TRADING NETWORKS, CREDIT, AND TRUST: THE HANSARDS' CAPITAL RAISING REVISITED

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Abstract: Since the late twelfth century, Low-German merchants—based on privileges in London, Novgorod, Bruges, and Bergen—succeeded in largely monopolising Baltic Sea trade. The Hansards used several formal contractual schemes to raise capital, spread commercial risk, and share profits, but predominantly they traded within family networks and preferred "reciprocal trade", which was handled without formal contract and formal credit, and often even without cash transfer. By doing this, the Hansards could circumvent several shortcomings of their system of trade—a notorious scarcity of precious metals and money in Northern Europe and a lack of venture capital. "Reciprocal trade" for long was a viable institution, even promoting the Hansards' limited use of money and credit. This in turn had an adverse long-term effect on economic growth in the Baltic Sea region because the development of capital markets and sophisticated instruments of trade finance was inhibited, this restricting a further expansion of Hanseatic trade around 1500.

Keywords: network trade; reciprocal trade; Hanse; institutional analysis; path dependence; lock-in

Introduction

This article is about how late-medieval mercantile practice—in particular the merchants' use of money and credit—correlated with the institutional arrangement of the respective trading system. By taking the case of the Hansards' trade in the Baltic Sea, I attempt to explain why the Hansards used money and other financial

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instruments—to some degree at least, and differently from other merchant groups at the time—to only a limited degree, and why they, in holding on to an exchange pattern today called "reciprocal trade", not only often avoided for much of their internal commercial exchange the transfer of money in either cash or payable formal debt but also ran during the fifteenth century into an institutional "lock-in" by which the economic development in the Baltic Sea region, in particular the development of a venture capital market, was restrained. Even though the Hanse case points to the economic development of medieval towns and therefore does not mirror a rural setting, it may well serve as an example of a small loan system, for Hansards typically operated with only little capital and thus borrowed only small sums.

So, the argument I would like to bring forward in this article contributes to a long-standing debate in economic history about the impact of institutional design on economic development and economic growth in the Middle Ages[1], and I am going on from ideas about the path-dependent development of the institutional arrangement of Hanseatic trade which Stephan Selzer and I have published together.[2]

Trade in the Late-Medieval Baltic Sea Region and the Hansards

Measured in terms of monetisation and commercialisation, the Baltic Sea in the late Middle Ages presented itself as an economically rather highly developed region. During the European boom period of the high Middle Ages, immigration of western settlers into the Baltic Sea region was enormous. A dense network of towns had sprung up along the southern Baltic shore, and the colonisation of the hinterland brought about a huge expansion of arable land and sustained agricultural development.[3] Trade in medieval Northern Europe can basically be described as the commercial exchange between crafted goods such as linen and cloth from the West for raw materials like ore, wax, timber, and furs, as well as foodstuffs like grain, herrings, or dried cod, from the East and North.[4] The east-

1 Cf. North 1990; Milgrom, North, and Weingast 1990; Greif 2000; Greif 2002b; Greif 2006; Greif, Milgrom, and Weingast 1994; Ogilvie 2007; González de Lara 2008; Edwards and Ogilvie 2012; Ogilvie and Carus 2014.

2 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.

3 Cf. Jahnke 2019.

4 Cf. Hammel-Kiesow 2000; Selzer 2010; Jahnke 2014.

west transfer of goods, especially of luxuries, existed, although much less intensive, even before the turn of the millennium. Numerous trading centres of the Viking Age, which in recent decades have been excavated mainly in the western Baltic Sea region, are proof of this.[5] Then, as a result of agricultural development and population growth, Baltic Sea trade was given a significant quantitative boost throughout the thirteenth century. Even before, it had already been relocated from the early trading centres to the towns newly founded along the southern Baltic coast. Urban dwellers, some of which became quite wealthy, consumed far more than what was necessary for subsistence. Their increasing demand for necessities and luxuries could be satisfied by an intensifying commerce[6], which now was carried out via permanent and legally protected urban markets.

The new and quite closed trading system emerging in this period was based on privileges that were granted by local rulers to groups of Low-German merchants at some important markets at the periphery of the North Sea and the Baltic Sea, that is in London, Bruges, Novgorod, and later also in Bergen. After having ousted former competitors from long-distance trade in this area, the Low-German traders—better known as the merchants of the Hanse or Hansards—operated most of the Baltic Sea trade in the late Middle Ages. The Hansards predominantly traded within kinship and friendship networks, and in economic terms, their dominance of Baltic Sea trade which remained more or less unchallenged up to the late fifteenth century can be addressed as a cartel.[7]

Of course, the transfer of commodities between the Hanse's trading outposts—the *Kontore*—in Novgorod, Bruges, London, and Bergen on the one hand, and the many cities and towns in the Baltic Sea region on the other, is barely conceivable without the existence of money and credit. Hence, various gold and silver currencies existed that could be used for commercial exchange[8]. Each season, Hansards brought silver and coins to the Saint Peter's court in Novgorod as well as to the Bruges fairs.[9] Thus, the Hansards used money as a medium of exchange and as a means of storing value, and different currencies served as a computing unit—in order to address only the three essential functions of money.[10] The computing function of money is all too obvious when looking into some of the merchants' account books and ledgers that have survived from the fourteenth and fifteenth

5 Cf. Adamczyk 2013a; Adamczyk 2013b; Kleingärtner 2013; Selzer and Ewert 2021 [forthcoming].
6 Cf. Irsigler 1989; Hammel-Kiesow 2000.
7 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.
8 Cf. Adamczyk 2018; Adamczyk 2019.
9 Cf. Jenks 1982.
10 Cf. Sprandel 1975; Steinbach 2019.

centuries.[11] In wills, too, a merchant's material wealth was usually given in a certain currency or even in several different currencies—in book money as well as in real money.[12]

The Hansards' Limited Use of Money and Credit

So, why speak of a Hansards' limited use of money and credit? To answer this question, it is not sufficient to only look at the degrees of commercialisation and monetisation in the Baltic Sea region in the late Middle Ages. Undisputedly, the Baltic economy was already highly developed, as proved by a widespread and intense commercial exchange all across the region, mainly of Hansards. Moreover, as noted above, since money was available in different currencies and merchants also used book money for computing and accounting purposes, monetisation had also reached a quite advanced degree. Hence, is non-use of money therefore not a good indication of an even more commercialised economy, an economy where commercial agents can substitute cash with other financial instruments?[13] Moreover, it appears though that even high degrees of commercialisation and monetisation did not automatically produce some kind of standard or universal trading practice in the late Middle Ages, and quite obviously merchants from a different regional and cultural background developed rather different trading techniques.[14] Therefore it would be necessary to analyse how the respective merchants made use of the money available and when they substituted alternative financial instruments for money.

Limits to the Hansards' use of money and credit for trade in this broader sense are very obvious when compared to the standards that were firmly established among Italian traders at the same time. Late-medieval Italian merchants, for in-

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11 See e.g. Nirrnheim H. (ed.) 1895 on the account book of Vicko von Geldersen from Hamburg; Mollwo C. (ed.) 1901 on the account book of Hermann and Johann Wittenborgfrom Lübeck); Slaski 1905, Stark 1993, and Orlowska 2012, 2020 on the account book of Johann Pyre from Gdańsk; Lesnikov M. P. and W. Stark (eds.) 2013 on the account books of Hildebrand Veckinchusen, who lived for most of his commercial life in Bruges; Koppe 2018 on the account book of Hans Wyneke from Reval.

12 A prominent example certainly is the will of Sivert Veckinchusen, written down and sealed in Lübeck on 9th May 1406, where numerous benefits in kind Sivert wanted to be given to his heirs are enlisted, each marked with its proper value in *marc lübisch* (Mark of Lübeck). See Stieda 1921.

13 Cf. Bell, Brooks, and Moore 2017.

14 Cf. Ewert 2019b.

stance, were able to use the bill of exchange a lot more virtuously than their contemporaries in Northern Europe. For Italian traders, this financial instrument was not only a common means of a sedentary merchant to change money in different currencies, or to make cashless payments abroad. They used the bill of exchange even to take out a loan, and more importantly, around 1400 they began to primarily take advantage of the arbitrage resulting from fluctuations of the exchange rate in various markets in Europe. This was a lucrative business, indeed, and some Italian merchants now traded mainly with bills of exchange, becoming merchant bankers in the process.[15] Barely anything comparable existed, however, in the Baltic Sea region.

Why was that? Reasons that are recurrently mentioned in the literature are an alleged lack of credit or even a sort of anti-credit stance of the Hansards as well as their supposed allegedly innovative backlog in all organisational, legal, and financial matters of long-distance trade.[16] These arguments can easily be disproved, and historians have done so in the past. For example, in an article published in 1982, Stuart Jenks convincingly shows that merchants of the Hanse who traded in England and Flanders quite often bought on loan and even used bills of exchange as a means of payment and also as a means of borrowing. To achieve the liquidity required for their business in Bruges, it was a standard procedure for Hansards to draw on bills of exchange of their trading partners in Cologne or Gdańsk, for example. The debt was redeemed by the proceeds of the sale of goods that were then sent to these partners.[17] Although this can primarily be shown for commercial activities of Hansards in the economically already highly developed western regions, there are no signs of either ignorance or hostility in general of Hansards vis-à-vis a use of bills of exchange or related financial instruments.[18] Quite the opposite: the Hansards were able to act extremely flexibly in financial matters, as is proved by a famous case where three Prussian merchants—Gerhard von Allen, Matthias Wyse, and Heinrich Schönhals—handled a debt of a group of English crusaders in Prussia to the Teutonic Order. To settle the debt that was acknowledged by the leader of the group, Humphrey de Bohun, in January 1363, the three merchants issued two bonds obligatory. Both letters of payment belonging to these bonds were at first brought to England by Thomas Albon, a London woolmonger, who then repaid one of them in Bruges at Easter the same year. The other letter of payment was repaid, again in Bruges, to Reynold Papen, a Hansard who was closely connected to Gerhard von Allen, the original issuer of one of the

15 Cf. Jenks 1982; Guidi-Bruscoli 2019.
16 Cf. Stromer 1976.
17 Cf. Jenks 1982.
18 Cf. North 1999.

bonds obligatory.[19] Resuming this latter case, it seems though that Hansards in principle were very well able to employ rather advanced techniques of finance whenever it was required. This notwithstanding, they did not systematically trade with either letters of payment or bills of exchange, so their use of financial instruments was limited, of course, in comparison to what Italian merchants commonly did.

There may have been other boundaries for Hansards to a full exploitation of available financial instruments as well—lacking capital or institutional deficiencies, for instance. Around 1400, for example, merchants from Venice, Genoa, Pisa, Siena, Florence, and other Italian cities were able to easily draw on capital from third parties for their trading activities. Italians used various forms of contract for either trade or raising capital where profits and risks were shared between partners, and guaranteed by municipal notaries. Such contractual schemes, for example, are the *rogadia, foenus nauticum, societas maris, commenda,* or *collegantia,* all of them being more or less sophisticated developments of a basic form of contract of greco-roman origin.[20] Thus, in Italian cities, something similar to a venture capital market already existed, through which traders were provided with enough capital for their sometimes risky commercial endeavours.[21] Hansards employed several formal contractual schemes, too, which had an incentive structure very similar to those used by Italian traders, the only difference being that such contracts were not certified by notaries, as was customary in Italian cities, but were legally protected by the respective town council. One of these types, much simpler of course than some of the more sophisticated Italian contracts, was the so-called *vera societas* (real partnership), by which trading capital could be raised from inactive partners. Here, the partners commonly agreed upon how they would distribute profits of trade among them, and who of them had to bear the risk of a potential loss of capital.[22] On 1 November 1358, for example, the merchants Arnold Lowe and Rudolf Wittenborch from Lübeck set up a written contract, saying that they had entered into a formal partnership where Arnold Lowe as the inactive partner paid 800 *marc lübisch* to Rudolf Wittenborch, who was to trade with this money for the benefit of both. Profits as well as losses shall be divided equally, and in case the active partner Rudolf Wittenborch died, Arnold Lowe shall be paid off with the whole sum of his deposit.[23] This *vera societas* contract was registered in the *Niederstadtbuch,* one of the town books in the

19 Cf. Paravicini 1995; Bell, Brooks, and Moore 2017.
20 Cf. Skambraks and Köhler 2019.
21 Cf. Greif 1994.
22 Cf. Cordes 1998; Cordes 1999; Cordes 2000.
23 Cf. Dollinger ⁴1989.

city of Lübeck.[24] With such contracts, Hansards were able to formally raise capital for trading activities. However, even though formal contractual schemes for spreading commercial risk and sharing profits existed, a venture capital market as is observed in Italian cities, never really developed in the towns of the Hanse.[25] In addition, trade that relied on such *vera societas* contracts made up for only a smaller portion of Hanseatic trade.

Just like the Hansards' limited use of some at the time well advanced financial instruments, also their use of venture capital was thus not principally restricted by the institutional setting. These episodes might be a hint for the fact that Hansards in principle—to raise capital—could employ financial instruments and contractual schemes in a multitude of ways, but for some reason, they were not always doing it. Also, the Hansards' obvious renunciation of exploiting the full power of financial instruments and contractual schemes available to them does not mean that in return they were restricted to primarily use cash. Interestingly enough, they found something different to raise capital through informal loan and to operate commercial exchange with a minimum of cash possible, a pattern of exchange that can probably be best labelled "reciprocal trade". How this pattern worked, and why it remained in wide use even in fourteenth and fifteenth centuries will be discussed in the following sections of this article.

Reciprocal Trade: the Avoidance of Cash Transfer and Formal Credit

The focus of my considerations on why the late-medieval Hansards, all in all, have been quite reluctant in using money or credit, is therefore on this very specific Hanseatic form of bilateral exchange between merchants, the "reciprocal trade". The majority of Hanseatic businesses were self-employed merchants, and commercial exchange of Hansards in general was handled on a partnership basis.[26] Those business transactions between Hansards that were operated as "reciprocal trade" were of great importance in quantitative terms. Estimations published in literature say that such transactions may have accounted for a majority of all transactions between Hansards in fourteenth and fifteenth centuries, very likely in the order of between more than a half and two thirds. And even in the sixteenth century, this pattern of trade was still prevalent among the merchants of

24 Cf. Seggern 2019.
25 Cf. Huang and Sapoznik 2019.
26 Cf. Ewert and Selzer 2016.

the Hanse.[27] This is why it seems crucially important to analyse in particular this pattern of commercial exchange and of capital raising.

What is the Hansards' "reciprocal trade"? Business partners who operated at distant locations in the Baltic Sea region sent goods to each other, which then were sold on by the respective recipients on their own account. The commercial risks related to the transportation and sale of goods were divided between the two partners. The sender of goods had to take the risk of transportation, whereas the recipient had to care about the risk of sale. And the sender would also formally pocket the profits of sale. All this was done without a written contract between the two partners involved.[28] A very important feature of this pattern is that trading partners were often relatives or considered themselves as friends.[29] For example, the probably most prominent late-medieval merchant of the Hanse, Hildebrandt Veckinchusen, who for most of his commercial life was a trader at the Bruges market, maintained such informal trading relationships with various relatives living in Lübeck, Riga, Reval (Talinn) and Dorpat (Tartu).[30] All these relatives themselves traded as legally independent merchants. Thus, trade of single members of the broader Veckinchusen family was not the trade of a family business at all. A second important feature of "reciprocal trade" is the usually long endurance of such informal partnerships. Some of the partners involved in "reciprocal trade" exchanged goods with each other for more than twenty years. Finally, an individual merchant usually entered into several such informal partnerships at the time, as there was no formal ban of competition among Hansards.[31] In the account book of Johan Pyre from Gdańsk that covers a period of thirty-two years, for instance, more than forty trading partners are enlisted.[32]

Concerning the contractual basis as well as the spread of risk, "reciprocal trade" differed significantly from another sort of business transaction that also was regularly employed by the Hansards, and was called *sendeve* (Sent-away good). The *sendeve* was more kind of a commission business, the like it is even nowadays still in use. Here, a merchant—the commission agent—transported the goods of another merchant and sold them by order and on behalf of this merchant. The owner of goods formally instructed the sale, he had to bear all potential risk, and similar to "reciprocal trade" he also received all the profits of sale, but he had to pay for the commission agent's service.[33]

27 Cf. Stark 1984; Thierfelder 1958.
28 Cf. Mickwitz 1937; Mickwitz 1938; Stark 1984; Stark 2000; Cordes 1998; Cordes 2000.
29 Cf. Ewert and Selzer 2015.
30 Cf. Irsigler 1985; Stark 1993; Cordes 1998; Kluge 2013.
31 Cf. Sprandel 1984.
32 Cf. Sprandel 1984; Orlowska 2012; Orlowska 2020.
33 Cf. Cordes 1998; Cordes 1999; Cordes 2000.

Hence, "reciprocal trade" was a means by which the Hansards were able to avoid, by and large, the transfer of cash because usually the profits of a sale could be paid to the sender by sending back own goods to him. These return goods he then could sell at a profit at his home town market. This notwithstanding, the more clever design of the institution of "reciprocal trade" is obvious because no formal contract or formal order was required in this trading pattern, and therefore the proceeds of a sale had not to be returned to the sender immediately. Since "reciprocal trade" by definition had an enduring element in it, mutual debts could be redeemed within a longer period of time. Furthermore, as long as the recipient of the goods had not yet returned the sale's profits to the sender, it was possible for him within this period to use the sale's proceeds to buy new goods. Thus, "reciprocal trade" was also a means for Hansards to raise capital without entering into a formal contract—a financial instrument providing credit to merchants without letting them pay interest. As a consequence, as Hansards were usually involved in several such informal partnerships using "reciprocal trade" for commercial exchange, the Hansards' trading network can also be considered a credit network in which the members were connected to one another through their mutual obligations of payment.

However, it is the informal character of this trading pattern that makes the analysis of "reciprocal trade" so difficult. The lack of written contracts is why it is almost impossible for legal history to classify this specific form of partnership.[34] This notwithstanding, by taking into account that "reciprocal trade" is nonetheless an informal and implicit contract, principal-agent theory and game theory can be used to derive the incentive structure and the performance of this institutional design, at least from a theoretical perspective.[35] What makes the empirical analysis even more difficult is that "reciprocal trade" can be neither systematically nor clearly detected in the account books that have survived from merchants of the Hanse of the fourteenth and fifteenth centuries. Exactly because of lacking formal agreements between merchants, it is simply impossible for many of the entries to show that they definitely were noted in connection with an informal partnership.

34 Cf. Selzer and Ewert 2001.
35 Cf. Greif 2002a; Ewert and Selzer 2010; Ewert and Selzer 2016.

Trust and Reputation: on the Viability of "Reciprocal Trade"

Compared to the sophistication of means of financing used by other groups of merchants in the fourteenth and fifteenth centuries, the Hansards' "reciprocal trade" appears simple and outdated, of course. Since this pattern of exchanging goods between trading partners and providing each other recurrently with loans worked without a significant transfer of cash, one might also think that very likely it was inefficient. Money or equivalents of money are usually viewed as being essential to make exchange more efficient. Nevertheless, the Hansards employed this trading pattern very intensively for their business, and they held on to this practice for quite a long time. Therefore, there must have been good economic reasons why the Hansards were doing this, if one does not want to assume they were not "clever" businessmen in general. To explain this, three points are briefly outlined below which made the institution of "reciprocal trade" advantageous for both the individual merchant and for the group of all Hansards.

Firstly, the key to understanding the considerable efficiency of "reciprocal trade" as a means of exchange and of financing is that it was embedded in the broad social network of the merchants of the Hanse. This network had emerged since the late twelfth century when merchants still travelled and accompanied their goods, and it became more and more dense later on when many merchants had already settled down.[36] The key terms to focus on here are trust and reputation. Trust played a crucial role in bilateral trade relationships without a contractual basis. However, trust itself was based on reputation. Every merchant within the trade network was keen to maintain a good reputation. Once reputation was lost, due to inadequate care for goods or even fraudulent behaviour, for example, not only was a single partnership destroyed for the merchant, other merchants also no longer wanted to do business with him because of his bad reputation. Hence, betrayal within a single partnership would result in a multilateral ban.[37] In a game-theoretical approach, this central importance of reputation can be demonstrated within a game of trust, which Avner Greif has proposed for the analysis of the incentive structure of institutions used in medieval trade.[38] This simple one-shot game can be extended to an infinite game and, in accordance with the structure of "reciprocal trade", it can be modified insofar as the recipient of the goods who operates the sale on his own responsibility only achieves a positive reputation in each round if he proves able, careful, and honest—that is, selling the partner's goods at a profit and sending back own goods to him which the partner

36 Cf. Ewert and Sunder 2012; Ewert and Sunder 2018.
37 Cf. Selzer and Ewert 2001; Ewert and Selzer 2007.
38 Cf. Greif 2000.

could sell in the next round to realise his profits. With such an incentive structure, betrayal is not a real option for rationally behaving merchants because fraudulent behaviour would very soon result in a loss of all trading partnerships and thus in the economic “death” of the betrayer.[39] News of a merchant’s bad reputation spread through the network—not necessarily very quickly, but nevertheless reliably—and thus ensured a properly working multilateral reputation mechanism.[40] Being embedded in the social network of Hansards, “reciprocal trade” proved then to be a self-enforcing and therefore viable institution.[41]

Secondly, because of this self-enforcing character, “reciprocal trade” produced manifest economic benefits for the individual merchant. In this trading practice essential components of the transaction costs remained relatively low, in particular information costs, cost of contract enforcement, and financing costs.[42] In their trusted relationships it was not necessary for Hansards to procure their own information if they wanted to send goods to a partner for sale. Commonly, the trading partner had enough information about what was going on in his home town market. Merchants could also trust that a trading partner would sell the goods at a profit in his own interest because he wanted to send his own goods back. There were no costs for the enforcement of contracts because with “reciprocal trade” there was no contract in a legal sense. Mutual fairness, however, resulted from embedding “reciprocal trade” into a network structure through which reputation was communicated. Financing costs were also low because little capital was needed to be able to trade at all and because the proceeds from the sale of the goods received from the trading partner were used as a loan to buy new goods. In terms of transportation costs only, there was likely no particular saving in “reciprocal trade” compared to other conceivable forms of trade because the goods had to be transported in any case. All in all, “reciprocal trade” made the merchants extremely flexible because easy-to-establish contacts with many other merchants in the network enabled everyone to offer a wide range of products without having to spend a lot of capital or transfer cash, and also to easily obtain small loans for own trading activities. In addition, little start-up capital was required to start trading, and young merchants typically started trading small quantities only within the network until they had gained enough reputation to do bigger business.[43]

39 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.
40 Cf. Selzer and Ewert 2001; Ewert and Selzer 2010.
41 Cf. Ewert and Selzer 2016.
42 Cf. Selzer and Ewert 2001; Selzer and Ewert 2005; Jenks 2005; Ewert and Selzer 2010; Ewert and Selzer 2016.
43 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.

Thirdly, "reciprocal trade" had noticeable positive effects at the group level, as well, and was thus of economic benefit for the whole Baltic Sea region. The Hanse's system of trade was extremely effective in distributing the goods across space. The network, consisting of many bilateral relationships, made it possible to distribute goods all across the Baltic Sea region. Like in a relay, goods could be sent on from town to town.[44] In addition, by using this trading pattern, the Hansards as a group were able to compensate in part for the lack of venture capital and the lack of a single currency in the Baltic Sea region, and the difficulties that resulted from the fact that the existing currencies were valid only locally or regionally. From an economic point of view, money or currency has to be understood as a public good. Because of potential 'free-riding' the incentive structure is quite unfavourable for any individual engagement. So, typically communities or states become responsible for both the provision and maintenance of public goods.[45] However, the central administrative structure of the Hanse was not yet so developed in the fifteenth century. Therefore the Hanseatic League, which was a loose and by no means permanent association of towns, had not only repeatedly great problems in reacting unanimously to all sorts of external threats[46] but also to credibly guarantee a universal and Northern-Europe-wide currency. However, shortcomings of the monetary system in the Baltic Sea region were only of secondary importance for the viability of "reciprocal trade". In their bookkeeping, the Hansards used the existing currencies to determine the value of the goods they sent away, but these were mostly paid for in kind—with the goods received from the trading partner in return.

Yet, around 1400 there were no economic reasons for giving up "reciprocal trade" and replacing it with newer trading and financing techniques, even more so because the estimated average margin of around fifteen per cent that could be earned in Hanseatic trade was not small, compared with the profit rates of Italian traders at the time.[47] As the institution of "reciprocal trade" proved to be efficient and viable, also the Hansards' limited use of money and credit seems to have been simply a rational choice.

44 Cf. Selzer and Ewert 2001; Ewert and Selzer 2010; Ewert and Selzer 2016.
45 Cf. Ewert 2019a.
46 Cf. Ewert and Selzer 2016.
47 Cf. Stark 1985.

Adverse Effects of the Hansards' Limited Use of Money and Credit

It is quite obvious that the pattern of "reciprocal trade" which the Hansards predominantly employed for commercial exchange within long-lasting informal partnerships had several desirable properties, indeed. As argued above, this institution was efficacious, efficient. and, because of its self-enforcing character, also viable. To keep business alive, neither the transfer of money between distant markets was necessary, nor that of financial instruments by which merchants could draw on credit. So, why should the Hansards have given up such an advantageous institution?

Maybe this is simply the wrong question to ask. In the fifteenth century, we see increasing signs that the merchants of the Hanse were beginning to lose some of their economic potential compared to other merchants in Europe. Only three points are mentioned here as examples: firstly, around 1400 the Hansards' did not enter the Italians' newly evolving trade with letters of exchange. Whether the Hansards in principal were unable to exploit this new business is not quite clear. Stuart Jenks is able to convincingly show that special circumstances in the Bruges market in late 1399 and early 1400—a regulation of the city's magistrate with the clear aim at coping with the shortage of coins, saying that bills of exchange shall be redeemed by paying in cash only—helped the Italian merchants a lot in promoting this new business while at the same time, the diet of the Hanseatic League had forbidden Hansards in Bruges to buy on loan.[48] However, in the further course of the fifteenth century, there were no attempts by the Hansards to organise anything comparable within the internal trade of the Hanse. Secondly, the famous *Venedyssche selscop* (Venetian society) which some members of the Veckinchusen family had founded to trade furs from Russia and Finland in Venice soon developed into a financial disaster and went bankrupt within a short period of time.[49] There were of course many reasons for this, but it was certainly also decisive that the Hansards in Venice operated outside their usual trading network, and so they lacked reputation to borrow money from other merchants than the Hansards. Finally, when the centre of Western European trade moved from Bruges to Antwerp around 1500, the merchants of the Hanse were unable to assert themselves against the emerging strong competitors from Upper Germany, who had much more capital at hand. As a result, the Hansards could neither maintain

48 Cf. Jenks 1982.
49 Cf. Stieda 1894; Kluge 2013.

their cartel regarding long-distance trade in the Baltic Sea region furthermore, nor gain a foothold in the new and capital-intensive transatlantic trade.[50]

Yet, it appears likely more adequate to ask: Why did the merchants of the Hanse not basically adopt the more modern techniques of raising capital which their Italian contemporaries already employed? Both groups of merchants came into contact regularly with each other in Bruges and in London, and due to these contacts, the Hansards knew about the Italian techniques of trade and finance. Nevertheless, apart from a few single cases that were discussed above, such an adoption cannot be observed in general, but especially not for the Hanse's internal trade.

At this point, path dependence comes into play. In economics, this concept was formulated in connection with the aim at explaining why technical standards prevail and still dominate even when they are no longer efficient. The starting conditions play a decisive role here, as they structure the further development.[51] Thus, developments of institutions and institutional arrangements are path-dependent as well.[52] Applied to medieval trading systems, this means that initial conditions of these systems are reflected in the design of institutions, and their further development often remains tied to the path that was taken at the time they were created. Therefore, path dependence is a theoretical concept that argues also with the past, which is why it seems suitable to explain institutional developments in medieval long-distance trade. The dominance of a particular institutional solution is typically promoted early in the development process by a large number of users. This creates a network effect and makes switching to other institutions costly and thus unattractive, because users typically value the expected returns from competing institutional solutions lower than the costs of switching. As a consequence, and contrary to any simple economic logic, inefficient institutions cannot simply be modified or replaced. Often, either modification or replacement of individual institutions within an institutional arrangement are difficult or even impossible because of their interdependence which had evolved in the process. A typical consequence of such a quasi-irreversibility is the so-called "lock-in" of the institutional arrangement.[53]

Exactly this happened in the Hanse's system of trade and of raising capital. As a result of a path-dependent institutional development, in the fifteenth century this system seems to have been trapped in such a "lock-in". The Hansards'

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50 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016; Kypta 2015; Hammel-Kiesow and Selzer (eds.) 2016.

51 Cf. David 1985; Arthur 1989.

52 Cf. David 1994; Sydow, Schreyögg, and Koch 2009.

53 Cf. Ewert 2019b.

preference to trade mainly within kinship and friendship networks still in the fourteenth and fifteenth centuries was path-dependent, of course. And so was the lasting dominance of "reciprocal trade". This specific pattern of trade thus reflected in many ways the initial conditions that once in the thirteenth century had promoted the emergence of the Hanse's reputation-based network organisation of trade, namely the huge regional differences in economic development that existed across the Baltic Sea region, a traditional shortage of precious metals and coins, the common practice of privileging entire merchant groups according to their region of origin, and an only weak legal system.[54] Furthermore, since the information and coordination problems typical of cartels could be solved rather easily via contacts based on relatives and friends, the trade network remained stable even after many of the merchants of the Hanse had settled in the late Middle Ages. For the Hansards, the network was a powerful vehicle to organise and maintain their trading cartel in the Baltic Sea region.[55] However, both network organisation and "reciprocal trade" not only developed path-dependently, they were also mutually dependent, in particular so because "reciprocal trade" was embedded in the social network of Hansards. Operating commerce through kinship and friendship networks promoted the pattern of "reciprocal trade" insofar as the network enabled merchants to easily get in contact with a lot of other merchants from the same Low-German speaking background—to trade with them and to obtain informal loans from them. In this respect, the Hanse can very well be understood as a "small world", a large but fragmented network, where nonetheless distant subgroups are loosely connected through "bridging persons".[56] The network also enhanced fairness among its members, thus members were protected by the multilateral reputation mechanism, which was pivotal for "reciprocal trade" to work properly.[57] In turn, through "reciprocal trade", trusted relationships were created which increased the number of possible connections and further intensified the cohesion of the whole network.[58] As a consequence of the mutual interdependence of Hanseatic institutions of trade, a single Hansard could not simply quit the Hanse's system of trade and adopt instead trading habits and financing techniques of other European merchant groups at the time, namely those of Italian merchant bankers. This would have meant losing all connections within the Hansards' network, renouncing from all benefits coming from it, and giving up business after all. It should be clear though, why the Han-

54 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.
55 Cf. Ewert and Sunder 2012; Ewert and Sunder 2018.
56 Cf. Watts 1999; Selzer and Ewert 2001; Ewert and Selzer 2016.
57 Cf. Selzer and Ewert 2001; Ewert and Selzer 2010; Ewert and Selzer 2016.
58 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.

sards did not switch to alternative means of raising capital and alternative techniques of financing trade.

That the merchants of the Hanse were not able to substantially change the institutional arrangement of their internal trade in the fifteenth century is also a result of the fact that the practice of "reciprocal trade" affected economic development adversely, especially the development of capital markets and a sophisticated finance of trade. As argued above, for "reciprocal trade" usually not much capital was required, which is why in the short term, newcomers could start a trading business quite easily. In the long run, however, such common low-capital trading among Hansards inhibited both the development and growth of a venture capital market in the towns of the Hanse.[59] It is no surprise, of course, that even in the fifteenth century, larger companies did not emerge and most of the Hanse's trading businesses were self-employed merchants or small firms, which in turn meant that the merchants were very well used to operating with only little capital.[60] The same was true for the development of more complex financial instruments because such instruments simply were not necessary, neither for the exchange of goods nor for borrowing within trusted relationships.[61] Hence, the majority of Hansards—those who did not trade at either the market of Bruges or London—had simply no opportunity within their own business to exploit the manifold financial possibilities that bills of exchange can provide. These serious deficits in the commercial development of the Baltic Sea region in the late Middle Ages therefore neither reduced the significance of "reciprocal trade", nor did this specific pattern become redundant. Quite the reverse: the practice of "reciprocal trade" was even more enhanced by this. Thus, commercial exchange with merchants from outside the Hanse—the so-called *butenhansen*—in general remained difficult, as in such cases the multilateral reputation mechanism was ineffective, and financing techniques were often not compatible with each other. This "lock-in" was stabilised furthermore because to keep the network of the Hansards closed, many towns of the Hanse prohibited formal trading companies with partners from outside the Hanse, who of course could have provided Hansards with more capital.[62] In addition, to protect the Hanse's privilege, the Bruges *Kontor* repeatedly banned purchases on loan, which to some extent exacerbated the notorious lack of credit and financing there.[63] It seems reasonable therefore why many Hansards held on to "reciprocal trade" in the late fifteenth century and even be-

59 Cf. Schonewille 1998.
60 Cf. Jenks 2013.
61 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.
62 Cf. Jenks 1996.
63 Cf. Jenks 1982.

yond, and did not make any attempt to employ more sophisticated techniques of capital raising and of finance. In the early sixteenth century, the Hansards finally had too little venture capital available and their financing techniques were too simple to really be able to enter into the then emerging capital-intensive trans-atlantic trade.[64]

Conclusions

With the rapidly progressing commercialisation and monetisation of the economy in various regions of Europe during the high and late Middle Ages, the use of money and credit within trade also changed accordingly. All across Europe merchants developed techniques to circumvent the notorious shortage of precious metals and an ever rising diversity of local currencies. Within long-distance trade, merchants began to use book money, they minimised the number of risky coin transfers, and finally tried to avoid payments in cash. And they also deployed more sophisticated means to finance trade. Like in other European regions, too, trade in Northern Europe had also reached this "new" level of economic development—that is merchants substituted financial instruments for cash wherever and whenever possible, which also meant that they had to rely more and more on loans to handle commercial exchange.

As with other merchant groups, the Hansards used book money and reduced the number of cash transfers to a minimum. However, the Hansards did not employ sophisticated financial instruments like e.g. Italian merchants did. And even though they knew about the more modern financing techniques that came in use in Mediterranean trade, there was barely an attempt to copy these techniques. Within much of their internal trade, the Hansards held on to a practice called "reciprocal trade" which allowed them to avoid the transfer of real money. Interestingly enough, this informal pattern of trade was so simple and lean that sophisticated financial instruments, by which merchants can draw on credit or transfer payable debts, were not necessary either. Thus, the Hansards' use of money within long-distance trade was extremely limited, indeed, but as "reciprocal trade" was embedded in a kinship and friendship network based on trust and reputation, this practice proved for long to be efficient and viable.

It was only around 1500, when European trade changed radically, that Hanseatic "reciprocal trade" had actually become inefficient and seriously inhibited

64 Cf. Ewert and Selzer 2010; Ewert and Selzer 2016.

both the development of credit markets and economic growth in the Baltic Sea region. This is why this pattern of commercial exchange and capital raising should have been replaced by a more efficient institutional arrangement, of course. However, due to the mutual interdependence of their trading network and their practice of "reciprocal trade", the Hansards found themselves trapped in a so-called "lock-in" of their system of trade, where it was barely possible to adopt more modern techniques of finance and to significantly increase venture capital by loans. Trust and reputation were perfect means to back-up financial obligations within a relatively small group of merchants where each merchant handled relatively small exchanges only, but they were poor when commercial exchange became more complex and capital-intensive. So, taking a step further to reach an even "higher" level of economic development, where finance turned out to be the key element of business expansion, was for Hansards simply impossible.

References

Bibliographic References

Adamczyk D. 2013a. "Fernhandelsemporien, Herrschaftszentren, Regional- und Lokalmärkte: Die ökonomischen Funktionen von Silber, oder wie lässt sich der Grad der Monetarisierung in den frühmittelalterlichen Gesellschaften des Ostseeraumes 'messen'?". In *Economies, Monetisation and Society in the West Slavic Lands AD 800–1200,* edited by T. Bogucki and M. Rębkowski, 115–136. Szczecin: Wydawnictwo IAE PAN.

Adamczyk D. 2013b. "Wollin und sein Hinterland im kontinentalen und transkontinentalen Beziehungsgeflecht um das Jahr 1000". In *Geschichte, um zu verstehen. Traditionen, Wahrnehmungsmuster, Gestaltungsperspektiven. Carl-Hans Hauptmeyer zum 65. Geburtstag,* edited by H. Düselder, D. Schmiechen-Ackermann, T. Schwark, M. Stöber and C. Schröder, 299–317. Bielefeld: Verlag für Regionalgeschichte.

Adamczyk D. 2018. "How and why did Dirhams flow to Scandinavia during the Ninth Century?" *Quaestiones Medii Aevi Novae* 23: 139–151.

Adamczyk D. 2019. "The Use of Silver by the Norsemen of Truso and Wolin: The Logic of the Market or Social Prestige?" In *Social Norms in Medieval Scandinavia,* edited by J. Morawiec, A. Jochymek and G. Bartusik, 19–34. Leeds: Arc Humanities Press.

Arthur W. B. 1989. "Competing Technologies, Increasing Returns, and Lock-in by Historical Events". *The Economic Journal* 99, no. 394: 116–131.

Bell A. R., C. Brooks, and T. K. Moore 2017. "The Non-Use of Money in the Middle Ages". In *Money and its Use in Medieval Europe. Three Decades on Essays in Honour of Professor Peter Spufford* [= Royal Numismatic Society Special Publication 52], edited by M. Allen and N. J. Mayhew, 137–151. London: Royal Numismatic Society.

Cordes A. 1998. *Spätmittelalterlicher Gesellschaftshandel im Hanseraum,* Quellen und Darstellungen zur hansischen Geschichte, Neue Folge 45. Cologne: Böhlau, 1998.

Cordes A. 1999. "Einheimische und gemeinrechtliche Elemente im hansischen Gesellschaftsrecht des 15.–17. Jahrhunderts. Eine Projektskizze". In *"kopet uns werk by tyden." Beiträge zur hansischen und preußischen Geschichte. Festschrift für Walter Stark zum 75. Geburtstag,* edited by N. Jörn, D. Kattinger, and H. Wernicke, 67–71. Schwerin: Thomas Helms Verlag.

Cordes A. 2000. *Wie verdiente der Kaufmann sein Geld? Hansische Handelsgesellschaften im Spätmittelalter* [= Handel, Geld und Politik 2]. Lübeck: Schmidt-Römhild.

David P. A. 1985. "Clio and the Economics of QWERTY". *American Economic Review* 75, no. 2: 332–337.

David P. A. 1994. "Why are Institutions the 'Carriers of History'? Path Dependence and the Evolution of Conventions, Organizations and Institutions". *Structural Change and Economic Dynamics* 5, no. 2: 205–220.

Dollinger P. [4]1989. *Die Hanse.* Stuttgart: Kröner.

Edwards J. and S. C. Ogilvie 2012. "What Lessons for Economic Development Can We Draw from the Champagne Fairs?," *Explorations in Economic History* 49, no. 2: 131–148.

Ewert U. C. 2019a. "Collective Goods in the Middle Ages". In *Methods in Premodern Economic History: Case Studies from the Holy Roman Empire, c. 1300–c. 1600,* edited by U. Kypta, J. Bruch, and T. Skambraks, 64–67. London: Palgrave Macmillan.

Ewert U. C. 2019b. "Pfadabhängigkeit und 'Lock-in'—Fernhandelspraxis im Hanseraum jenseits italienischer Vertragsstandards". In *Italien als Vorbild? Ökonomische und kulturelle Verflechtungen europäischer Metropolen am Vorabend der "ersten Globalisierung" (1300–1600)* [= Forum Mittelalter—Studien 16], edited by J. Oberste and S. Ehrich, 151–166. Regensburg: Schnell & Steiner GmbH.

Ewert U. C. and S. Selzer 2007. "Netzwerkorganisation im Fernhandel des Mittelalters: Wettbewerbsvorteil oder Wachstumshemmnis?". In *Unternehmerische Netzwerke. Eine historische Organisationsform mit Zukunft?,* edited by H. Berghoff and J. Sydow, 45–70. Stuttgart: Kohlhammer.

Ewert U. C. and S. Selzer 2010. "Wirtschaftliche Stärke durch Vernetzung. Zu den Erfolgsfaktoren des hansischen Handels". In *Praktiken des Handels. Geschäfte und soziale Beziehungen europäischer Kaufleute in Mittelalter und früher Neuzeit,* edited by M. Häberlein and C. Jeggle, 39–69. Constance: UVK Verlagsgesellschaft.

Ewert U. C. and S. Selzer 2015. "Chapter 5: Social Networks," In *A Companion to the Hanseatic League* [= Brill's Companions to European History 8], edited by D. J. Harreld, 162–193. Leiden/Boston: Brill.

Ewert U. C. and S. Selzer 2016. *Institutions of Hanseatic Trade: Studies on the Political Economy of a Medieval Network Organisation.* Frankfurt/Main: Peter Lang Edition.

Ewert U. C. and M. Sunder 2012. "Trading Networks, Monopoly, and Economic Development in Medieval Northern Europe: An Agent-based Simulation of Early Hanseatic Trade". In *Raumbildung durch Netzwerke? Der Ostseeraum zwischen Wikingerzeit und Spätmittelalter aus archäologischer und geschichtswissenschaftlicher Perspektive* [= Zeitschrift für Archäologie des Mittelalters, Beiheft 23], edited by S. Kleingärtner and G. Zeilinger, 131–153. Bonn: Rudolf Habelt Verlag.

Ewert U. C. and M. Sunder 2018. "Modelling Maritime Trade Systems: Agent-based Simulation and Medieval History". *Historical Social Research* 43, no. 1: 110–143.

González de Lara Y. 2008. "The Secret of Venetian Success: A Public-order, Reputation-based Institution". *European Review of Economic History* 12, no. 3: 247–285.

Greif A. 1994. "On the Political Foundations of the Late Medieval Commercial Revolution: Genoa during the Twelfth and Thirteenth Centuries". *Journal of Economic History* 54, no. 2: 271–287.

Greif A. 2000. "The Fundamental Problem of Exchange. A Research Agenda in Historical Institutional Analysis". *European Review of Economic History* 4, no. 3: 251–284.

Greif A. 2002a. "Chapter 52: Economic History and Game Theory". In *Handbook of Game Theory with Economic Explanations, vol. 3,* edited by R. Aumann and S. Hart, 1989–2004. Amsterdam: North Holland.

Greif A. 2002b. "Institutions and Impersonal Exchange. From Communal to Individual Responsibility". *Journal of Institutional and Theoretical Economics* 158, no. 1, 168–204.

Greif A. 2006. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade.* Cambridge: Cambridge University Press.

Greif A., P. Milgrom and B. R. Weingast 1994. "Coordination, Commitment, and Enforcement: The Case of the Merchant Guild". *Journal of Political Economy* 102, no. 4: 745–776.

Guidi-Bruscoli F. 2019. "The Florentines and European 'Capitals' at the Dawn of the 'First Globalisation'". In *Italien als Vorbild? Ökonomische und kulturelle Verflechtungen europäischer Metropolen am Vorabend der "ersten Globalisierung" (1300–1600)* [= Forum Mittelalter—Studien 16], edited by J. Oberste and S. Ehrich, 137–150. Regensburg: Schnell & Steiner GmbH.

Hammel-Kiesow R. 2000. *Die Hanse.* Munich: C. H. Beck.

Hammel-Kiesow R. and S. Selzer (eds.) 2016, *Hansischer Handel im Strukturwandel vom 15. zum 16. Jahrhundert* [= Hansische Studien 25]. Trier: Porta Alba Verlag.

Huang A. and A. Sapoznik 2019. "Fremdes Geld. Auswärtige Kapitalbeziehungen des Braunschweiger Rentenmarktes im 15. und 16. Jahrhundert". *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 106, no. 1: 29–66.

Irsigler F. 1985. "Der Alltag einer hansischen Kaufmannsfamilie im Spiegel der Veckinchusen-Briefe". *Hansische Geschichtsblätter* 103: 75–99.

Irsigler F. 1989. "Der hansische Handel im Spätmittelalter". In *Die Hanse. Lebenswirklichkeit und Mythos. Eine Ausstellung im Museum für Hamburgische Geschichte in Verbindung mit der Vereins- und Westbank,* edited by J. Bracker, 518–532. Lübeck: Museum für Hamburgische Geschichte; Vereins- und Westbank.

Jahnke C. 2014. *Die Hanse.* Stuttgart: Reclam.

Jahnke C. 2019. "Lübeck: Early Economic Development and the Urban Hinterland". In *A Companion to Medieval Lübeck* [= Brill's Companions to European History 18], edited by C. Jahnke, 226–252. Leiden/Boston: Brill.

Jenks S. 1982. "War die Hanse kreditfeindlich?". *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 69, no. 3: 305–337.

Jenks S. 1996. "Hansisches Gästerecht". *Hansische Geschichtsblätter* 114 (1996), 2–60.

Jenks S. 2005. "Transaktionskostentheorie und die mittelalterliche Hanse". *Hansische Geschichtsblätter* 123: 31–42.

Jenks S. 2013. "Small is Beautiful: Why Small Hanseatic Firms Survived in the Late Middle Ages". In *The Hanse in Medieval and Early Modern Europe* [= The Northern World 60], edited by J. Wubs-Mrozewicz and S. Jenks, 191–214. Leiden/Boston: Brill.

Kleingärtner S. 2013. *Die frühe Phase der Urbanisierung an der südlichen Ostseeküste im Frühmittelalter* [= Studien zur Archäologie des Ostseeraums 13]. Neumünster: Wachholtz.

Kluge M.F. 2013. “Zwischen Metropole, Fürst und König: Die Venedische Handelsgesellschaft der Kaufleute Veckinchusen und ihr Niedergang”. *Hansische Geschichtsblätter* 131: 33–76.

Koppe G. 2018. “Hans Wynekes Revaler Handlungsbuch (1490–1497). Ein Beitrag zur Ausbildung hansischer Kaufleute”. In *Menschen—Märkte—Meere. Bausteine zur spätmittelalterlichen Wirtschafts- und Sozialgeschichte zwischen Hamburg, Lübeck und Reval* [= Contributiones 6], edited by S. Selzer, 123–179. Münster: Verlag für Wissenschaft.

Kypta U. 2015 “Die Hanse und die Krise des Spätmittelalters. Überlegungen zum Zusammenspiel von wirtschaftlichem und institutionellem Wandel”. In *Wirtschaftskrisen als Wendepunkte,* edited by D. Adamczyk and S. Lehnstaedt, 159–184. Osnabrück: fibre Verlag.

Lesnikov M.P. and W. Stark (eds.) 2013. *Die Handelsbücher des Hildebrand Veckinchusen: Kontobücher und übrige Manuale* [= Quellen und Darstellungen zur hansischen Geschichte, Neue Folge 67]. Cologne: Böhlau.

Mickwitz G. 1937. “Neues zur Funktion hansischer Handelsgesellschaften”. *Hansische Geschichtsblätter* 62: 191–201.

Mickwitz G. 1938. *Aus Revaler Handelsbüchern. Zur Technik des Ostseehandels in der ersten Hälfte des 16. Jahrhunderts,* [= Societas Scientiarum Fennica. Commentationes Humanarum Litterarum IX/5]. Helsinki: Akademische Buchhandlung.

Milgrom P.R., D.C. North, and B.R. Weingast 1990. “The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs”. *Economics and Politics* 2, no. 1: 1–23.

Mollwo C. (ed.) 1901. *Das Handlungsbuch von Hermann und Johann Wittenborg.* Leipzig: Dyk.

Nirrnheim H. (ed.) 1895. *Das Handlungsbuch des Vicko von Geldersen.* Hamburg: Voss.

North D.C. 1990. *Institutions, Institutional Change and Economic Performance.* Cambridge/New York: Cambridge University Press.

North M. 1999. “Kreditinstrumente in Westeuropa und im Hanseraum” In *“kopet uns werk by tyden”. Beiträge zur hansischen und preußischen Geschichte. Festschrift für Walter Stark zum 75. Geburtstag,* edited by N. Jörn, D. Kattinger and H. Wernicke, 43–46. Schwerin: Thomas Helms Verlag.

Ogilvie S.C. 2007. “‘Whatever Is, Is right’? Economic Institutions in Pre-industrial Europe”. *Economic History Review* 60, no. 4: 649–684.

Ogilvie S.C. and A.W. Carus 2014. “Chapter 8: Institutions and Economic Growth in Historical Perspective”. In *Handbook of Economic Growth,* vol. 2A, edited by P. Aghion and S. Durlauf, 403–513. Amsterdam: North Holland.

Orlowska A. P. 2012. "Handel in einem Kaufmannsnetz: Der Danziger Johann Pyre". In *Vertraute Ferne. Kommunikation und Mobilität im Hanseraum,* edited by J. Mähnert and S. Selzer, 32–39. Husum: Husum Druck- und Verlagsgesellschaft.

Orlowska A. P. 2020. *Johan Pyre. Ein Kaufmann und sein Handelsbuch im spätmittelalterlichen Danzig. Darstellung und Edition* [= Quellen und Darstellungen zur Hansischen Geschichte, Neue Folge 77]. Cologne: Böhlau.

Paravicini W. 1995. *Die Preussenreisen des europäischen Adels. Part 2.* [= Beihefte der Francia 17/2]. Sigmaringen: Thorbecke.

Schonewille M. 1998. *Risk, Institutions and Trade. New Approaches to Hanse History.* Nijmegen: Univ. Nijmegen.

Seggern H. von 2019. "The 'Niederstadtbuch'. A Source of History of Private Life of Lübeckers around 1500". In *A Companion to Medieval Lübeck* [= Brill's Companions to European History 18], edited by C. Jahnke, 352–371. Leiden/Boston: Brill.

Selzer S. 2010, *Die mittelalterliche Hanse.* Darmstadt: Wissenschaftliche Buchgesellschaft.

Selzer S. and Ewert U. C. 2001. "Verhandeln und Verkaufen, Vernetzen und Vertrauen. Über die Netzwerkstruktur des hansischen Handels". *Hansische Geschichtsblätter* 119: 135–161.

Selzer S. and U. C. Ewert 2005. "Die Neue Institutionenökonomik als Herausforderung an die Hanseforschung". *Hansische Geschichtsblätter* 123: 7–29.

Selzer S. and U. C. Ewert 2021. "Nord- und Ostsee, 500–1600". In *Globale Handelsräume und Handelsrouten von der Antike bis zur Gegenwart,* edited by M. A. Denzel and M. Häberlein. Berlin: De Gruyter. [forthcoming]

Skambraks T. and S. Köhler 2019. "Medieval Trade and Credit Contracts: *foenus nauticum, commenda* and *compagnia/societas*". In *Methods in Premodern Economic History: Case Studies from the Holy Roman Empire, c. 1300–c. 1600,* edited by U. Kypta, J. Bruch, and T. Skambraks, 157–159. London: Palgrave Macmillan, 2019.

Slaski W. von 1905. *Danziger Handel im 15. Jahrhundert auf Grund eines im Danziger Stadtarchiv befindlichen Handlungsbuches geschildert.* Heidelberg: Beisel.

Sprandel R. 1975. *Das mittelalterliche Zahlungssystem nach hansisch-nordischen Quellen des 13.–15. Jahrhunderts* [= Monographien zur Geschichte des Mittelalters 10]. Stuttgart: Anton Hiersemann Verlag.

Sprandel R. 1984. "Die Konkurrenzfähigkeit der Hanse im Spätmittelalter," *Hansische Geschichtsblätter* 102: 21–38.

Stark W. 1984. "Über Platz- und Kommissionshändlergewinne im Handel des 15. Jahrhunderts". In *Autonomie, Wirtschaft und Kultur der Hansestädte. Jhannes Schildhauer zum 65. Geburtstag* [= Hansische Studien 6—Abhandlungen zur Handels- und Sozialgeschichte 23], edited by K. Fritze, E. Müller-Mertens and W. Stark, 130–146. Weimar: Böhlau.

Stark W. 1985. *Untersuchungen zum Profit beim hansischen Handelskapital in der ersten Hälfte des 15. Jahrhunderts.* Weimar: H. Böhlaus Nachfolger.

Stark W. 1993. "Über Techniken und Organisationsformen des hansischen Handels im Spätmittelalter". In *Der hansische Sonderweg? Beiträge zur Sozial- und Wirtschaftsgeschichte der Hanse* [= Quellen und Darstellungen zur hansischen Geschichte, Neue Folge 39], edited by S. Jenks and M. North, 191–201. Cologne–Weimar–Vienna: Böhlau.

Stark W. 2000. "Über Handelstechniken auf dem Brügger Markt um die Wende vom 14. zum 15. Jahrhundert". In *Hansekaufleute in Brügge, Part 4. Beiträge der Internationalen Tagung in Brügge April 1996,* edited by N. Jörn, W. Paravicini and H. Wernicke, 97–107. Frankfurt/Main: Peter Lang.

Steinbach S. 2019. "What is Money?" In *Methods in Premodern Economic History: Case Studies from the Holy Roman Empire, c. 1300–c. 1600,* edited by U. Kypta, J. Bruch and T. Skambraks, 132–145. London: Palgrave Macmillan, 2019.

Stieda W. (ed.) 1921. *Hildebrand Veckinchusen. Briefwechsel eines deutschen Kaufmanns im 15. Jahrhundert.* Leipzig: S. Hirzel Verlag.

Stieda W. 1894. *Hansisch-Venetianische Handelsbeziehungen im 15. Jahrhundert. Festschrift der Landes-Universität Rostock zur zweiten Säcularfeier der Universität Halle a.S.* Rostock: Dr. v. Adlers Erben.

Stromer W. von 1976. "Der innovatorische Rückstand der hansischen Wirtschaft". In *Beiträge zur Wirtschafts- und Sozialgeschichte des Mittelalters. Festschrift für Herbert Helbig zum 65. Geburtstag,* edited by K. Schulz, 204–217. Cologne–Vienna: Böhlau.

Sydow J., G. Schreyögg, and J. Koch 2009. "Organizational Path Dependence: Opening the Black Box". *Academy of Management Review* 34, no. 4: 689–709.

Thierfelder H. 1958. *Rostock-Osloer Handelsbeziehungen im 16. Jahrhundert. Die Geschäftspapiere der Kaufleute Kron in Rostock und Bene in Oslo* [= Abhandlungen zur Handels- und Sozialgeschichte 1]. Weimar: H. Böhlaus Nachfolger.

Watts D. 1999. "Networks, Dynamics, and the Small-World Phenomenon". *American Journal of Sociology* 105, no. 2: 493–527.