

---

**German  
Historical  
Institute  
London**

---

---

**German Historical Institute London Bulletin Supplement**

**Bd. 3 (2015)**

---

Copyright



Das Digitalisat wird Ihnen von perspectivia.net, der Online-Publikationsplattform der Max Weber Stiftung – Deutsche Geisteswissenschaftliche Institute im Ausland, zur Verfügung gestellt. Bitte beachten Sie, dass das Digitalisat urheberrechtlich geschützt ist. Erlaubt ist aber das Lesen, das Ausdrucken des Textes, das Herunterladen, das Speichern der Daten auf einem eigenen Datenträger soweit die vorgenannten Handlungen ausschließlich zu privaten und nicht-kommerziellen Zwecken erfolgen. Eine darüber hinausgehende unerlaubte Verwendung, Reproduktion oder Weitergabe einzelner Inhalte oder Bilder können sowohl zivil- als auch strafrechtlich verfolgt werden.

## Networks of Lenders and Borrowers: A Rural Credit Market in the Nineteenth Century

MARTIN STARK

### I. Introduction

This essay will look at the rural credit market in the Württemberg village of Ohmenhausen as a social network of lenders and borrowers.<sup>1</sup> This relatively poor community, near the former Imperial City of Reutlingen, was chosen as an example because its development in the nineteenth and early twentieth centuries can be regarded as typical of a Swabian village that has already been well researched in several social-historical studies.<sup>2</sup> Ohmenhausen was a relatively small and poor village of farmers and artisans. It was part of the territory of the Free Imperial City of Reutlingen, and thus had various administrative, economic, and social connections with the neighbouring city. When the city was transferred to the Kingdom of Württemberg in 1803, the village became part of the newly founded District of Reutlingen. The examination of the Ohmenhausen credit market that follows takes a predominantly visual, explorative, and comparative

<sup>1</sup> Martin Stark, *Soziale Einbettung eines ländlichen Kreditmarktes im 19. Jahrhundert* (Trier, 2014), online at <<http://ubt.opus.hbz-nrw.de/volltexte/2014/839/>>, accessed 11 June 2015.

<sup>2</sup> Paul Schwarz, *Ortsgeschichte des Reutlinger Stadtbezirks Ohmenhausen* (Reutlingen, 1975); Ulrich Herrmann, Andreas Gestrich, and Susanne Mutschler, 'Kindheit, Jugendalter und Familienleben in einem schwäbischen Dorf im 19. Jahrhundert und 20. Jahrhundert (bis zum Ersten Weltkrieg)', in Peter Borscheid and Hans J. Teuteberg (eds.), *Ehe, Liebe, Tod: Zum Wandel der Familie, der Geschlechts- und Generationsbeziehungen in der Neuzeit* (Münster, 1983), 66–79; Andreas Gestrich, *Traditionelle Jugendkultur und Industrialisierung: Sozialgeschichte der Jugend in einer ländlichen Arbeitergemeinde Württembergs, 1800–1920* (Göttingen, 1986); Susanne Mutschler, *Ländliche Kindheit in Lebenserinnerungen: Familien- und Kinderleben in einem württembergischen Arbeiterbauerndorf an der Wende vom 19. zum 20. Jahrhundert* (Tübingen, 1985).

network approach.<sup>3</sup> It should demonstrate that the use of network visualization offers significant potential for historical research. This enables large quantities of statistical data to be made manageable and generates new questions in the research process.<sup>4</sup> What should be ascertained specifically is whether structural changes to the rural credit market in Ohmenhausen occurred following the reform of the lending laws in 1825/28. In order to do so the regional market in the sample years 1825 and 1850 will be compared. For 1825 there are two types of mortgage: private loans that were not centrally registered and loans that were entered into the public securities book (*Unterpfandsbuch*) of the Ohmenhausen community. Compared to the secured loans the private loans consistently reveal less information here. In the case of private loans generally only the name of the lender and borrower, the lender's place of origin and possibly the professions of the contracting parties, and the amount of the loan are recorded. In some cases there are also details of the interest rate, the value of the land used as security, and the time the loan was taken out. In the case of the officially secured loans all this information is recorded systematically. By contrast there were no clear firm legal guidelines for documenting private loans. The general level of information therefore varied according to who the lender was, whereby institutional lenders with large loans generally provided more information than private persons making smaller loans. The reason for this may be the lenders' varying degrees of professionalization. In order to conduct the examination both types of mortgage loans will be analysed despite the disparity in information, since before the reform of the lending laws in 1825/28 they were equal in the eyes of the law. The network visualizations were produced by the software programme Netdraw,<sup>5</sup> which

<sup>3</sup> Lothar Krempel, *Visualisierung komplexer Strukturen: Grundlagen der Darstellung mehrdimensionaler Netzwerke* (Frankfurt am Main, 2005).

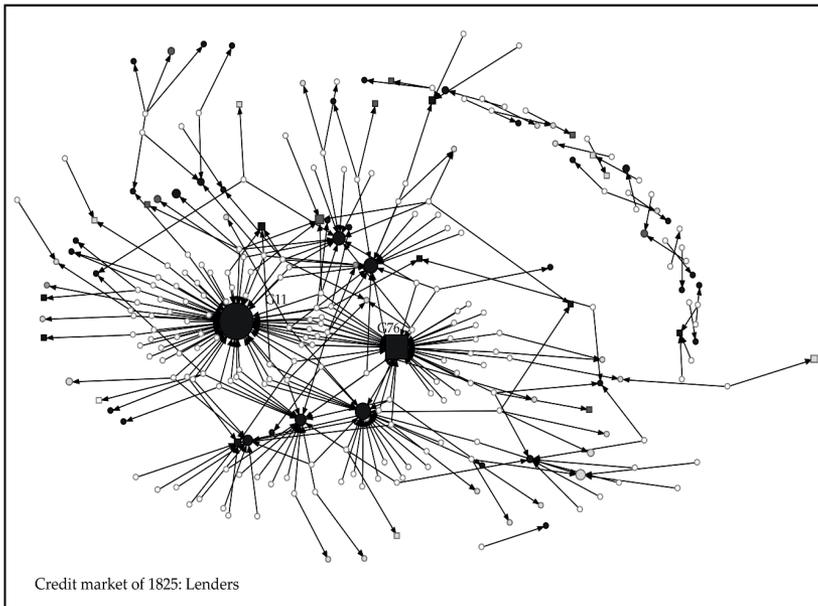
<sup>4</sup> Martin Stuber, Stefan Hächler, Lothar Krempel, and Marion Maria Ruisinger, 'Exploration von Netzwerken durch Visualisierung: Die Korrespondenznetze von Banks, Haller, Heister, Linné, Rousseau, Trew und der Oekonomischen Gesellschaft Bern', in Regina Dauser, Stefan Hächler, Michael Kempe, and Frank Mauelshagen (eds.), *Wissen im Netz: Botanik und Pflanzentransfer in europäischen Korrespondenznetzen des 18. Jahrhunderts* (Berlin, 2008), 373.

<sup>5</sup> S. P. Borgatti, M. G. Everett, and L. C. Freeman, *Ucinet for Windows: Software for Social Network Analysis* (Harvard, Mass., 2002).

## *Networks of Lenders and Borrowers*

is integrated into Ucinet; the statistical assessments were carried out with the programme SPSS.<sup>6</sup> Both these tools can be regarded as standard in their spheres of application, which is why they were chosen for this project. In the first section the lenders in the two sample years are examined, then the borrowers as actors in the rural credit market of Ohmenhausen. In conclusion the results of the examination will be drawn together.

Figure 1: Credit Market of 1825. Lenders.



### *II. Lenders*

Figure 1 shows the network of the mortgage credit market in the Ohmenhausen community for the sample year 1825. Altogether 88 lenders could be identified. These made 354 mortgage loans to

<sup>6</sup> Felix Brosius, *SPSS 16 für Dummies* (2nd updated edn. Weinheim, 2008); id., *SPSS 16* (Bonn, 2008).

Ohmenhausen, on average 4 per borrower; 236 (67.6 per cent) of these loans were registered private secured loans, 113 (32.4 per cent) were entered in the public securities book. On the other side, 184 Ohmenhausen citizens took out loans, on average 1.9 loans per borrower. The total volume of loans in the sample year was 56,928 guilders, the average size of loan around 161 guilders. The average interest rate was 5.02 per cent. This corresponded almost exactly to the usual interest rate of 5 per cent prescribed by regional law, which was only rarely undercut or exceeded.<sup>7</sup> As a bimodal network the loan market contains two classes of actors (lenders and borrowers), who are connected to one another via loans.<sup>8</sup> Aided by the inclusion of appropriate attributes this section will visualize the network from the perspective of the lender. Private persons as lenders are represented by circles, institutional lenders by squares. The size of each lender's symbol shows the lender's total volume of loans in the network in guilders. Colour coding illustrates the lender's geographical origin. Dark grey represents the village of Ohmenhausen, black the city of Reutlingen, grey the rest of the District of Reutlingen, and light grey the remainder of the Kingdom of Württemberg. In order to separate them visually from the lenders, the borrowers remain in white. At first glance a strong centre-periphery structure in the network is already clear. Just a few major lenders from Reutlingen dominate the network from the centre outwards, both as regards the number of loans made and the loan volumes. So there did not seem to be any point in adding a geographical map to the presentation of the network.

<sup>7</sup> Andreas Maisch, *Notdürftiger Unterhalt und gehörige Schranken: Lebensbedingungen und Lebensstile in württembergischen Dörfern der frühen Neuzeit* (Stuttgart, 1992), 180; Gabriele B. Clemens and Daniel Reupke, 'Kreditvergabe im 19. Jahrhundert zwischen privaten Netzwerken und institutioneller Geldleihe', in Gabriele B. Clemens (ed.), *Schuldenwert und Schuldenlast: Kreditnetzwerke in der europäischen Geschichte 1300–1900* (Trier, 2008), 230; Anne Mauch, *Ländliches Darlehenswesen in wirtschaftlichen Krisenzeiten: Eine Untersuchung am Beispiel der Beurener Unterpfansbücher und -protokolle (1846–1854)* (Tübingen, 2009), 29–33.

<sup>8</sup> Alexander Rausch, 'Bimodale Netzwerke', in Christian Stegbauer and Roger Häußling (eds.), *Handbuch Netzwerkforschung* (Wiesbaden, 2010), 421–32; Stephen P. Borgatti and Martin G. Everett, 'Network analysis of 2-mode data', *Social Networks*, 19 (1997), 243–69.

The most significant lender was Maria Elisabetha Ellwert (b. 1765), widow of the village pastor Phillip Eberhard Ellwert (G11) who died in 1816. She was the daughter of Phillip Karl Bitsche, the former pastor of the village of Wannweil, which was likewise part of Reutlingen. Her late husband came from an old and wealthy Reutlingen family. His father, Johann Gottfried Ellwert, had also been pastor of Wannweil and Ohmenhausen. After her husband's death she moved back to Reutlingen, where she died in 1830. In 1825 widow Ellwert had made 87 loans altogether, amounting in all to 12,954 guilders. She predominantly made private secured loans. It is possible that since she had lived in the place for a long time due to her husband's profession she had better knowledge of the borrowers' creditworthiness than other lenders, and therefore needed no further formal security. Given her already advanced age in this sample year it should not be assumed that she was still actively involved in making loans, but rather that she was administering what remained of her husband's former credit network.

The local power of the *Schultheiß* (head of a village) or the influence of pastor on his congregation depended, among other things, on his financial ability to make loans. Other citizens could also give loans in order to make their fellow citizens indebted to them. The sums involved here, however, were mainly small or medium-sized loans.<sup>9</sup> Other studies on credit history or micro-history explicitly point to the lack of a village king of this sort.<sup>10</sup> Even these studies, however, seem at least to have expected such a dominant person as an essential characteristic of a local rural credit market in the pre-modern period. By contrast the central structural position of the village pastor or his widow within the credit network of Ohmenhausen in this sample year is indisputable. What is also striking is that where credit was concerned there was hardly any overlapping of personnel with lenders from the other three villages that originally belonged to the Free

<sup>9</sup> Maisch, *Notdürftiger Unterhalt*, 185–6.

<sup>10</sup> See Anke Sczesny, *Zwischen Kontinuität und Wandel: Ländliches Gewerbe und ländliche Gesellschaft im Ostschwaben des 17. und 18. Jahrhunderts* (Tübingen, 2002), 313; Andreas Ineichen, 'Bäuerliche Verschuldung im Ancien Regime: Das Beispiel Ebikon (bei Luzern) um 1990', *Schweizerische Zeitschrift für Geschichte*, 4 (1992), 81; Reinhard Johler, 'Bäuerliches Kreditwesen im Alpenraum: Vorbemerkungen zu einer "economic anthropology"', *Historische Anthropologie*, 7 (1999), 151.

Imperial City. Due to the state of the sources, however, the question must remain unanswered as to whether local patrons retained geographically separate spheres of influence that were mutually respected, or whether it was simply that the Ohmenhausen citizens had no need to seek loans outside their own area because of the dominant lending activity of their village pastor.

The next biggest lender was the Reutlingen Hospital (G76). This institution made 45 loans to Ohmenhausen, amounting to 7,702 guilders. As was the case with the pastor's widow, special factors came into play in terms of the significance of the hospital for the local credit market. The Reutlingen Hospital owned considerable amounts of land locally; the hospital's proportion of all the village's agricultural land was around 85 per cent in 1750. As a consequence many Ohmenhausen citizens were tenants of the hospital. The ownership structure created by the hospital since the late Middle Ages with ten large farms, which were then split up in the course of time in line with inheritance cases and the constantly growing population, continued to characterize landownership in the village into the nineteenth century.<sup>11</sup> Here, too, it can be assumed that many and various mutual relations of dependence and information existed between the hospital and the Ohmenhausen citizens, more than can be represented by the formal model of the credit networks. After all, the city was only an hour's walk away and any creditor from Reutlingen could easily have come to Ohmenhausen in person to see his debtor's good behaviour for himself.

Table 1 shows the whole volumes of mortgage credit given according to region of origin and type of lenders in guilders for the sample year 1825. What is striking here above all is the marked significance of the city of Reutlingen, 5 km from Ohmenhausen, for giving credit. Of a total amount of 56,389 guilders given in credit, 44,758 guilders (79.42 per cent) was from Reutlingen. Within Ohmenhausen loans of 3,536 Gulden (6.26 per cent) were made. Lenders from the rest of the District of Reutlingen played hardly any role; only 328 came from them. Creditors from the rest of the Kingdom of Württemberg were responsible for loans amounting to 7,767 guilders. Of par-

<sup>11</sup> Markus Bauer, 'Ohmenhausen', in Landesarchivdirektion Baden-Württemberg/Landkreis Reutlingen (ed.), *Der Landkreis Reutlingen* (Sigmaringen, 1997), ii. 429-36.

*Networks of Lenders and Borrowers*

Table 1: Mortgage volume according to region of origin and type of Lender 1825 (in Guilders)<sup>a</sup>

Mortgages in Guilders	Lenders		
	Private Person	Institution	Total
Origin Lender			
Ohmenhausen	1,550	1,986	3,536
Reutlingen	34,806	9,952	44,758
District of Reutlingen	328	–	328
Kingdom of Württemberg	6,331	1,436	7,767
Total	43,015	13,374	56,389

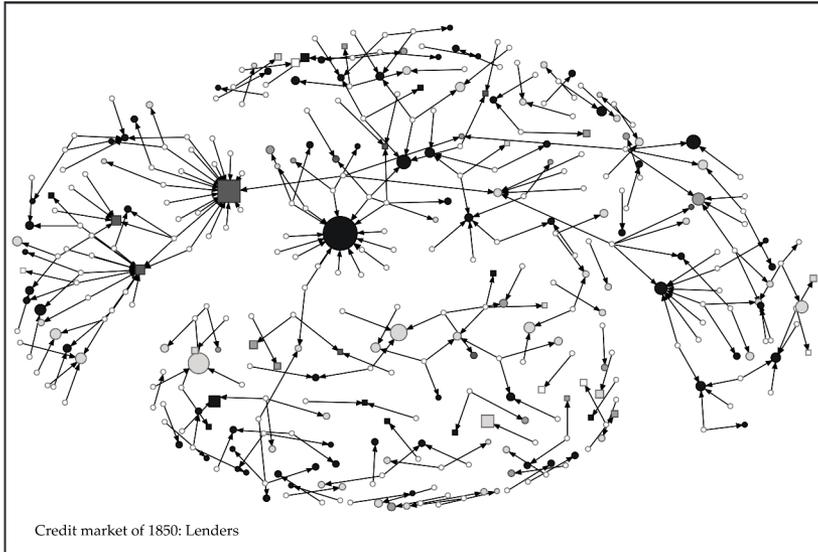
<sup>a</sup> Five unidentified cases (539 guilders).

ticular importance here was the city of Tübingen, 13 km from Reutlingen. Tübingen alone provided the village with loans amounting to 5,801 guilders (10.27 per cent). So almost 96 per cent of the total loans came from these three places in the sample year 1825. What is also interesting is the relative dominance of private persons as creditors as opposed to institutions. It was only within Ohmenhausen that loans from institutions prevailed over those from private persons. It appears that in a poor village like Ohmenhausen it was only the local institutions that could accumulate sufficient funds to function as creditors to any significant degree. As historical credit research has already established, it was precisely this regional restriction of lending and the dominance of lenders from the neighbouring towns that constituted the dominant structural characteristics of the rural credit market in the pre-modern period.<sup>12</sup>

Figure 2 presents the mortgage credit market network of the Ohmenhausen community for the sample year 1850. The same graphical

<sup>12</sup> See Sczesny, *Zwischen Kontinuität und Wandel*, 326–7; Mauch, *Ländliches Darlehenswesen*, 86–8.

Figure 2: Credit Market of 1850. Lenders.



notations are used here as for 1825. For 1850, 166 lenders could be identified. They made a total of 325 mortgage loans, on average almost 2 loans per lender. Compared to the average of almost 4 loans per lender in 1825, this was clearly fewer and points to the fact that the market power of just a few dominant lenders was declining. Even if we ignore the two major lenders in 1825, pastor Ellwert's widow and the Reutlingen Hospital, the average was still 2.6 loans per lender, so the decline in the average number of loans is clear. Conversely, the 201 borrowers identified in Ohmenhausen for this year took out an average of 1.6 loans, which is not substantially fewer than the 1.9 average for the first sample year. In the second sample year the total volume of the Ohmenhausen credit market was 98,634 guilders. Compared to 56,298 guilders in the first sample year this represents what can only be called a dramatic increase. The average size of loan in 1850 was 331 guilders, more than double the 161 guilders in 1825. It appears that the greater legal security brought about by the change to the lending laws made it worthwhile for lenders to make fewer loans, but of larger amounts. It was only the average interest rate that did not appear to change very much: it was

*Networks of Lenders and Borrowers*

4.85 per cent and thus continued to be around the 5 per cent generally regarded as normal. The main difference in the network structure compared to 1825 was that prominent major lenders similar to pastor Ellwert's widow or the Reutlingen Hospital, who had previously connected up the credit market network, no longer existed. They were replaced by numerous smaller and medium-sized lenders. The

Table 2: Mortgage Volume According to Region of Origin and Type of Lender, 1850 (in guilders)<sup>a</sup>

Mortgages in Guilders	Lenders		
	Private Person	Institution	Total
Origin Lenders			
Ohmenhausen	800	7,171	7,971
Reutlingen	38,187	3,185	41,372
District of Reutlingen	6,190	2,025	8,215
Kingdom of Württemberg	33,602	3,925	37,527
Total	78,779	16,306	95,085

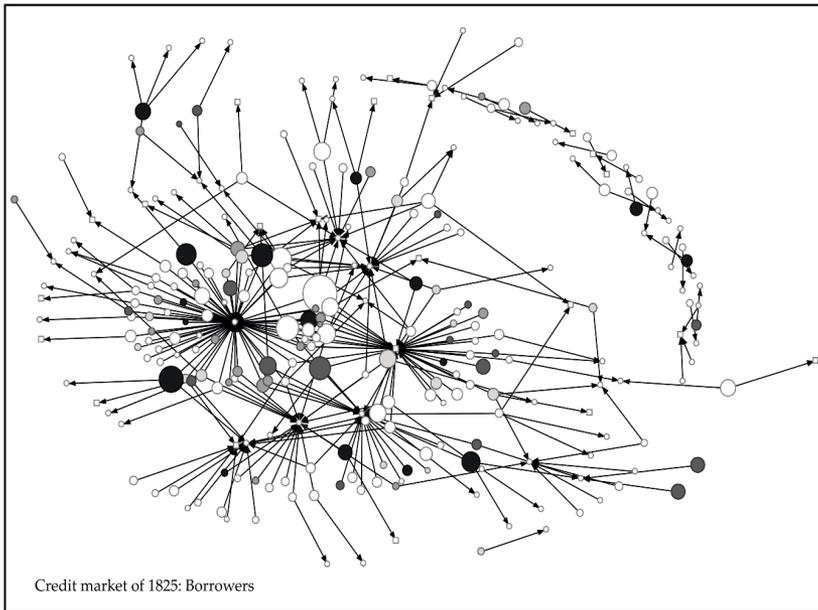
<sup>a</sup> Seven unidentified cases (1,769 guilders).

credit market network gives the impression of being far more balanced, with far less empowerment. There are only very few major lenders with high volumes of loans. The disintegration of the key centre-periphery structure and the general trend towards greater equality on the part of the lenders in the capital market network meant that in 1850 institutional lenders from Ohmenhausen assumed a far more prominent role than in 1825.

Table 2 shows the volume of mortgage credit given according to region of origin and type of lender for the sample year 1850. The total for this year was 95,085 Guilders. Of this, 41,372 guilders (43.51 per cent) is attributable to lenders from the town of Reutlingen; in 1825 this had been 44,798 guilders (79.42 per cent). So in absolute terms the

city's (administrative town's) credit volume had not decreased very much. But since the overall market volume had increased rapidly, the significance of Reutlingen as a source of money had declined in relative terms. It almost seems as if, having compensated for the disappearance of pastor Ellwert's widow and the Reutlingen Hospital, the means available to the former Imperial City for servicing Ohmenhausen's credit needs had been exhausted. Lenders from other places now had to step into the breach. Lenders from the Reutlingen region gave mortgages to the value of 8,215 guilders to the village, whereas in the first sample year it was only 328 guilders. So it seems to be particularly plausible here that the shifting pattern in loans made from the rest of the Reutlingen district is directly related to the lack of a dominant local lender such as Pastor Ellwert or his widow. As a result either potential lenders who had previously been excluded pushed their way into the local credit market, or else, due to the general socio-economic misery, including failed harvests between 1846 and 1848, villagers in need of loans had to look for new lenders because their traditional sources of credit had dried up. The dramatic increase in loans from the rest of the Kingdom of Württemberg can also be seen in this context: if a mere 7,767 guilders were lent to Ohmenhausen in 1825, this figure had already risen to 37,527 Guilders by 1850. The importance of Tübingen as a source of loans also increased considerably; loans amounting to 19,653 guilders (20.28 per cent) came from there. In the first sample year the amount had been 5,801 guilders (10.2 per cent). From nearby Eningen came loans of 4,200 guilders, and even 7,715 (8.11 per cent) from far-off Stuttgart. The relative dominance of private persons as lenders over institutions increased even more compared to 1825: private persons from Reutlingen gave loans of 38,187 guilders, institutions of only 3,185 guilders. In the first sample year this relationship had been 34,806 guilders to 9,952 guilders. In the District of Reutlingen the relationship was 6,190 guilders to 2,025 guilders. Private persons from the rest of the Kingdom of Württemberg made loans to Ohmenhausen of 33,602 guilders, but institutions only 3,925 guilders; in 1825 it had been 6,331 guilders to 1,436 guilders. It was only inside Ohmenhausen that institutional lenders not only continued to dominate, from 800 to 7,171 guilders compared to 1,550 to 1,986 guilders in the first sample year, but were actually able to extend their position even further. But this was hardly surprising in a poor farming village

Figure 3: Credit Market of 1825. Borrowers.



whose inhabitants had hardly any cash to lend and which had been in a quasi-permanent economic crisis for more than 30 years.

### III. *Borrowers*

Figure 3 shows the mortgage credit market network of the Ohmenhausen community for the first sample year 1825 from the perspective of the borrowers. A total of 184 borrowers could be identified. The circles represent the borrowers. Using the tax records of the Ohmenhausen community for the years 1825/26 the borrowers were divided into four classes.<sup>13</sup> Of the 184 borrowers from Ohmenhausen 78 (42.39 per cent) could be identified in the tax list. Those borrowers put into the first class were those who paid 11 guilders or more in

<sup>13</sup> Gestrich, *Traditionelle Jugendkultur*, 183–9.

land tax. This corresponded to owning land of at least six hectares or an entire farm. These borrowers were able to live from agriculture alone and thus constituted the economic elite in Ohmenhausen, which tended to be poor. Those put into the second class were borrowers who paid land tax of 5.5 guilders or more. This tax class owned at least three hectares of land and were also largely involved in agriculture. The third tax class paid two and a half or more guilders in land tax. They owned between one and three hectares of land. These borrowers were generally better-off artisans. Here agriculture represented more of a sideline or subsistence economy. The fourth and final tax class contained borrowers who paid up to two and a half guilders in tax. This was less than the taxable value of a hectare of normal land. So these borrowers, poor artisans or day-labourers, were largely dependent on acquisition labour. The colour coding shows which of the four tax classes the borrowers were in. Black is for the first class, dark grey for the second, grey for the third and light grey for the fourth. White colouring indicates that the borrower could not be clearly identified on the tax list. The lenders are also all in white. The size of the borrower's symbol represents the sum total of their debt in guilders, with several loans added together where appropriate. Based on the data a clear visual correlation emerges between the amount paid in ground tax and the average amount of debt; those who owned more land could take out higher loans, and did so. Visually the loans taken out by Ohmenhausen borrowers in the highest tax class (dark green) stand out. Almost all of them borrowed larger amounts, though they took loans from various lenders, even from several major lenders at the same time. If we accept the thesis that the lenders were attempting to create a network of clients, then the behaviour of the borrowers in the highest tax class looks like an attempt to avoid financial dependence on one single patron, and to some extent to play off the major Reutlingen lenders against one another.<sup>14</sup> Fifteen borrowers from the highest tax class could be identified from the tax list. That is 19.23 per cent of all identified borrowers. The average amount they borrowed was c.654 guilders per person, clearly more than the general average of 310 guilders. Some 2.67 loans per person were taken out. However, since these persons clearly owned more land, their mortgage potential was

<sup>14</sup> Sczesny, *Zwischen Kontinuität und Wandel*, 326–7.

*Networks of Lenders and Borrowers*

obviously greater than that of those in other tax classes. The 23 borrowers in the second-highest tax class, again largely involved in agriculture, had average debts of 287 guilders. This is considerably less than in the first tax class and is somewhat surprising since there is not much difference between the average size of the mortgages in the two tax classes. The reason, however, is that with 1.35 loans they only took out half as many as the borrowers in the first tax class. On the other hand the 17 (21.8 per cent) borrowers in the third tax class, predominantly artisans who did not own much land, generally took on larger debts, around 330 guilders, and clearly took out more loans, 2.3 per person. It could be that because they largely lived from trade and had far less of their own agricultural activities than those in the first two classes they suffered more in times of economic crisis and therefore had to take on greater debts. Again, the 23 borrowers from the lowest tax class generally took out fewer loans, around 1.8 per person. Their average amount of debt was about 185 guilders per person, but because they only owned a minimal amount of land their mortgage potential was also very small.

Table 3 shows the distribution of mortgage loans in the sample year 1825 classed according to the amount of land tax paid by the

Table 3: Distribution of Mortgage Loans Classed According to Paid Land Taxes by Borrowers, 1825.<sup>a</sup>

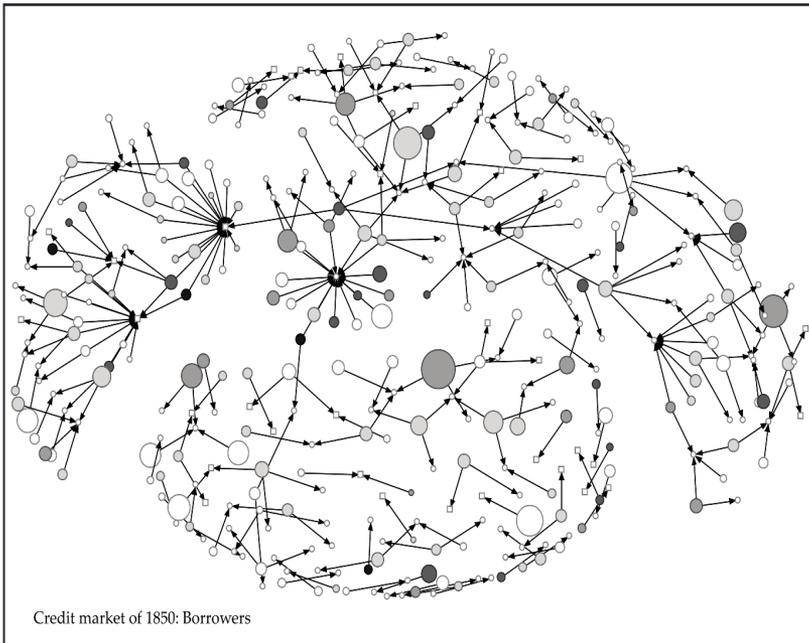
Classed land taxes	Number of mortgages		Amount of land taxes	Loan amount	
	absolute	in %	in %	absolute	in %
1	40	26.5	52.7	9,186	36.4
2	31	20.5	26.3	6,597	26.2
3	39	25.8	15.7	5,168	20.5
4	41	27.2	5.3	4,257	16.9
Total	151	100.0	100.0	25,208	100.0

<sup>a</sup> Not identified: 202 mortgages (31,272 guilders), 49.16 per cent of land taxes.

borrowers. An additional source of data here was the Ohmenhausen community's tax receipt book for 1825/26. Loans that could not be clearly allocated were marked accordingly in the table. Even though only some of the mortgages could be allocated there is no reason to assume that this caused any systematic distortion of the data. The distribution presented in the table should therefore be regarded as capable of sensible interpretation. All this shows are the general difficulties that can arise when systematically linking up different serial sources available in their entirety. In the case of the private secured loans in particular all that is recorded is the name of the borrower. This is generally not sufficient without additional information such as occupation or wife's name to identify each borrower on the tax list. Successful linkage of data that is in itself complete, in this case allocating the loans to the various land tax classes, therefore remains incomplete. However, we should still work with this data because it is by linking different sources that new information can often be generated. In the highest tax class 49 loans (26.5 per cent) were taken out, amounting to 9,186 guilders in all (36.4 per cent). So the average amount of debt in this class was around 230 guilders. In the second tax class 31 loans (20.5 per cent) loans were taken out, amounting to 6,597 guilders, an average of 213 guilders per loan. The third tax group took out 39 loans (25.8 per cent), amounting to 5,168 guilders in all. The average loan was around 133 guilders. In the fourth and last tax class 41 loans (27.2 per cent) were taken out, amounting to 4,257 guilders in all; the average loan was around 104 guilders. Thus a picture emerges of a social cascade as regards the indebtedness of the Ohmenhausen citizens; although the difference in size of loans between the 'major land owners' of little Ohmenhausen in the first tax class and those in the second class, likewise involved in agriculture, was not very big: 230 to 213 guilders.

Figure 4 shows the mortgage credit market network of the Ohmenhausen Municipality for the sample year 1850 from the perspective of the borrowers. Here, too, the same graphic notations are used as for 1825. For the second sample year 145 of the 201 Ohmenhausen borrowers (72.14 per cent) could be identified on the tax list. For 1825 the percentage was 42.39. So the quality of the data has clearly improved compared to the first sample year. Figure 4 makes it immediately apparent that the relatively clear correlation between size of debt and amount of land tax paid has disintegrated. It was the indebtedness of

Figure 4: Credit Market of 1850. Borrowers.



persons in the third and fourth tax classes that increased rapidly. Only two persons (some 1.4 per cent of all identified borrowers) were now in the highest tax class. In the first sample year there were 15. These two persons both had debts of 700 guilders. Although this was well above the general average of 419 guilders, compared to the indebtedness of borrowers in this tax class in 1825, 654 guilders, this was not a very great increase. Likewise the average number of loans, 2.5 per borrower, remained constant compared to 1825. The 17 borrowers (11.74 per cent) in the second-highest tax class—compared to 23 in the first sample year—had average debts of 534 guilders. Thus the level of debt in this tax class had clearly increased compared to 287 guilders in 1825. Although the number of loans rose, 1.824 compared to the original 1.35 per borrower, it still remained below the number of loans in the first tax class. The 26 borrowers (17.93 per cent) in the third tax class, largely artisans who did not own much land—in 1825 there were only 17 of them—generally had debts of

about 616 guilders compared to 330 guilders in 1825, clearly a drastic increase, while the percentage increase in debt in the second and third tax classes remained almost the same (86.1 per cent to 86.54 per cent). With 1.46 loans per person they took out fewer loans, but for much higher amounts. For 1850, 100 borrowers (69 per cent) could be allocated to the lowest tax class. Compared to the 23 borrowers in this class in 1825 this is a massive increase. Borrowers in this tax class took out 1.33 loans per person compared to 1.8 in 1825, but the size of these loans was much greater. Members of this tax class borrowed an average of 354 guilders per person. Compared to 185 guilders per person in 1825 this was an extreme increase of 91.26 per cent.

Table 4: Distribution of Mortgage Loans Classed According to Paid Land Taxes by Borrowers, 1850.<sup>a</sup>

Classed land taxes	Number of mortgages		Amount of land taxes	Loan amount	
	absolute	in %	in %	absolute	in %
1	5	2.4	15.1	1,400	2.3
2	31	15.0	40.6	9,075	14.7
3	38	18.4	20.1	16,028	25.9
4	133	64.3	24.2	35,396	57.2
Total	207	100.0	100.0	61,899	100.0

<sup>a</sup> Not identified: 110 mortgages (34,955 guilders), 44.95 per cent of land taxes.

Table 4 shows the distribution of mortgage loans for 1850 classed according to the amount of land tax paid by the borrower. An additional source of data here was the tax receipt book of the Ohmenhausen Municipality for 1850/51. In the highest tax class there were now only five loans (2.4 per cent), amounting to 1,400 guilders (2.3 per cent). In the first sample year borrowers in this first tax class took

out 40 loans amounting to 9,186 guilders. The average size of loan taken out by borrowers in this tax class was 280 guilders, clearly below the general average size of loan, around 331 guilders. In 1825 the average size of loan in this tax class was 230 guilders, still much more than the general average at that time, 161 guilders. In the second sample year 41 loans (15 per cent) were taken out in the second tax class, amounting to 9,075 guilders, on average 293 guilders per loan. So the number of loans was just as high as in the first sample year, but the total volume, compared to 6,597 in 1825, increased considerably. Thus compared to 213 guilders in 1825 the average size of loan in this year was much higher. In 1850 the third tax class took out 38 loans (18.4 per cent), compared to 39 loans in 1825. The volume of loans, 16,028 guilders (25.9 per cent), rose more than threefold compared to 5,168 guilders in the first sample year. The average size of loan was around 422 guilders; in 1825 it was 133 guilders. In the fourth and lowest tax class 133 loans (63.4 per cent) were taken out, amounting to 35,396 guilders, with an average loan of 266 guilders. In the first sample year there were 41 loans amounting to 4,257 guilders in the lowest tax class, an average of 104 guilders per loan. So compared to the first sample year there was a shift in the number of loans per tax class. Here too there was a dramatic increase in indebtedness compared to the first sample year. A strong imbalance emerges in the distribution of loans. In the highest tax class there were now only 5 loans, but in the lowest there were 133. So a relatively equal distribution of loans no longer exists. Borrowers from the second and third tax classes did not take out a particularly larger number of loans; it remained much the same as in 1825. But at the same time the average size of loans taken out in the third tax class increased massively. Conversely the average size of loan in the first and second tax groups hardly changed, 280 to 293 guilders. So it was mainly members of the third and fourth tax classes who had to take out loans. This caused the increase in the volume of loans in this sample year, thus reversing, to some extent, the loans cascade. This development towards increased indebtedness, however, was certainly facilitated by the fact that borrowers' ability to take out more and higher loans was considerably improved by the reform of the lending laws of 1825/28. The average security for loans in the form of land ownership was reduced from three times the value to twice the value between the two sample years and this gave borrowers greater

scope for taking out further loans.<sup>15</sup> In addition, the abolition of the so-called *Kriegsvogt* (the legal guardian of a wife and her fortune whose job was to prevent its embezzlement by the husband), in the 1820s meant that borrowers could more easily use the land brought to the marriage by their wives as security for loans.<sup>16</sup> So what was the borrowed money used for?

Due to the state of the sources little can be said directly about the motives for taking out loans. In the securities books nothing is usually said about what the loans were to be used for.<sup>17</sup> However, based on the size of the individual loans it can be assumed that this was not a question of consumer credit to cover daily needs. These were always smaller sums, as can be seen by going through the inventories of the Ohmenhausen Municipality, which were used to supplement the current study. Thus in the crisis year of 1848 farmer Johann Georg Kemmler owed his son-in-law 1.5 guilders for salt. In the same year the day-labourer Johannes Weber owed *Schultheiß* Walz 3 guilders for fruit. Slightly higher sums, but still far below the mortgage loans, were taken out as business credit. In 1845 coach-maker Jacob Walz owed merchant Kümmerlin from Reutlingen 10 guilders for iron or the master cobbler Georg Renz almost 6 guilders for wood. So the assumption is that, along with the re-financing of possible older debts, these were primarily investment loans. In her study on Langenauhnach, Anke Sczesny demonstrates that there almost three-quarters of debt was attributable to acquiring and maintaining possessions and to loan rescheduling.<sup>18</sup> In this study the concept of investment includes maintaining or extending house and grounds, as well as acquiring land useful for agriculture such as pastures and the cattle to go with them. Acquiring and working land could have been a strategy for the poorer artisans and day-labourers in the third and fourth tax classes to secure their own subsistence in times of economic crises after the failed harvests of 1815–16 and 1846–8. These attempts at investments, driven by the crisis, substantially increased

<sup>15</sup> Karl Georg von Wächter, *Geschichte, Quellen und Literatur des Württembergischen Privatrechts* (Frankfurt am Main, 1985; reprint of Stuttgart 1842 edn.), ii, 988.

<sup>16</sup> David Sabeau, 'Allianzen und Listen: Die Geschlechtvormundschaft im 18. und 19. Jahrhundert', in Ute Gerhard (ed.), *Frauen in der Geschichte des Rechts von der Frühen Neuzeit bis zur Gegenwart* (Munich, 1997), 460–79.

<sup>17</sup> Mauch, *Ländliches Darlehenswesen*, 39.

<sup>18</sup> Sczesny, *Zwischen Kontinuität und Wandel*, 316–20.

indebtedness of the less well-off villagers in the lower tax classes when comparing the two sample years. Another possible interpretation of the growing indebtedness of the less well-off citizens of Ohmenhausen could be connected to the wave of emigration after the failed harvests of 1846–8 and the economic crises connected with them. It is possible that family members of the emigrants, largely belonging to the poorer classes, acquired their property so that it could be kept in the family. But they could only do this by taking out more loans. There can, however, be no definitive answer to this because the question cannot be satisfactorily answered by means of the sources employed for this research project.

#### *IV. Conclusion*

In conclusion, the essential developments should be summed up once again. Taken as a whole the comparison of credit volumes between the two sample years reveals clear tendencies towards geographical differentiation as regards the origin of the lenders and, connected with this, the disempowerment of rural lending. While almost 96 per cent of loans were made by lenders from Ohmenhausen, Reutlingen, and Tübingen in 1825, by 1850 this had fallen to around 72.6 per cent. If loans from Tübingen had not increased sharply in the second sample year the relative decline of these three places would have been even more marked. At the same time another trend was the decreased significance of institutional lenders; more private individuals were clearly willing and able to provide capital and to become active lenders on the rural credit market. After the reform of the lending laws of 1825/28 there was a certain geographical expansion in terms of lenders' origin. It was institutional lenders here that lost significance compared to private lenders. In essence, however, the standard geographical model whereby lending was restricted to a radius of about 20 km remained intact. The relative geographical expansion of rural lending went hand in hand with a dramatic increase in the total volume of credit, though the total number of loans decreased slightly. Comparing the two sample years the number of lenders almost doubled, and the average size of loan more than doubled. More lenders made on average fewer loans per person, but each loan was for a higher sum. It seems plausible here to see a con-

nection with the improved legal transparency brought about by the reform of the lending laws and the greater degree of protection for lenders this entailed. For potential lenders making loans became more worthwhile because the inconvenience of checking out borrowers, sometimes living some distance away, was reduced by the improved legal security. So lenders from further away and from other administrative districts now came forward offering loans on the Ohmenhausen credit market. Comparing the two sample years a huge expansion of indebtedness amongst Ohmenhausen households becomes clear as a result. Above all the poorer artisans and day-labourers living in Ohmenhausen took out more loans and for obviously higher amounts. Most of the loans taken out by Ohmenhausen borrowers were probably investment loans for the acquisition of land. In the crisis years buying land was possibly an emergency strategy, particularly amongst these poorer groups, for securing their subsistence. Or it was a question of keeping in the family land belonging to relatives who were emigrating because of the economic crisis, though this was only possible if the family members who stayed behind took on more debts. This is precisely what the reform of the lending laws facilitated in both cases.