephs II. In Herbert Matis (ed.), *Von der Glückseligkeit des Staates: Staat, Wirtschaft und Gesellschaft in Österreich im Zeitalter des aufgeklärten Absolutismus*. Berlin: Duncker & Humblot.
- PERSSON, K. G. (1988). *Pre-Industrial Economic Growth: Social Organization and Technological Progress in Europe*. Oxford: Basil Blackwell.
- PERSSON, K. G. (1991). Was Feudalism inevitable? *Scandinavian Economic History Review* 39, pp. 68–76.
- PLANITZ, H. (1940). Kaufmannsgilde u. städtische Eidgenossenschaft in niederfränkischen Städten im 11. und 12. Jahrhundert. *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte, germanistische Abteilung* 60, pp. 1–116.
- PLEHN, H. (1904). Zur Geschichte der Agrarverfassung von Ost- und Westpreußen. *Forschungen zur Brandenburgischen und Preußischen Geschichte* 17, pp. 43–126.
- POPPER, K. (1969). A pluralist approach to the philosophy of history. In Erich Streissler (ed.), *Roads to Freedom: Essays in Honour of Friedrich A. von Hayek*. London: Routledge.
- POSNER, R. (1974). Theories of economic regulation. *Bell Journal of Economics and Management Science* 5, pp. 335–58.
- POSTAN, M. M. (1987 [1952]). The trade of medieval Europe: the North. In Michael Postan and Edward Miller (eds.), *The Cambridge Economic History of Europe*, vol. 2: Trade and Industry in the Middle Ages. Cambridge: Cambridge University Press.
- QUARTISCH, H. (1970). *Staat und Souveränität*, vol. 1: *Die Grundlagen*, Frankfurt: Athenäum.



- REINHARD, W. (1992). Das Wachstum der Staatsgewalt: Historische Reflexionen. *Der Staat* 31, pp. 59–75.
- RHEINHEIMER, M. (1999). *Die Dorfordnungen im Herzogtum Schleswig: Dorf und Obrigkeit in der Frühen Neuzeit*, vol. 2. Stuttgart: Lucius & Lucius.
- RÖSENER, W. (1992). *Agrarwirtschaft, Agrarverfassung und ländliche Gesellschaft im Mittelalter* (Enzyklopädie deutscher Geschichte 13, ed. by Lothar Gall). München: Oldenbourg.
- RUSSELL, J. C. (1975). Population in Europe 500–1500. In Carlo M. Cipolla (ed.), *The Fontana Economic History of Europe*, vol. 1. 3rd edn. Glasgow: Fontana.
- SCHISSLER, H. (1978). *Preußische Agrargesellschaft im Wandel: Wirtschaftliche, gesellschaftliche und politische Transformationsprozesse von 1763 bis 1847*. Göttingen: Vandenhoeck & Ruprecht.
- SCHLECHTE, H. ed. (1958). *Die Staatsreform in Kursachsen 1762–1763: Quellen zum kursächsischen Rétablissement nach dem Siebenjährigen Kriege*. Berlin: Rütten & Loenig.
- SCHUMM, K. and SCHUMM, M. eds. (1985). *Hohenlohische Dorfordnungen: Württembergische ländliche Rechtsquellen 4*. Stuttgart: Kohlhammer.
- SCRIBNER, R. W. (1996). Communities and the nature of power. In Robert W. Scribner (ed.), *Germany: A New Social and Economic History*, vol. 1: 1450–1630, London: Arnold.
- SLICHER VAN BATH, B. H. (1963a). *The Agrarian History of Western Europe AD 500–1850*. London: Arnold.
- SLICHER VAN BATH, B. H. (1963b). *Yield Ratios, 810–1820*. Wageningen: Landbouwhogeschool.
- SPADING, K. (1973). *Holland und die Hanse im 15. Jahrhundert*. Weimar: Hermann Böhlaus Nachf.
- SPRUYT, H. (1994). *The Sovereign State and Its Competitors: An Analysis of Systems Change*. Princeton, NJ: Princeton University Press.
- STIGLER, G. J. (1971). The theory of economic regulation. *Bell Journal of Economics and Management Science* 2, pp. 3–21.
- STREIT, M. E. (2000). *Theorie der Wirtschaftspolitik*, 5. impr. Düsseldorf: Werner.
- STREIT, M. E. and KIWIT, D. (1999). Zur Theorie des Systemwettbewerbs. In Manfred E. Streit and Michael Wohlgemuth (eds.), *Systemwettbewerb als Herausforderung an Politik und Theorie*. Baden-Baden: Nomos.
- STREIT, M. E. and WOHLGEMUTH, M. (1999). Einleitung: Systemwettbewerb als Herausforderung an Politik und Theorie. In Manfred E. Strei and Michael Wohlgemuth (eds.), *Systemwettbewerb als Herausforderung an Politik und Theorie*. Baden-Baden: Nomos.
- TILLY, C. (1985). War making and state making as organized crime. In Peter B. Evans, Dietrich Rueschmeyer and Theda Skocpol (eds.), *Bringing the State Back In*. Cambridge: Cambridge University Press.
- TILLY, C. (1990). *Coercion, Capital, and European States, 990–1990*. Cambridge, MA: Basil Blackwell.
- TILLY, R. (2001). German Economic History and Cliometrics: A Selective Survey of Recent Tendencies. *European Review of Economic History* 5, pp. 151–187.
- TOPOLSKI, J. (1972). The model method in economic history. *Journal of European Economic History* 1, pp. 713–26.

- TOPOLSKI, J. (1981). Ein Versuch der Modellanalyse der Entstehung des Kapitalismus und des Refeudalisierungsprozesses in Europa (14.–17. Jh.). In Jürgen Schneider (ed.), *Wirtschaftskräfte und Wirtschaftswege: Festschrift für Hermann Kellenbenz*, vol. 5. Stuttgart: Klett-Cotta.
- TROITZSCH, U., ed. (1981). *Technologischer Wandel im 18. Jahrhundert*. Wolfenbüttel: Herzog-August-Bibliothek.
- TULLOCK, G. (1974). *The Social Dilemma: The Economics of War and Revolution*. Blacksburg, VA: University Publications.
- TULLOCK, G. (1993). *Rent Seeking*. Cambridge: Edward Elgar.
- UDÉHN, L. (1993). Twenty-five years with the logic of collective action. *Acta Sociologica* 36, pp. 239–261.
- VAN CREVELD, M. (1999). *The Rise and Decline of the State*. Cambridge: Cambridge University Press.
- VAN DÜLMEN, R. (1999). *Kultur und Alltag in der Frühen Neuzeit*, vol. 2: Dorf und Stadt 16.–18. Jahrhundert, 2. impr. München: Beck.
- VANBERG, V. (1982). *Markt und Organisation: Individualistische Sozialtheorie und das Problem korporativen Handelns*. Tübingen: Mohr.
- VANN, J. A. (1984). *The Making of a State: Württemberg, 1593–1793*. Ithaca, NY: Cornell University Press.
- VOLCKART, O. (2000a). The open constitution and its enemies: competition, rent seeking, and the rise of the modern state. *Journal of Economic Behavior and Organizations* 42, pp. 1–17.
- VOLCKART, O. (2000b). State building by bargaining for monopoly rents. *Kyklos* 53, pp. 265–293.
- VOLCKART, O. (2002). No utopia: government without territorial monopoly in medieval central Europe. *Journal of Institutional and Theoretical Economics* 158, pp. 325–43.
- WATKINS, J. W. N. (1953). Ideal types and historical explanation. In Herbert Feigl and May Brodbeck (eds.), *Readings in the Philosophy of Science*. New York: Appleton-Century-Croft.
- WEBER, M. (1978). *Economy and Society: An Outline of Interpretative Sociology*. Berkeley, CA: University of California Press.
- WENDEHORST, A. (1986). Wer konnte im Mittelalter lesen und schreiben? In Johannes Fried (ed.), *Schulen und Studium im sozialen Wandel des hohen und späten Mittelalters*. Sigmaringen: Thorbecke.
- WILKE, J. (1988). Der Einfluß der Hugenotten auf die gewerbliche Entwicklung. In Sibylle Badstübner-Gröger, Klaus Brandenburg, Rolf Geissler et al. (eds.), *Hugenotten in Berlin*, Berlin, Union Verlag.
- WILLIAMSON, O. E. (1975). *Markets and Hierarchies*. New York: Free Press.
- WOHLGEMUTH, M. (1995). Institutional competition – notes on an unfinished agenda. *Journal des Économistes et des Études Humaines* 6, pp. 277–299.
- WOHLGEMUTH, M. (1999). Systemwettbewerb als Entdeckungsverfahren. In Manfred E. Streit and Michael Wohlgemuth (eds.), *Systemwettbewerb als Herausforderung an Politik und Theorie*. Baden-Baden: Nomos.
- WUNDER, H. (1986). *Die bäuerliche Gemeinde in Deutschland*. Göttingen: Vandenhoeck & Ruprecht.
- WUNDER, H. (1987). Finance in the ‘Economy of Old Europe’: the example of peasant credit from the late Middle Ages to the Thirty Years’ War. In Peter-

- Christian Witt (ed.), *Wealth and Taxation in Central Europe: The History and Sociology of Public Finance*. Hamburg, New York: Berg.
- ZMORA, H. (1997). *State and Nobility in Early Modern Germany: The Knightly Feud in Franconia, 1440–1567*. Cambridge: Cambridge University Press.
- ZUMSTRULL, M. (1983). Die Gründung von ‘Hugenottenstädten’ als wirtschaftspolitische Maßnahme eines merkantilistischen Landesherrn – am Beispiel Kassel und Karlshafen. In Volker Press (ed.), *Städtewesen und Merkantilismus in Mitteleuropa*. Köln: Böhlau.
- ZWANOWETZ, G. (1971). Der österreichische Merkantilismus bis 1740. In Institut für Österreichkunde (ed.), *Die Wirtschaftsgeschichte Österreichs*. Wien: Ferdinand Hirt.