

Household Debt in Seventeenth-Century Württemberg:
Evidence from Personal Inventories

Sheilagh Ogilvie, Markus Küpker and Janine Maegraith

July 2011

CWPE 1148

Household Debt in Seventeenth-Century Württemberg: Evidence from Personal Inventories

Sheilagh Ogilvie, Markus Küpker, and Janine Maegraith

Faculty of Economics, University of Cambridge

Acknowledgements: We are grateful to John Broad, D'Maris Coffman, Roland Deigendesch, Tracy Dennison, Jeremy Edwards, Sara Horrell, Jim Livesey, Anne Mauch, Craig Muldrew, Michelle O'Malley, Jean-Laurent Rosenthal, Tom Safley, Kenneth Sneath, James Thomson, Allan Tulchin, Martin Uebele, Frank Westermann, three anonymous referees, and participants at seminars at the University of Cambridge and the University of Sussex, for stimulating comments on earlier versions of this paper. We also gratefully acknowledge the generous financial support of an ESRC Large Research Grant (RES-062-23-0759).

Abstract

The “less-developed” interior of early modern Europe, especially the rural economy, is often regarded as financially comatose. This paper investigates this view using a rich dataset of marriage and death inventories for seventeenth-century Germany. It first analyzes how borrowing varied with gender, age, marital status, occupation, life-cycle juncture, date, and asset portfolios. It then explores the characteristics of debts, examining borrowing purposes, familial links, intracommunal ties, and documentary instruments. It finds that ordinary people, even in a “less-developed” economy in rural central Europe, sought to invest profitably, smooth consumption, bridge low liquidity, and hold savings in financial form.

JEL Classifications: N23, G11, O12, D14

1. Introduction

Early modern rural financial activity, long emphasized for the Low Countries, England and France, remains largely unexplored for German-speaking central Europe.¹

Traditional German historiography often portrays borrowing as being precluded by non-capitalist mentalities among peasants before the nineteenth century.² Many scholars accept Chayanov's view that in peasant societies "capital" and "interest" are not comprehensible concepts and "cannot even be defined quantitatively".³ Other studies view rural borrowing as a profoundly negative economic indicator, signalling pauperization,⁴ social polarization,⁵ and "forced commercialization".⁶ According to this view, borrowing only arose when the rural poor, struggling to make ends meet, were forced to pledge (and often lose) their landholdings to predatory lenders, especially Jews.⁷ Pre-industrial German elites had adopted a similar stance, arguing that rural people should be prevented from borrowing, be required to obtain permission before doing so, be forbidden to pay high interest rates, or be prohibited from using sophisticated financial instruments, in the interests of protecting them from their own irrationality and ensuring they would owe money only to landlords (for rents) and rulers (for taxes) and not to creditors (for their own borrowing).⁸ German financial history

¹ As emphasized in Wunder (1987), 24; Pfister (2007), 490; Häberlein (2007), 37-8.

² See Sczesny (2002), 325.

³ Chayanov (1986), 5; Brunner (1986), 107; Kriedte/Medick/Schlumbohm (1981), 53; Figs (1989), 12; Pallot (1999), 14-16.

⁴ See Boelcke (1964), 324-35; Blömer (1990), 2-43; Boelcke (1991), 195, 198, 200, 202, 207-11; Blessing (1997), 879.

⁵ Sabeian (1990), 19-20, 47-8, 194; Sabeian (1998), 298.

⁶ Kriedte/Medick/Schlumbohm (1981), 47-50, 102-07.

⁷ For a discussion of these issues, see Gilomen (1998), 112-13; Guinnane (2001), 374; Binnenkade (2007), 154, 166-7; Fertig (2008), 161-2; Clemens/Reupke (2008), 237.

⁸ Boelcke (1964), 324-35; Wunder (1987), 42; Blömer (1990), 2-43; Boelcke (1991), 195, 198, 200, 202, 207-11; Blessing (1997), 879; Gilomen (1998), 99-101, 112-13, 128-31; Binnenkade (2007), 154; Laufer (2007), 115-16; Schofield/Lambrecht (2009), 8.

long concentrated primarily on merchants, cities, and banks,⁹ and although rural borrowing is recently attracting more attention, most research still focuses on the nineteenth century.¹⁰

This paper will argue that analysing rural credit is central to understanding economic performance in the “less developed” interior of central Europe in a period – the seventeenth century – in which the economies of the north Atlantic seaboard were undergoing rapid growth and development. As the modern micro-credit literature emphasizes, borrowing enables people to improve payment services, smooth consumption over time, finance profitable investments that they cannot fund from their current resources, and diversify risks.¹¹ Rural credit markets are particularly important for enhancing human well-being and productive capacity in a developing economy because they serve its largest sector and its poorest social groups.¹² Our lack of knowledge about rural credit outside the early modern success-stories – England, France, Flanders, Holland – may therefore hamper our understanding of pre-industrial economic development across the European continent more widely.

We seek to fill this gap by reconstructing the whole world of borrowing for ordinary people in a rural region of seventeenth-century Germany, using a rich dataset of marriage and death inventories which we have linked with other documentary sources on the same population. We first focus on economic agents – not just debtors but also those who did not borrow at all. We explore how borrowing (or its absence) varied with personal characteristics such as gender, age, and marital status, with economic characteristics such as occupation and wealth, and with the composition of

⁹ As remarked in Gilomen (1998), 101-03; Häberlein (2007), 37-8, 46; Laufer (2007), 99; Fertig (2008), 162; Clemens/Reupke (2008), 211; Fertig (2009), 169.

¹⁰ For an outstanding exception, see Sczesny (2002), 295-327. On the nineteenth century there are excellent studies by, among others, Guinnane (2001); Laufer (2007); Fertig (2008); Fertig (2009); Clemens/Reupke (2008); and Mauch (2009).

¹¹ World Bank (1989).

¹² Basu (1997), 267-80; Ray (1998), 529-84.

asset portfolios. We investigate the life-cycle of borrowing for these early modern people, and consider the reasons for the age-profile of borrowing we discover. We examine whether “over-indebtedness” was a widespread problem, how private borrowing responded to periods of warfare and crisis, and whether structural changes such as proto-industrialization were associated with “debt peonage”. We then turn our attention to the debts themselves, examining the heterogeneous sources of credit available in this rural economy and asking whether people borrowed for consumption or production purposes, whether agriculture or industry benefited more, whether borrowing extended beyond the immediate family and community, whether impersonality increased over time, and how debts were intermediated and documented. We conclude by drawing the implications of this micro-level exploration of rural borrowing in central Europe for open questions about pre-industrial European economic development.

2. The Micro-Study

Early modern credit markets can be analysed using a whole array of sources – court records,¹³ notarial registers,¹⁴ pledge-books,¹⁵ mortgage-books,¹⁶ aldermen’s registers,¹⁷ contract-registers,¹⁸ land registers,¹⁹ farm account-books,²⁰ tax lists,²¹ annuity registers,²² and bank records²³ – each of which sheds light on a different subset of debt.

¹³ Muldrew (1998); Binnenkade (2007); Laufer (2007); Schuster (2008), 39-41.

¹⁴ Hoffman/Postel-Vinay/Rosenthal (2000); Potter/Rosenthal (2002); Hoffman/Postel-Vinay/Rosenthal (2004); Clemens/Reupke (2008).

¹⁵ Lorenzen-Schmidt (2006), 9; Mauch (2009).

¹⁶ Lorenzen-Schmidt (2006), 9; Laufer (2007); Fertig (2009).

¹⁷ Limberger (2009), 64-5; Thoen/Soens (2009), 21-2.

¹⁸ Winnige (2004), 74-5; Laufer (2007); Schuster (2008), 42-3.

¹⁹ Laufer (2007); Bracht/Fertig (2008).

²⁰ Lorenzen-Schmidt (2006), 10-12.

²¹ Ineichen (1992), 70; Sczesny (2002), 298-305.

²² Lambrecht (2009).

But to assess the overall importance of borrowing for individuals and households, we ideally need a source recording the entire range of types of borrowing in which they engaged. This paper uses such a source: detailed personal inventories drawn up at marriage, remarriage, widowhood, and death in a German rural community during the seventeenth century.

2.1. Early Modern Wildberg

The community of Wildberg lies in the forested valley of the Nagold River in the southwest German territory of Württemberg. Although legally a town, Wildberg was a small, rural settlement whose inhabitants relied on farming alongside manufacturing and services.²⁴ Table 1 shows the development of the total population, number of taxpayers, and land-owning population in Wildberg from the sixteenth through to the nineteenth century. With fewer than 1,000 inhabitants in 1600, the population of the locality expanded to around 1,650 up to the Imperial invasion of 1634. From then to the end of the Thirty Years War in 1648, its population hovered around 1,000 inhabitants, and although it gradually recovered to about 1,400 inhabitants by the mid-1670s, renewed war with France in the 1680s and 1690s reduced its size to some 1,200 inhabitants in 1700.²⁵

The rapid expansion of proto-industrial worsted production after about 1580 saw weaving become a livelihood source for about 40 percent of Wildberg households by the mid-seventeenth century and spinning a mainstay of its female inhabitants.²⁶ In a parallel development, as Table 1 shows, the percentage of Wildberg taxpayers owning

²³ Bracht/Fertig (2008).

²⁴ Ogilvie (1997); Ogilvie (2003); Mantel (1974).

²⁵ Ogilvie/Küpker/Maegraith (2009a), 8-10 (Tables 1-2).

²⁶ Ogilvie (1997), chapters 6, 8.

land (other than cottage gardens) declined from around 70 percent in 1565 to around 50 percent in 1614 and 1629, but the proportion then recovered to around 60 percent for the rest of the century. Wildberg thus remained a small, agricultural community throughout this period, although most households combined small-scale farming with other occupations.²⁷

Most secondary- and tertiary-sector occupations in Württemberg, including the weaving, dyeing and exporting of proto-industrial worsteds, were controlled by “regional” (rural-urban) guilds, which until the nineteenth century maintained entry barriers, fixed wages and prices, and excluded women, migrants, Jews, labourers, and many others.²⁸ The courts, councils, assemblies and officials of Württemberg’s powerful local communities closely monitored and administered settlement, marriage, migration, inheritance, consumption, prices, wages, land transactions – and financial dealings. The Württemberg state also regulated factor and product markets in symbiosis with the local communities and the occupational corporations.²⁹

2.2. Württemberg Inventories

Württemberg had a partible inheritance system in which spouses retained rights over property brought into marriage, and daughters inherited equally with sons. To facilitate administration of this system, from 1551 onwards the Württemberg state mandated death inventories – “contingent inheritance inventories” (Eventualteilungen), drawn up for a couple when one spouse died, at which inheritance shares were recorded but not actually allocated among heirs; and “actual inheritance inventories” (Realteilungen), drawn up for widowed (and a few never-married) persons, at which inheritance shares

²⁷ Ogilvie (1997), ch. 2; Ogilvie (2003), ch. 2; Ogilvie/Küpker/Maegraith (2009a).

²⁸ Ogilvie (1997), ch. 3; Ogilvie (2004).

²⁹ Sabeian (1990); Maisch (1992); Medick (1996); Ogilvie (1997); Ogilvie (1999); Ogilvie (2003).

were actually distributed. From 1610 onwards the state also mandated inventories at marriage and remarriage (Beibringungsinventare). Inventories were sometimes also “decreed” to address special circumstances such as marital conflict, desertion, crime, or indebtedness.³⁰

Württemberg inventories were carefully structured documents. An introductory section recorded locality, date, and personal details – not just for inventoried individuals but for their offspring and other heirs, and often also for parents and former spouses. A second section listed real estate, including buildings, gardens, arable fields, pastures, woods, and fishing-waters. A third section recorded all moveable goods, including those worth only one Heller (the smallest currency unit), in pre-specified categories: cash, ornaments and jewellery, silver valuables, men’s clothing, women’s clothing, books, bedding, household linen, household vessels (in sub-categories), furniture, general household goods, farm and craft tools, animals, food and grain stores, business wares, and miscellaneous items.³¹ A fourth section recorded outgoing debts (Passiva) and financial assets (Aktiva). The final section struck a balance, divided any inheritance among heirs, and recorded participants’ signatures.

This paper focuses on the outgoing debts recorded in all surviving Wildberg inventories for the period 1602-1700. This approach is made possible by the fact that Württemberg inventories were supposed to record monetary values for all items listed although, as we shall see, not all of the earliest surviving inventories did so. Counter to occasional claims in the historiography that inventory valuations were merely standardized assessments, there are strong reasons to believe that Württemberg inventories recorded actual prices. First, inventory-makers were not casual amateurs drawing up an occasional inventory, but specially appointed community officials

³⁰ Mannheims (1991); Bidlingmaier (2005).

³¹ Mannheims (1991), 61.

(Inventierer) assisted by professional clerks, an important part of whose training consisted in learning how to draw up inventories carefully so as to avoid inheritance conflicts. Inventory-makers even sometimes asked women to assist them in describing and valuing gender-specific items.³² Second, certain items in the inventories themselves were explicitly described as having been paid for by the bride or groom personally. Third, prices for the same item type in the same inventory varied with quality.³³ Fourth, creditors were sometimes repaid by being given moveable goods from the inventory, which they would hardly have accepted had the valuations deviated from the market price. Finally, inheritance shares were legally allocated according to inventory valuations, a practice to which neither heirs nor courts would have consented had the valuations not been accurate. Prices of all items in an inventory would have had to be “wrong” to precisely the same degree in order to satisfy sharp-eyed heirs and creditors. It was surely easier for inventory-makers simply to use the prices paid for these items on the market, which the evidence suggests they did.³⁴ Certainly, the very precise values recorded for outgoing debts in Wildberg inventories provide strong reason for placing reliance upon these data as an accurate record of the borrowing activity of the individual or couple concerned.

2.3. The Socio-Economic Coverage of Württemberg Inventories

According to Württemberg law, a person or couple was not legally obliged to be inventoried if they possessed a special legal status, left a will, agreed to marital community of property, got the district court’s approval, drew up a private inventory, had only one heir, or obtained agreement from all their heirs – although such people

³² Mannheims (1991), 44-54, 61 with n. 27.

³³ Boelcke (1964), 322 n. 8.

³⁴ For similar conclusions reached for English inventories, see Overton (2000), 127.

could be inventoried, since these rules were just treated as guidelines. Administrative breakdown, corruption, and bureaucratic negligence could also prevent inventorying.³⁵

The administrative guidelines about inventorying imply that Württemberg inventories may have systematically excluded certain groups. It is therefore important to consider for Württemberg the various types of bias for which inventory studies are often criticized.

One source of bias relates to gender. Historical inventories tend to survive for many more men than women, as shown by the preponderance of males in historical inventory studies for early modern England.³⁶ Württemberg inventories, by contrast, survive for more women than men, one result of the strictly partible inheritance system that caused these inventories to be mandated. As Table 2 shows, of the 1,292 surviving inventories of individuals at marriage for seventeenth-century Wildberg, over 50 percent were for brides. Females dominated males to an even greater extent among the 144 surviving inventories of individuals at death, in which over 64 percent were for females, as can be seen from Table 3.

A second source of bias for which historical inventory studies are criticized is age. This arises primarily from the fact that in most historical societies, inventories were drawn up at death but not at marriage. Historians have traditionally assumed that the age distribution of inventoried persons was biased toward older age-groups because death was more likely at that age. However, for early modern England, Overton and his co-authors have argued that the age distribution of inventoried persons closely resembled that for the country as a whole, although their argument is heavily based on findings for a single Kentish village between 1580 and 1711.³⁷ For nineteenth-century Sweden, by

³⁵ Mannheims (1991), 28-9.

³⁶ Overton et al. (2004), 27-8, 208; Sneath (2009), 104-05.

³⁷ Sneath (2009), 39-40.

contrast, Lindgren finds that, as expected, the frequency of death inventories was higher for older age-groups.³⁸

An advantage of Württemberg inventories is that they were legally compulsory at four life-cycle junctures – marriage, remarriage, widowhood, and death. As Table 9 shows, and as discussed below in greater detail, this meant that inventories survive for adults of all ages between 17 and 87 years. There is unquestionably some heaping of marriage inventories in the prime ages of first marriage (the mid-twenties) but people remarried throughout their middle years and old age, and inventories were drawn up on those occasions. Death inventories, moreover, were scattered across the whole age-spectrum from 23 to 87. As a result of being in a position to link the Wildberg inventories to a family reconstitution based on parish registers, as well as to a series of censuses recording ages, we were able to reconstruct the ages of a majority of inventoried individuals. Consequently, in the multivariate regressions in Section 5 below, we control for any age bias that might exist in our sample by including ages of both inventoried persons and their spouses as explanatory variables.

Those whom demographic accident had deprived of heirs may also be under-represented in Württemberg inventories, given the legal exemption from compulsory inventorying for those with one heir or none. On the other hand, such persons were not wholly unrepresented in the inventories for seventeenth-century Wildberg. Thus the 304 inventories for Wildberg couples at death between 1602 and 1700 include 34 in which there is only a single heir and one in which there is no heir at all, and thus more than 11 percent of the surviving death inventories for Wildberg couples in this period had been drawn up despite the fact that there was no legal obligation to do so.

³⁸ Lindgren (2002), 821-2.

It is also conceivable that heirs could be somehow coerced into agreeing to do without an inventory, but there is no evidence of this having taken place. On the contrary, heirs had strong incentives to comply with the legal obligation that an estate be inventoried, since only that could ensure a fair division, defend their interests against those of the surviving spouse who would have inside information about the size and composition of the estate, and ensure that they were formally exempted from garnishment should undisclosed loans of the deceased person later come to light.³⁹

Probably the largest demographic sub-group under-represented in Württemberg inventories were those who remained unmarried throughout their lives. This was an inevitable consequence of the process that generated inventories in Württemberg: never-married persons could by definition not be inventoried at marriage or remarriage, and their relative economic deprivation (which was in most cases both a cause and a consequence of their never-married status) meant that they were much less likely than married or widowed individuals to be inventoried at death.⁴⁰ In seventeenth-century Wildberg, 7.8 percent of women and 1.5 percent of men dying over the age of 49 were single, to which must be added some proportion of the 0.7 percent of women and 5.6 percent of men dying over the age of 49 who were of unknown marital status at death.⁴¹ Although never-married persons could not be represented among the marriage inventories, they could be inventoried at death, and the inventories for seventeenth-century Wildberg do include death inventories for two never-married males and four never-married females. Never-married adults are thus not wholly excluded from observation. Furthermore, it must be recognized that the marriage inventories for

³⁹ Lindgren (2002), 818-19, discusses these forces at work in the coverage of inventories in eighteenth- and nineteenth-century Sweden.

⁴⁰ On the relative economic deprivation of never-married individuals in early modern Württemberg, and a discussion of the economic and institutional pressures underlying this deprivation, see Ogilvie (2003), chapters 4 and 6.

⁴¹ Ogilvie (2003), 44-7 with Tables 2.1 and 2.2

individuals entering into their first marriages represent persons who had, until that marriage, never been married, and thus these inventories cast light on the possessions (and debts) of this demographic sub-group.

A further common source of bias in historical inventory studies is that inventories are likely to under-represent certain socio-economic strata. In most cases, it is assumed that inventories provide little or no coverage of less-well-off social strata. In Württemberg, the situation was more complicated because the inventorying regulations actually exempted certain high-status groups. Thus one of the exemptions from the legal obligation to be inventoried was enjoyed by those with “special legal status”, who comprised members of the royal family, state bureaucrats and their families, clergymen, and other high-status groups enjoying specific jurisdictional privileges.⁴² The exemption of such individuals from the legal obligation to be inventoried meant that certain groups at the top end of the social spectrum were probably under-represented. However, these high-status groups were not totally excluded. The Wildberg inventories for the seventeenth century include at least one for a Vogt (the top state bureaucrat in the district administration),⁴³ one for a widow of a Stadtschreiber (a senior state bureaucrat in the district administration whose family would have been legally exempt from the obligation to be inventoried),⁴⁴ one for a clergyman,⁴⁵ and three for clergymen’s widows.⁴⁶ As these cases make clear, those groups that were exempted from the legal obligation to be inventoried did sometimes have inventories drawn up anyway, and are thus to some extent represented in our sample. Persons rich enough to afford the costs of drawing up a will might also have been under-represented – although again not totally

⁴² Mannheims (1991), 28-9.

⁴³ HStAS A573 Bd. 4890, 17.05.1641.

⁴⁴ HStAS A573 Bd. 4885 (1636 No. 7), 4978 (1733 No. 14).

⁴⁵ HStAS A573 Bd. 4804 (19.07.1625).

⁴⁶ HStAS A573 Bd4806 (1649 No. 4), 4932 (1685 No. 14), 4946 (1699 No. 7).

excluded, since 23 of the surviving inventories for seventeenth-century Wildberg mention the existence of a will or attach a copy of it to the inventory.

Württemberg must also have been somewhat affected by the pressures causing inventories in most pre-modern European societies to under-represent lower-status groups, especially those with little property to leave to any heirs.⁴⁷ If an individual or couple had no property other than the clothes they stood up in, they were obviously less likely to be inventoried unless there was some dispute over the question of whether they were truly destitute. Moreover, the inventory-makers and the town or village clerk charged a fee for carrying out the inventorying, which a very poor person would have found it more difficult to pay, thereby creating an incentive for such propertiless individuals to avoid being inventoried and for busy officials to avoid inventorying them.

On the other hand, in Württemberg law there was no minimum wealth level below which one was exempted from the obligation to be inventoried, unlike in England where a probate inventory was not required if the deceased person left wealth worth less than £5 (excluding real estate, which English inventories did not record).⁴⁸ In the seventeenth century, £5 was equal to 34 Gulden in the currency of the Holy Roman Empire of the German Nation, although this must be regarded as a very rough approximation, given lack of information on purchasing power parity between England and Württemberg.⁴⁹ But it provides a rough dividing-line for investigating whether inventories in seventeenth-century Wildberg also included people with low levels of total wealth. The Wildberg inventories do cover people who would not have been inventoried in England: 23.8 percent of individuals and 2.1 percent of couples

⁴⁷ On this problem in early modern English inventory studies, see Overton et al. (2004), 29-30, 79, 188-9; Sneath (2009), ch. 7; Weatherill (1996), 3, 46, 172; Cressy (1980), 42, 139, 226-7.

⁴⁸ Erickson (1993), 33; Overton (1980), 209; Moore (1985), 18.

⁴⁹ For the exchange rate between English pounds sterling and the Gulden (fl) used in German-speaking central Europe (albeit with somewhat varying values in different territories of the Empire), see <http://www.pierre-marteau.com/currency/converter/rei-eng.html>; in the seventeenth century, the exchange rate was approximately 6.67 fl = £1.

inventoried at marriage lay below the 34 fl threshold, as did 8.3 percent of individuals and 3.7 percent of couples inventoried at death.⁵⁰ People at the bottom of the wealth distribution were not altogether missing from Württemberg inventories, therefore, although they were almost certainly under-represented, if only because they had few possessions worth recording.

Socio-economic coverage of Württemberg inventories was thus affected at the top of the spectrum by the legal exemption of high-status groups and those rich enough to pay for wills on the one hand and at the bottom by the weaker economic incentive for people with few possessions to be inventoried. Taken together, these factors are likely to have meant that the very top and the very bottom of the socio-economic spectrum was under-represented in the inventoried population. However, as we have seen, neither end of the socio-economic spectrum was missing altogether.

In considering the general question of the extent to which Württemberg inventories represented the underlying population, one further factor must be taken into account. Early modern Württemberg was a highly regulated state with numerous communal officials and paid state bureaucrats on the local level, giving rise to a relatively well-functioning local administration.⁵¹ The fact that the legal obligation to be inventoried was devolved by the central state to communal officials made it much more probable that it would be implemented. For one thing, communal officials were aware of the marriages, deaths, and inheritance situations of their fellow-citizens and thus knew when an event had taken place that triggered the legal obligation to be inventoried. For another, the fact that the inventory-makers and the town or village clerk

⁵⁰ Calculations include only those inventories for Wildberg between 1602 and 1700 in which monetary values are recorded for all items. For comparability with English inventories, total wealth in these calculations is taken to exclude real estate (since this was not recorded in English inventories) and thus to consist of all moveable goods and financial assets (i.e. debts payable to the inventoried person).

⁵¹ On this communal and state administrative structure, see Ogilvie (1997), 42-72, 79-85; Ogilvie (1999). For similar arguments for early modern Sweden, see Lindgren (2002), 818.

were entitled to be paid a fee for drawing up each inventory created an incentive for them to insist that the legal obligation to be inventoried be complied with so that they would receive their perquisites.⁵²

As in any document-based historical analysis, therefore, the administrative guidelines governing the writing of inventories in Württemberg probably did influence the composition of the sample of inventoried individuals and couples.⁵³ However, the degree of this distortion was limited by the fact that social coverage was extremely high. This emerges from micro-analyses in which those who were inventoried can be compared with the wider population of local inhabitants.

For the Württemberg village of Laichingen between 1766 and 1799, for instance, Medick found marriage inventories for over 94 percent of fully reconstituted families (and over 85 percent of partially reconstituted ones) in his family reconstitution. He found inventories at the death of the first spouse for c. 87 percent of couples in the reconstitution; and he found death inventories for c. 31 percent of widowers and c. 57 percent of widows in the reconstitution.⁵⁴

A similarly high coverage emerges from our own investigation of the representativeness of the inventories in seventeenth-century Wildberg. Our family reconstitution is not as complete for the seventeenth century as would ideally be desirable because the first Wildberg baptism register was destroyed by Swedish soldiers in 1645, and thus information on baptisms survives only from 1646 onwards. However, Wildberg possesses a series of 12 tax registers and tax lists covering the period 1599-1705.⁵⁵ We explored the representativeness of the Wildberg marriage and death inventories for 1602-1700 by linking them with these tax registers, which recorded all

⁵² According to Lindgren (2002), 816-17, a similar incentive existed in eighteenth- and nineteenth-century Sweden.

⁵³ See the discussion in Lindgren (2002), 816-20.

⁵⁴ Medick (1996), 614-615.

⁵⁵ HStAS A573 Bü. 1055-1145 (Steuerregister); HStAS A573 Bü. 5415 (Vermögensverzeichnisse).

autonomous economic units – i.e. those pursuing independent livelihoods – including women, solitaries, and persons with zero taxable assets (i.e. no real estate, and in many cases no craft or business since many tax registers also recorded those as taxable assets).⁵⁶

As Figure 1 shows, even though the Wildberg death inventories survive only from 1602 and marriage inventories in Württemberg more widely (and thus also in Wildberg) start only in 1610, as early as 1614 over one-third of Wildberg's male taxpayers could be linked definitively with at least one inventory, rising over 40 percent by 1629, over 50 percent by 1639, over 67 percent by 1661, and over 80 percent by 1695. Even among female taxpayers, 23 percent could be linked with at least one inventory by 1614, rising to 44 percent by 1629, and over 75 percent by 1695. Although the taxable wealth of the inventoried taxpayers in Wildberg was on average higher than that of the non-inventoried ones, the difference was not always statistically significant, and there were individuals with zero taxable wealth among the inventoried taxpayers in every cross-section.

The socio-economic coverage provided by Württemberg inventories is high relative to other European inventory studies. In rural central Sweden, for instance, Lindgren found that for 1770 inventories survive for just 10 percent of adults who died, rising to 42-3 percent by 1800 and exceeding 50 percent only after about 1830.⁵⁷

Although the Württemberg inventories were neither universal nor perfectly representative, therefore, they covered a very substantial proportion of economic agents with the autonomy needed to take out loans, even among women and the propertiless, and in that respect surpass any other available data source on early modern rural portfolio composition.

⁵⁶ This situation contrasts with early modern Dutch tax-registers, which excluded those without taxable assets: see McCants (2007), 3-4, 12.

⁵⁷ Lindgren (2002), 818-9.

3. The Institutional Framework for Borrowing in Early Modern Württemberg

Borrowing and lending in any economy is inevitably influenced by the institutions of that society, and early modern Württemberg was no exception. The institutional framework of early modern Württemberg affected credit markets in four main ways: through providing administrative services to record and register debt agreements; through legal and administrative mechanisms for enforcing debt contracts; through requiring communal or state permission to be obtained before entering into particular types of debt; and through regulating the interest rates that could be legally charged for different types of debt or to different types of debtor.

A first set of institutional influences on borrowing consisted in the mechanisms available for formally recording and registering debt contracts. Württemberg was one of the “non-notarial” societies of the northern part of Europe, which are generally contrasted with “notarial” societies such as France, Italy and other parts of Mediterranean Europe.⁵⁸ Indeed, when foreign notaries began to operate in Württemberg in the 1790s the government passed legislation restricting their activities.⁵⁹ Instead, the Württemberg government required debt documentation to be written up by official clerks, either the Gerichtschreiber (court clerk) of the local communal court or the Amtschreiber (district clerk) of the district administration, in accordance with a particular schedule of fees.⁶⁰ In addition, all private “Passiva”, including but not limited to formal bonds, were supposed to be recorded in the marriage or death inventory of the debtor – the very documents on which we base the analysis in

⁵⁸ Ogilvie (2011), 293-6.

⁵⁹ Reyscher (1828ff), 6:705-6, #449 (2.12.1795).

⁶⁰ Riecke (1842), 29-30, § 156-7.

this paper.⁶¹ In principle, recording all debts in death inventories was supposed to enable all creditors to be paid off before the inheritance was distributed, although in practice this did not happen: instead, debts were inherited along with assets.⁶²

A second set of institutional influences on borrowing in early modern Württemberg consisted in the mechanisms available for enforcing contracts between creditors and debtors. Legislation issued by the dukes of Württemberg as the territorial princes provided a thoroughgoing framework for contract enforcement within and between local communities, across administrative districts, and even beyond the national borders.⁶³ The first judicial instance at which defaulting debtors could be pursued was the local communal court (Dorfgericht, Stadtgericht), at which the dense “social capital” of information transmission inside the closely knit Württemberg communities was mobilized against defaulters.⁶⁴ The next level of jurisdiction was the district court (Amtsgericht), convened in the district capital (Amtstadt), manned by town council members, and chaired by the princely district governor (Amtmann). The district governor also pursued debtors administratively, by writing to governors of other districts and even beyond the frontiers of Württemberg.⁶⁵ Borrowers who failed to repay their debts were inflicted with a variety of penalties in the communal and state courts – loss of collateral (where this had been provided), fining, imprisonment, garnishment of inheritance, confiscation of funds from personal pledges or family members, and even being declared “Mundtot” (deprived of the legal right to conduct one’s economic affairs).⁶⁶

⁶¹ See, for instance, Reyscher (1828ff), 6:202, #222 (25.11.1698).

⁶² A practice criticized but acknowledged to be common practice e.g. in Reyscher (1828ff), 6:233-4, #234 (25.11.1709); 6:278-9, #253 (27.2.1717).

⁶³ Riecke (1842), 126-32, §LXXV; Reyscher (1828ff), 6:281-2, #254 (8.9.1717).

⁶⁴ Sabeau (1990), e.g. 425; Ogilvie (1997), ch. 3.

⁶⁵ Reyscher (1828ff), 6:281-2, #254 (8.9.1717); Sabeau (1990), 425; Ogilvie (1997), 68.

⁶⁶ For an example of a number of these penalties being imposed on a defaulting debtor from Wildberg in 1565, see Fritz (1911), 133-4. On the threat of being declared “Mundtot” for prodigal behaviour, as laid out in the 1621 Württemberg national law-code, see Reyscher (1828ff), 12:742-5, #214 (11.11.1621)

A third set of institutional arrangements governed whether one was allowed to incur a formal debt. The Württemberg state required ordinary people to obtain communal or government permission for most formal acts of borrowing. According to the 1621 Landesordnung (national ordinance), no-one was to borrow money unless the debt was approved by his village or town council, as well as the district-level state bureaucrats.⁶⁷ Communal officials and district bureaucrats were legally obliged to monitor the householding behaviour of persons who consumed or borrowed excessively, and to control their conduct with a variety of penalties culminating in declaring them “Mundtot”.⁶⁸ Local studies of early modern Württemberg communities document how the powerful Württemberg community courts in practice exercised the right to veto ratification for any loan secured by real property.⁶⁹

The obligation to obtain communal or (for large loans) princely permission became more stringent as debts became more formal and documented, e.g. once they took the form of bonds or other more sophisticated debt instruments such as letters of exchange. Thus according to the 1536 Württemberg Landesordnung (national ordinance), no-one was to lend money on a bond without special princely permission, although if the principal did not exceed 20 fl the decision about whether to grant permission lay with the district bureaucrats and the local communal court; if the sum exceeded 20 fl, however, the borrower had to petition the prince in writing and the petition had to be signed by the district governor and the communal court with an accompanying report.⁷⁰ The 1621 Landesordnung stated explicitly that no-one was to lend money to any Württemberg subject on a bond without the special permission of the

§XLVI. For more detail on the array of different methods of ensuring repayment of debts in late medieval and early modern Württemberg, see Boelcke (1964).

⁶⁷ Reyscher (1828ff), 12:742-5, #214 (11.11.1621) §XIV.

⁶⁸ Reyscher (1828ff), 12:742-5, #214 (11.11.1621) §XLVI.

⁶⁹ Sabeian (1990), 425; Ogilvie (1997), 68.

⁷⁰ Reyscher (1828ff), 12:116-17, #21 (1.6.1536).

prince, the district officials, and the community court.⁷¹ By 1781, the boundary between small and large loans had moved upwards but the basic requirement had not changed: anyone borrowing on a bond was required to get permission from his commune for loans up to 100 fl and from the princely government for sums above that amount.⁷² According to a law of 1759, more sophisticated debt instruments, such as letters of exchange (Wechselbriefe), were reserved for merchants and courtiers, with ordinary people being required to apply for a government permit, which was costly and could be refused.⁷³ The pecuniary and transaction costs of obtaining permits to borrow using such instruments inevitably created incentives to engage in less formal types of borrowing.

The fourth main way in which Württemberg institutions influenced borrowing was by legislating against “usury”, which principally consisted of prohibiting lending at what were defined as excessively high interest rates as well as outlawing various lending practices in which repayment conditions were stipulated in such a way as to circumvent the legal interest-rate ceiling, e.g. agreements involving repaying debts in the form of grain, cattle, wine, or the usufruct on land.⁷⁴ The result was that until the nineteenth century an interest-rate ceiling of 5 percent per annum applied to the vast majority of ordinary loans taken out by ordinary citizens in Württemberg.⁷⁵ Local compliance was monitored by the community courts, which were required to withhold ratification⁷⁶ and deny enforcement⁷⁷ if loans involved explicit or implicit interest payments above 5 percent. Studies of Württemberg credit markets based on both

⁷¹ Reyscher (1828ff), 12:742, #214 (11.11.1621).

⁷² See Reyscher (1828ff), 6:629, #422 (14.04.1781).

⁷³ Reyscher (1828ff), 6:534-9, #397 (24.03.1759).

⁷⁴ See, for instance, Reyscher (1828ff), 12:97-8, #21 (1.6.1536); 12:798-800, #214 (11.11.1621).

⁷⁵ Riecke (1842), 149, 169; Reyscher (1828ff), 6:177-183, #212 (5.12.1692), 12:202-05, #49 (2.1.1552); Wächter (1839), 495-510, 1008-1011.

⁷⁶ Sabeau (1990), 425; Ogilvie (1997), 68.

⁷⁷ For an example from Wildberg in 1623, see Ogilvie (2003), 241-2.

inventories and mortgage books from the sixteenth through to the mid-nineteenth century find thoroughgoing compliance with this 5 percent ceiling.⁷⁸

This 5 percent rate ceiling clearly created excess demand for loans, as shown by borrowers' eagerness to borrow at higher rates in the black market. Furthermore, rate ceilings (and actual interest-rates paid) were higher in early modern England,⁷⁹ Flanders,⁸⁰ and the Netherlands.⁸¹ The few economic agents in early modern Württemberg who were legally exempted from the 5 percent ceiling were willing to pay 12.5 percent (permitted on grain or wine loans) or even higher rates (e.g. debts incurred by merchants or the prince).⁸² Others were willing to skirt the boundaries of legality by taking out "usurious" loans at implicit interest rates of 25 percent (according to disapproving reports in 1621)⁸³ or 15-50 percent (according to similar reports in 1692),⁸⁴ often in the form of contracts involving repayment in kind. As Lipp has pointed out, interest-rate ceilings in early modern Germany meant that high-risk borrowers were either excluded from credit altogether, or could only obtain loans in the informal sector at rates over the legal limit, and without the benefits of legal protection.⁸⁵

4. The Prevalence of Borrowing

What shape did the borrowing behaviour of ordinary Württemberg inhabitants take within this framework? A first way in which we can use the Wildberg inventories to

⁷⁸ Maisch (1992), 180, 202; Mauch (2009), 30-1, 91 (Anlage 2). No debt recorded in seventeenth-century Wildberg inventories paid above 5 percent. Cf. Lindgren (2002), 811, where in pre-1864 Sweden "informal" lenders were allowed to charge above the legal ceiling of 6 percent.

⁷⁹ Spufford (2000), 220-1; Sneath (2009), 154.

⁸⁰ Lambrecht (2009), 83-5.

⁸¹ Gelderblom/Jonker (2011), 6-7, 16; Zijderdijn (2009), 151-3; Lambrecht (2009), 83-5.

⁸² Wächter (1839), 495-510, 1008-1011.

⁸³ Reyscher (1828ff), 12:799-800 (11.11.1621), § LVI.

⁸⁴ Reyscher (1828ff), 6:177-183, #212 (5.12.1692), § XIX, XXII.

⁸⁵ Lipp (2007), 32; see also Guinnane (2001), 368 with n. 6.

answer this question is to find out how prevalent borrowing actually was in this central European rural population.

At marriage, as Table 2 shows, just over one-quarter of inventoried individuals in seventeenth-century Wildberg had debts and just under one-third had financial assets. A non-trivial proportion (about one-sixth) were both debtors and creditors, a pattern observed in other early modern economies.⁸⁶ Debts were owed by Wildberg individuals of both sexes and all marital statuses, but were significantly more common among men than women and among the widowed than the unmarried.⁸⁷ Asset ownership also varied by sex, with slightly but significantly more women holding liquid assets such as cash, ornaments, and animals while slightly but significantly more men held illiquid ones such as real estate (which was readily sold but had higher transaction costs).⁸⁸ Prior marital status was associated with differences in assets, with significantly more widowed than single people of both sexes holding financial assets, silver, real estate, and animals at marriage, but significantly fewer holding cash.

At death, Wildberg individuals were even more heavily involved in borrowing and lending than at marriage. Table 3 shows that 85-90 percent had debts, 80 percent had financial assets, and 70 percent had both – figures resembling those from post mortem inventories in other early modern European rural economies.⁸⁹ In Wildberg, the pronounced gender differences in marriage inventories were largely lacking in death inventories, with no significant differences between the sexes in holdings of debts, financial assets, cash, silver, real estate, ornaments, or animals. We cannot make definitive statements about the effect of marital status on borrowing at death because

⁸⁶ E.g. Schuster (2008), 44.

⁸⁷ Throughout this paper, “significant” means the null hypothesis is rejected at or above the 0.05 level; “borderline significance” means it is rejected at the 0.10 level but not the 0.05 level; “not significant” means the hypothesis cannot be rejected even at the 0.10 level.

⁸⁸ Sabeau (1990), 355-70.

⁸⁹ E.g. Béaur (2009), 153-4; Matthews (2009), 258-9.

inventories were drawn up only for a handful of never-married individuals. However, all six never-married individuals with surviving inventories for seventeenth-century Wildberg had undertaken some borrowing.

Finally, borrowing was also widespread among Wildberg couples, as Table 4 shows. At marriage, just under one-half of seventeenth-century Wildberg couples had debts, exactly half had financial assets, and about one-third had both – proportions similar to those found in nineteenth-century German rural economies.⁹⁰ By the time one spouse died, over nine-tenths of couples had debts, over three-quarters had financial assets, and about three-quarters had both. Between marriage and death, couples' asset portfolios also changed, with significantly fewer couples holding liquid assets such as cash and jewellery and significantly more holding illiquid ones such as real estate and financial claims.

Borrowing also extended across the economic spectrum, as Table 5 shows, with at least some members of every wealth stratum owing debts. However, less than 1 percent of individuals or couples had debts exceeding total assets. Indeed, few violated the contemporary rule of thumb that one should not take on debts exceeding three-fifths of the value of the collateral one could provide⁹¹ – just 2.1 percent of individuals and less than 3.6 percent of couples. This is consistent with Ineichen's finding that debt payments in the seventeenth-century Swiss village of Ebikon averaged only 61 percent of a farm's net yield,⁹² and Fertig's finding that debts in nineteenth-century Westphalian village inventories rarely exceeded 70 percent of the value of land and buildings.⁹³

In seventeenth-century Wildberg, both the prevalence of borrowing and the share of assets it accounted for was significantly lower among the poor than the rich –

⁹⁰ E.g. Laufer (2007), 105.

⁹¹ Boelcke (1991), 212.

⁹² Ineichen (1992), 76-7.

⁹³ Fertig (2009), 174.

counter to assumptions of early modern elites and some modern historians that pre-modern rural people borrowed only as a last resort when they faced economic crisis or destitution.⁹⁴ Among seventeenth-century Wildberg individuals, as Table 5 shows, less than 12 percent of those with under 100 fl total assets had debts, compared to 47 percent of those with over 100 fl. Among couples, the corresponding figures were 27 percent and 62 percent.

The degree of borrowing also varied significantly and positively with wealth. Thus only about 7 percent of individuals with wealth under 100 fl had debts worth over 10 percent of their wealth, compared to over 29 percent of individuals with wealth over 100 fl; the corresponding figures for couples were 19 percent and 36 percent. This pattern was not unique to seventeenth-century Wildberg: higher borrowing among richer strata also emerges for villages in early modern Swabia⁹⁵ and Switzerland.⁹⁶ There are two possible explanations for this: one is that borrowing required collateral, which was disproportionately available to the rich; the second is that poor people did borrow but sold off assets to repay debts, creating a large group of people with no assets and no debts. The first explanation is the more persuasive. For one thing, even if poor people did borrow and then repay by selling assets, it is the nature of cross-sectional sources such as inventories that we should observe some such persons in the period between borrowing and repaying; we observe few of them. Second, as we shall see in the next section, higher borrowing was associated not merely with higher total wealth but with ownership of specific asset categories that were durable and thus more susceptible to being used as collateral.

⁹⁴ See the literature in Boelcke (1964), 324-35; Blömer (1990), 2-43; Boelcke (1991), 195, 198, 200, 202, 207-11; Blessing (1997), 879.

⁹⁵ Sczesny (2002), 303.

⁹⁶ Pfister (1994), 1345 n. 22.

Such findings already cast doubt on the idea that “over-indebtedness” was widespread among an ignorant, uncommercialized, and irrational rural population that did not know how to calibrate its borrowing to its economic means. Further doubts are raised by Table 6, which compares borrowing to ownership of real estate and moveable goods. Fewer than 10 percent of individuals and fewer than 14 percent of couples had debts exceeding the value of their real estate – and, as we saw in Tables 2-4, real estate, though important, was not the only store of value in Wildberg. “Excessive” borrowing thus appears to have been lower in this early modern German locality than in rural England at the same period: whereas in Wildberg 6.6 percent of individuals and 7.2 percent of couples had debts worth more than the value of their moveable goods (including financial assets), the corresponding figure for early modern Yorkshire was significantly higher, at 15.7 percent.⁹⁷ The credit market in seventeenth-century Württemberg was thus accessible to those without real estate, and even to those without any assets at all, but persons whose debts exceeded their total assets were rare and unfortunate cases. The evidence for seventeenth-century Wildberg provides no support for the view that over-indebtedness was widespread, that rural people were unable to adjust their debts to their economic capacities, or that borrowing was a negative economic indicator.⁹⁸

5. What Factors Were Associated with Borrowing?

Borrowing was not rare in this less-developed economy. As Tables 2-6 show, it was undertaken by women and men; the unmarried, the married and the widowed; those entering marriage, those losing a spouse and those leaving life; those with no assets and

⁹⁷ Sneath (2009), 165-6 (Table 31).

⁹⁸ For comparable findings from other Württemberg localities, see Boelcke (1964), 346; Maisch (1992), 181.

those with many. Furthermore, the total value of borrowing was non-trivial relative to inventoried assets: in the 1,182 inventories for individuals in seventeenth-century Wildberg recording monetary values for all items, the value of debts amounted to 11.5 percent of the value of total possessions; in the 638 inventories for couples, debts amounted to 13.4 of the value of total possessions. The average size of a single debt in an individual inventory was 13.6 inflation-adjusted Gulden (fl), in a couple inventory 14.3 fl; this was nearly two times the annual cash wage of an average male servant in seventeenth-century Wildberg and over four times that of a female servant.⁹⁹ This already casts doubt on any simple view that the pre-modern central European rural economy was financially inactive.

But what variables were associated with higher or lower borrowing? Tables 2-6 suggest that borrowing might have varied with sex, marital status, stage of life, and ownership of assets. But cross-tabulations can only suggest hypotheses; to test them and control for underlying variables, we need multivariate approaches.

We do not know all possible influences on borrowing, and even the extraordinarily detailed Württemberg inventories do not contain data on all the factors that might have affected people's decision to borrow. However, a large majority of the inventories for seventeenth-century Wildberg contain information about the value of borrowing, the value of possessions in different asset-categories, and a number of the characteristics of the inventoried individual or couple, derived either from the inventories or from other documentary sources such as tax registers, censuses, and parish registers.¹⁰⁰

⁹⁹ All values are in Württemberg Gulden (fl), indexed for inflation with 1565 as the index year. On servants' wages see Ogilvie (2003), Table 3.8.

¹⁰⁰ On research strategy and record linkage between inventories and other documentary sources, see http://www.econ.cam.ac.uk/Ogilvie_ESRC/index.html?page=about; and K pker/Maegraith (2009).

A first step was to categorize each inventory according to whether it recorded the borrowing and possessions of an individual person or a couple. As Table 7 shows, 662 documents containing marriage inventories (Beibringensinventuren) survive for Wildberg between 1602 and 1700. Of these, 2 contain only a combined list for the couple; 632 contain individualized lists for both bride and groom, 20 contain an individual list for the bride but not for the groom, and 8 contain an individual list for the groom but not the bride. Together, these 662 documents generate 634 couple-inventories and 1,292 individual inventories (652 for brides and 640 for grooms). There are also 448 documents containing death inventories (Eventualteilungen and Realteilungen, in a range of variants). Of these, 304 are inventories for couples – most of them Eventualteilungen, which record a couple's possessions on the occasion of the death of one member of that couple, but also a handful of Realteilungen in which both members of the couple died so close together that the inventory, although putatively that of the widow or widower, in fact records the possessions of the couple. The remaining 144 are standard Realteilungen, listing the possessions of individuals at death – 93 females and 51 males. Almost all were widowed persons, but the total does include 2 bachelors and 4 spinsters.

As already mentioned, although Württemberg inventories were supposed to record monetary values for all items, not all of them did so, especially in the early seventeenth century. Table 8 breaks down the 1,292 individual inventories and 634 couple inventories for seventeenth-century Wildberg according to the proportion of items for which monetary values are recorded in the inventory. Among individual inventories, over 82 percent had values for all items, although it was much lower (58 percent) among death inventories, mainly because these started being drawn up at an earlier date than the marriage inventories (of which 85 percent had values for all items).

Among couple inventories, 68 percent had complete values, again much higher for marriage inventories (75 percent) than death inventories (53 percent). Nonetheless, a good majority of inventories of all types – individual and couple, marriage and death – record complete monetary values for all items.

Given that the most important characteristic of a debt is its monetary value, our multivariate analyses are restricted to those inventories for which such values are given. The result is that for 1,182 individuals and 638 couples inventoried at marriage or death in Wildberg between 1602 and 1700, we have information about the sums they had borrowed, the value of their possessions in different categories of asset, and a number of other characteristics, derived either from inventories or through record-linkage with tax registers, censuses, or parish registers.¹⁰¹

The basis for our multivariate analysis was the hypothesis that people wished to smooth their consumption over time by borrowing, finance profitable investments that they could not fund from current resources, and spread risks by holding wealth in diverse forms including financial assets. However, their ability to do so was likely to be affected by their personal characteristics as well as by their demographic and economic circumstances. To explore the characteristics of borrowers in seventeenth-century Wildberg systematically, we estimated a regression in which the dependent variable was the inflation-adjusted value of the borrowing recorded in an inventory. We used a Tobit model because the dependent variable was left-censored, with zero borrowing in 74 percent of individual inventories and 45 percent of couple inventories for which values of all items were recorded.

To test the hypothesis that borrowing was influenced by personal characteristics, a first set of independent variables were sex and marital status (for individuals only) and

¹⁰¹ For research strategy and methods, see http://www.econ.cam.ac.uk/Ogilvie_ESRC/index.html?page=about; and Küpker/Maegraith (2009).

(for both individuals and couples) occupation, migration status, life-cycle juncture of inventorying (marriage or death), number of living offspring, and number of non-offspring heirs.

To explore the hypothesis that people chose the amount they borrowed in combination with their choices about how to allocate their wealth among different asset types, a second set of independent variables consisted of the value of the individual's (or couple's) buildings, land, animals, cash, silver, financial assets, personal items (clothing, weapons, jewellery, etc.), and durable and non-durable household items. All values were indexed for inflation in order to allow for changes in the general price level across the period. Since our hypothesis is that these wealth variables were chosen together with the amount of borrowing, the regression results must of course be interpreted as multivariate correlations rather than unidirectional causal effects.

To investigate whether the association between borrowing and asset categories differed between men and women, unmarried and widowed persons, or marriage and death inventories, we included interaction terms between the three binary variables (sex, marital status and inventory type) and all the asset variables.

Since there were possible influences on borrowing that varied over time, such as the recurrent surges of warfare in central Europe during the seventeenth century, we included "date" as an independent variable. Our specification of this variable was one in which the effect of date on borrowing was allowed to differ between four periods, with break-points reflecting the major caesurae of seventeenth-century Württemberg history, at 1634 (Imperial invasion of the territory), 1648 (Peace of Westphalia), and 1687 (French invasion).

We also postulated that borrowing might be affected by a person's age. Inventories are often criticized for covering only older persons close to death.¹⁰² But, as discussed in Section 2.3, our inventories were generated at four life-cycle junctures – marriage, remarriage, widowhood, and death. As Table 9 shows, our inventories covered the entire spectrum of adult ages, from 17 to 76 years for marriage inventories and from 23 to 87 years for death inventories. For the inventories in which monetary values were recorded for all items, the family reconstitution yielded ages for 882 of the inventoried individuals (74.7 percent of the total) and for both spouses in 371 of the inventoried couples (58.2 percent of the total). Controlling for age enabled us both to address the criticism that inventory-studies reveal the decisions only of older persons close to death; and to explore the life-cycle of borrowing in this economy.

We therefore began by estimating the regression for the data subsets for which age was known. For the 75 percent of individuals for which age was known, age had no statistically significant effect on borrowing. This enabled us to drop age as an independent variable for individuals.

For the 58 percent of couples whose ages were known, by contrast, both husband's and wife's age did significantly affect borrowing. The coefficient on age itself was positive while the coefficient on the square of age was negative, indicating an inverted-U-shaped relationship between a couple's age and the inflation-adjusted value of its borrowing. The estimated coefficients imply that borrowing peaked at 39.8 years for men and 49.8 years for women. Borrowing was thus higher for couples when husbands and wives were in middle life, and lower when they were young or old. A similar inverted-U-shaped age-profile of borrowing emerges from Pfister's study of a

¹⁰² E.g. Frey (2000), 116.

Swiss proto-industrial village in the seventeenth century,¹⁰³ and low borrowing in old age (though not in early adulthood) is found by Bracht and Fertig for nineteenth-century rural Westphalia.¹⁰⁴

Such an age profile was wholly rational given the typical life-cycle of a couple in this pre-modern economy. Formal human capital investment in youth was low: in early modern Württemberg, schooling was compulsory but ended at age 14; females typically received no further formal training because guilds excluded them; males followed apprenticeship and journeymanhood but completed these before first marrying, which occurred on average at age 26 for both sexes in seventeenth-century Wildberg.¹⁰⁵ In middle life, most couples operated farm, craft and service businesses with high demand for production loans, high household dependency ratios, and peak credibility vis-à-vis external creditors. In old age, retirement was rare, implying relatively low “dissaving” until one’s final illness. This economic life-cycle made high borrowing in middle life rational for couples in this early modern rural economy, for reasons relating both to the demand for loans and the supply.

We then formally explored the statistical effects of dropping age from the regression model, for two reasons. First, the data subset with known ages might differ systematically from the wider dataset (e.g. by excluding more migrants, whose ages were less often recorded in local documents). Second, the data subset with known ages excluded 42 percent of observations which, ideally, one would wish to include in the analysis. Formal tests demonstrated that for the data subset for which ages were known, excluding husband’s and wife’s age had no statistically significant influence on the estimates of the other independent variables. We therefore estimated the model for the entire sample, excluding the age variables, and compared the resulting estimated

¹⁰³ Pfister (2007), 506.

¹⁰⁴ Bracht/Fertig (2008), 186-91.

¹⁰⁵ See Ogilvie (2003), chapters 2-3.

coefficients on the non-age variables with those obtained for the data subset for which ages were known. For almost all variables, the coefficients did not differ significantly between the two regressions. The estimated coefficients did differ significantly for three variables – number of children, value of silver, and time in the post-1687 period. We therefore employ caution in interpreting these coefficients in the model for the full dataset.

We began by estimating the most general model, including all independent variables and interaction terms described above. We then excluded a number of variables from the Tobit regression on the basis of significance tests showing that their coefficients did not differ significantly different from zero, although some variables with statistically insignificant coefficients were retained on the grounds that their lack of significance was of particular analytical interest. Tables 10 and 11 report the resulting Tobit models, estimated for individuals and couples respectively.

A first set of four variables was not significantly associated with borrowing for either individuals or couples: migration status for husbands, migration status for wives, number of live children, and number of non-child heirs. Early modern Wildberg thus provides no support for the hypothesis that migrants borrowed less because they were less integrated into local personalized lending networks. Nor does it support the view that individuals or couples substituted offspring or heirs for financial borrowing.

A core set of seven variables, by contrast, were significantly associated with borrowing for both individuals and couples: the passage of time, proto-industrial occupation, inventory type, and value of buildings, financial assets, furniture, and silver. Two variables (sex and marital status) only applied to individuals, and a further three variables were significantly associated with borrowing for individuals but not for couples: land, personal possessions, and non-durable household goods. Conversely,

three variables were significantly associated with borrowing for couples but not for individuals: cattle, cash, and work-related tools and wares.

The passage of time was significantly associated with borrowing for both individuals and couples. Borrowing fell significantly and substantially with each year that passed from 1602 to 1634. For individuals, there was a positive time-effect from 1634 to 1648 (though of borderline significance) but no significant time-effect from 1649 to 1687. For couples, there was no significant time-effect for the entire period of the Thirty Years War and the post-war aftermath, from 1634 to 1686. By contrast, borrowing rose again significantly with every year that passed from 1687 to 1700, albeit with borderline statistical significance for individuals.

The expansion of borrowing described for the north Atlantic economies across the seventeenth century is thus not to be found in this region of rural central Europe, where borrowing fell from c. 1600 to 1634, did not change with time over the next half-century, and only rose again after 1686. This time-pattern may reflect the catastrophic economic fallout of the Thirty Years War and the very slow post-war recovery in Württemberg. This interpretation is supported by micro-studies of eastern Swabia and Bavaria which find that the Thirty Years War decreased rural borrowing by reducing savings, depressing collateral values, and strangling capital markets,¹⁰⁶ and by analyses of other pre-modern European economies also revealing withdrawal of credit in crisis periods.¹⁰⁷

A second variable associated with borrowing for both individuals and couples was proto-industrial occupation. As mentioned earlier, proto-industrial textile production was the single most important occupation in Wildberg, with about 40 percent of household heads at least partially dependent upon worsted-weaving as a

¹⁰⁶ Sczesny (2002), 299.

¹⁰⁷ Postel-Vinay (1998), 247-69; Schofield/Lambrecht (2009), 7.

livelihood, although many of them combined it with farming their own land.¹⁰⁸ Record-linkage enabled us to identify three main groups among those for whom inventories survive in seventeenth-century Wildberg: the definitely proto-industrial, those not recorded in either proto-industry or non-proto-industry, and those definitely pursuing non-proto-industrial occupations (the residual category in the regressions).¹⁰⁹

Theories of proto-industrialization describe the expansion of export-oriented cottage industries as bringing its practitioners into a harmful state of over-indebtedness.¹¹⁰ The findings for seventeenth-century Wildberg cast doubt on this view. For couples, the effect of proto-industrial occupation compared to non-proto-industrial occupation was to reduce borrowing significantly, by 19.8 inflation-adjusted fl, a substantial effect given that mean total borrowing for couples was 61 inflation-adjusted fl. The effect for individuals was only of borderline significance and was also less substantial, with proto-industrial occupation associated with 2.5 fl less borrowing (a small difference given mean individual borrowing of 24 fl). Neither for couples nor for individuals do these findings provide any support for the view that export-oriented manufacturing dragged its practitioners into debt. If anything, in Wildberg it was quite the opposite: proto-industrial couples borrowed significantly and substantially less than non-proto-industrial couples.

This finding cannot be dismissed by arguing that proto-industrial households were more likely to have highly liquid debts to merchants or large shopkeepers, as testified to by large stocks of raw material or merchandise in the household at the time of inventorying. There is no significant difference in the value of raw materials and merchandise between the proto-industrial and non-proto-industrial individuals in

¹⁰⁸ Ogilvie (1997), 277.

¹⁰⁹ Females were ascribed husbands' occupations, since guilds permitted wives and widows to operate craft and proto-industrial workshops; see Ogilvie (2003), esp. chs. 4-5.

¹¹⁰ Kriedte/Medick/Schlumbohm (1981), 47-50, 102-07; Fertig (2008), 161-2.

seventeenth-century Wildberg inventories which record values for all items. Nor is it probable that this pattern of lower borrowing was caused by proto-industrialization diversifying incomes more than other occupations, since by-employments between farming and other livelihood sources were actually more common in Wildberg among traditional, locally-oriented craftsmen than among proto-industrial worsted-weavers.¹¹¹

Finally, the lower borrowing of the proto-industrial population cannot be ascribed to its relative poverty. It was certainly true that proto-industrial people in seventeenth-century Wildberg were poorer than their non-proto-industrial neighbours. The mean total wealth of the proto-industrial individuals was 137 fl, significantly lower than the mean of 279 fl for definitely non-proto-industrial individuals; the same was true of couples, with mean total wealth of 275 fl for the proto-industrial couples, significantly lower than the 573 fl for the definitely non-proto-industrial ones. However, the significantly lower borrowing of the proto-industrial population cannot be ascribed to its lower average wealth since the Tobit regressions control for wealth. Some other aspect of pursuing a proto-industrial occupation led to lower borrowing in seventeenth-century Wildberg.

A third variable associated with borrowing for both individuals and couples was the life-cycle juncture of the inventory. Borrowing was higher at death than at marriage by 17 fl for individuals (a large difference, given mean individual borrowing of 24 fl) and by 71 fl for couples (a very striking difference, given mean couple borrowing of 61 fl). A possible explanation is that in death inventories the decrepitude of the recently deceased individual or spouse led to borrowing, a finding consistent with the medical and funeral expenses recorded as causes for borrowing in Table 1.¹¹² Another probable influence, however, was economic substance. A newly married individual or couple had

¹¹¹ Ogilvie (1997), 282 with Table 8.16.

¹¹² For analogous findings in the early Netherlands, see McCants (2007), 9-11; in eighteenth- and nineteenth-century Sweden, see Lindgren (2002), 819.

not yet amassed the wealth or reputation need for collateral vis-à-vis prospective lenders; by the time of an individual's or spouse's death, by contrast, they had a more established position, facilitating borrowing.

The association between borrowing and the value of people's assets also differed significantly according to inventory type. A first asset category strongly associated with borrowing was buildings. At marriage, the value of one's buildings was positively associated with the value of borrowing for both individuals and couples; at death, by contrast, the positive association emerged only for unmarried individuals, and was absent for widowed individuals and for couples. A similar pattern emerges for silver, which at marriage had a positive association with borrowing for individual males and for couples (though not for individual females); at death, by contrast, although the association was still significant for individual males, it was only of borderline significance for couples. Financial assets were likewise positively associated with borrowing for couples at marriage but not at death; for individuals, financial assets were positively associated with borrowing for the unmarried, but not for the widowed. Furniture, work-related tools and wares, and non-durable household goods, by contrast, were positively associated with borrowing for particular subsets of individuals or couples irrespective of the life-cycle juncture at which they were inventoried.

The consistently positive association between the value of so many categories of assets and the value of individuals' and couples' inventoried debts points to the fact that borrowing in this economy was not associated with poverty or distress. Rather, borrowing was associated with ownership of the single largest and most important piece of real property (a house and its appurtenances), with precious metals, with financial assets, and with large amounts of valuable furniture (the most durable of household

moveables).¹¹³ As we shall see below, in analyzing the purposes of borrowing recorded in the inventories, people in seventeenth-century Wildberg sometimes borrowed money in order to buy buildings; but they did not borrow to buy silver plates or furniture. A more weighty explanation for the very pronounced association between buildings, silver, furniture, and financial assets on the one hand and borrowing on the other is that all these asset categories provided collateral to support higher borrowing.

Collateral plays a role in most credit markets, of course. But studies of developing economies show it to be particularly important for access to credit where interest-rates cannot be adjusted to reflect the risks of lending.¹¹⁴ As discussed earlier, lenders in early modern Württemberg were legally prohibited from charging interest rates higher than 5 percent and could not enforce repayment of illegal loans made at higher rates. This rate ceiling probably created excess demand for loans, as suggested by borrowers' willingness to pay higher rates illegally as well as by the higher interest rates prevailing in early modern Holland, Flanders and England, and in most parts of Germany in the nineteenth century.¹¹⁵ Interest-rate ceilings in early modern Germany are likely to have caused higher-risk borrowers to be either excluded altogether from access to credit, or forced to seek loans in the black market, at rates over the legal limit and without any of the benefits of legal protection.¹¹⁶ Studies of modern developing economies also find that legal interest-rate ceilings deter lenders from providing credit to poorer borrowers whose higher riskiness cannot legally be covered with higher expected returns, and thus bias credit provision toward those owning real estate or other

¹¹³ It might initially seem puzzling that the association with silver resembled that of illiquid real estate rather than liquid cash. But silver valuables were luxuries with a limited group of potential buyers. Impurities made it hard for potential buyers to value silver readily, as testified to in legislation such as the "General-Ausschreiben wegen Sicherung der Aechtheit der Gold- und Silberwaaren", in Reyscher (1828ff), 13:578, #566 (21.3.1682). Silver valuables were also harder to turn into money than more modest moveable assets, making them function more as collateral than liquidity, as shown, for instance, by the "Verbot des Aufkaufs von Gold und Silber", in Reyscher (1828ff), 13:66, #347 (16.7.1649).

¹¹⁴ Paxson (1990), 535-7, 542; World Bank (1989), 30, 83, 100, 128-9.

¹¹⁵ Guinnane (2001), 368 with n. 6.

¹¹⁶ Lipp (2007), 32.

valuable collateral.¹¹⁷ Ownership of collateral may therefore have been so universally and strongly associated with borrowing in seventeenth-century Wildberg partly because the 5 percent legal interest-rate ceiling rationed credit for high-risk borrowers who could not offer substantial collateral.

In this context, it might seem odd that land, which could also be used as collateral, was not consistently associated with higher borrowing. Land was positively associated with borrowing for couples at death, but not for couples at marriage, and never for individuals. In the Wildberg context, however, this is not so surprising. Although most Wildberg citizens owned some land, few of them relied on it wholly for their livelihood, whereas almost all needed a building for their secondary or tertiary by-employment.¹¹⁸ This is reflected in the fact that on average individuals owned 46 fl worth of buildings but only 35 fl worth of land; couples owned 120 fl worth of buildings but only 84 fl worth of land. Furthermore, by far the most common type of inventoried building was a “Behausung” (abode, dwelling), which often included a garden and agricultural infrastructure (barns, stables, sheds, manure-racks, etc.). In Wildberg, therefore, buildings typically included some land and also exceeded pure land in value, so buildings’ greater importance as collateral is hardly surprising. For a locality more dependent on full-time farming, pure land-ownership might well play the role that possession of a “Behausung” did in proto-industrial Wildberg.

A second way in which people’s borrowing interacted with how they allocated their wealth among different asset types is revealed by the negative coefficients on two asset types which were particularly liquid – cash and cattle. Cash had a negative association with borrowing for both individuals and couples, although only for couples was it statistically significant. Cattle seem to have played the same role for couples, at

¹¹⁷ Paxson (1990), 535-7, 542; World Bank (1989), 30, 83, 100, 128-9.

¹¹⁸ On by-employments, see Ogilvie/Küpker/Maegraith (2009), 155-73.

least in death inventories, where the more cattle a couple had, the lower its borrowing. These results mirror findings for economies as diverse as medieval Nürnberg,¹¹⁹ sixteenth-century Württemberg,¹²⁰ and early modern England,¹²¹ where cattle and cash also substituted for borrowing. One function of borrowing in the pre-modern rural economy, these findings suggest, was to enable households temporarily short of liquid resources – whether cash or cattle – to smooth consumption and make profitable investments which could not be funded from current resources. This is consistent with the idea that households borrowed to solve cash-flow problems, not because they were fundamentally lacking in valuable assets.

Finally, the effects of gender and marital status on borrowing for individuals confirm and intensify the emerging pattern whereby borrowing in this pre-modern rural economy was associated not with poverty and disadvantage but with more substantial socio-economic status. Borrowing was significantly and substantially higher among males than females and among widowed individuals than among the unmarried. This cannot be dismissed by arguing that when a man and a woman were married, a disproportionate share of their debts would be held in the name of the man. Most marriage inventories listed the bride's and the groom's possessions separately precisely in order to maintain clearly demarcated property rights between the two spouses throughout the ensuing marriage. Although unmarried females were not totally excluded from the credit market – about seven percent of them entered marriage with debts – their borrowing was significantly lower than that of unmarried males or than widowed individuals of either sex. Unmarried males in turn had significantly and substantially lower borrowing than widowed individuals of either sex. Interestingly, marital status was more significantly associated with borrowing than was gender, as shown by the fact

¹¹⁹ Schuster (2008), 43-4.

¹²⁰ Boelcke (1964), 322.

¹²¹ Muldrew (1998), ch. 4.

that once an individual achieved widowed status, borrowing did not differ significantly between the sexes.

These findings are consistent with Mauch's findings for the Württemberg village of Beuren, where in 1846-54 the mean mortgage debt was significantly lower for females and for persons who had achieved the married (or widowed) state.¹²² They are also consistent with qualitative and quantitative evidence on the institutional disadvantages suffered by females and unmarried persons in the pre-modern Württemberg economy.¹²³ Females were subject to gender guardianship which hindered them from transacting as independent legal agents.¹²⁴ They were excluded by guilds and other occupational associations from most craft, proto-industrial, commercial and professional occupations.¹²⁵ Despite their equal inheritance rights under the Württemberg partible inheritance system, other institutions caused women's property rights to be less secure than men's.¹²⁶ And females lacked any voice in the powerful community councils that regulated most factor and product markets in rural Württemberg.¹²⁷ All these disadvantages made women poorer and riskier borrowers, deterring lenders. Marital status was also associated with noticeable economic disadvantages in pre-modern Württemberg, particularly community and guild rules preventing never-married persons from practising most occupations independently.¹²⁸ Both sets of institutional disadvantages coincided for unmarried females who, when they sought to conduct a livelihood independently outside a household headed by a male relative or master, were pejoratively dubbed Eigenbrötlerinnen (literally, "own-breaders") and persecuted at the discretion of communal, guild, religious and

¹²² Mauch (2009), 42-5.

¹²³ Ogilvie (2003), chs. 4-6; Mauch (2009), 42-5.

¹²⁴ Ogilvie (2003), 186-7, 237, 249, 258.

¹²⁵ Ogilvie (2003), 96-9, 163-72, 230-6, 239-47, 295-308.

¹²⁶ Ogilvie (2003), 248-57, 309-17.

¹²⁷ Ogilvie (2003), 251-2.

¹²⁸ Ogilvie (2003), chs. 4-6.

governmental authorities.¹²⁹ Lower borrowing by females and the unmarried – and lower willingness to lend to them – was rational, given these severe institutional and economic restrictions. The pronounced positive effects of male gender and ever-married status on the value of one's borrowing provide further confirmation that in this pre-modern rural economy borrowing was associated with a higher, not a lower, socio-economic position.

6. Characteristics of Debts

These econometric findings illuminate the variables associated with high or low borrowing for individuals and couples – gender, age, marital status, occupation, date, and portfolio composition. But what about the debts themselves – their purposes, their formality, their impersonality? To address these questions, we analyse the debts recorded in Wildberg inventories between 1602 and 1700. These inventories listed a total of 8,206 separate debts, but for 26 of them no monetary value was recorded. The analysis below is restricted to the 8,180 inventoried debts for which monetary values are known.

6.1. Why Did People Borrow?

Early modern elites thought that peasants borrowed to indulge in consumption beyond their means.¹³⁰ Historians traditionally assumed that rural people borrowed mainly to survive consumption crises because they were poor.¹³¹ To find out why people actually

¹²⁹ Ogilvie (2003), ch. 6.

¹³⁰ Boelcke (1964), 324-35; Blömer (1990), 2-43; Blessing (1997), 879.

¹³¹ As discussed in Kriedte/Medick/Schlumbohm (1981), 47-50, 102-07; Hoffmann (1989), 296; Gilomen (1998), 108-09, 135-6; Laufer (2007), 99-109; Schuster (2008), 40-1; Béaur (2009), 155-8.

borrowed in seventeenth-century Wildberg, Tables 12 and 13 categorize inventoried debts according to their purpose. Table 12 breaks down the 8,180 debts by number, while Table 13 breaks them down by value.

Not all inventoried debts had specific purposes recorded. Among the 8,180 debts recorded in the inventories of seventeenth-century Wildberg for which monetary values were given, about 30 percent by value were described only in general terms (capital sum, interest payments, instalments, etc.), in which capital sums made up two-thirds of the category. Another 24 percent of debts by value were described only in terms of the creditor, in which debts to private persons comprised over two-thirds of the category. However, another 17 percent by value of the debts that had no purpose recorded were owed to officials and institutions, and may thus be assumed to be largely to cover fiscal demands, although in some cases they reflected a sum of capital borrowed from a public office. Even these debts whose purpose was not otherwise recorded thus reveal one reason for borrowing in this economy, as in many other parts of seventeenth-century Germany – the expanding activities of the early modern state.¹³²

In Wildberg inventories, 38 percent of debts by number and 47 percent by value – 3,147 individual debts – recorded a clear, specific purpose. It might seem regrettable that we know the purposes of less than half of debts by value, and it is possible that this 47 percent may be unrepresentative. However, this proportion of known purposes for borrowing is extremely high compared to most other historical debt studies and thus sheds light on a facet of early modern borrowing behaviour which is almost wholly obscure in the historiography, at least in terms of quantitative analyses.¹³³ Furthermore, the fact that virtually all conceivable purposes for borrowing are recorded at least once

¹³² Boelcke (1964), 320; Maisch (1992), 186ff; Ogilvie (1999).

¹³³ On paucity of historical sources recording purposes of borrowing, see Gilomen (1998), 135; Sczesny (2002), 300-01, 305, 316; Fertig (2009), 171, 193; Mauch (2009), 40-1, 92 (Anlage 6); Lambrecht (2009), 86.

in the inventories for seventeenth-century Wildberg suggests that there is no particular type of purpose that was systematically left unrecorded.

The top panels of Tables 12 and 13 categorize the recorded purposes of inventoried debts into consumption, production, and “mixed” purposes. In early modern households, of course, production and consumption were closely linked. Consequently, many debts – such as those for buildings (used for both residence and work) and animals (producers of food, draught power, and industrial materials) – had to be categorized as “mixed”.

The most salient class of “mixed” debts were for buildings, though these declined from around 50 percent of specific-purpose debts by value before mid-century to 42 percent thereafter. A second important class of “mixed” debts were for inheritance claims, which made up 8 percent of specific-purpose debts by value across the century, though much higher percentages during and immediately after the Thirty Years War, probably as fallout from high wartime mortality. Taxes comprised a third notable “mixed” purpose, rising significantly from only 2 percent of specific-purpose debts by value before 1634 to 10 percent after 1687. Debts caused by tax demands had a long tradition in Germany, reaching back into the fifteenth century.¹³⁴ But these quantitative findings for Wildberg between 1602 and 1700 suggest that the accelerating growth of the seventeenth-century state was a major influence on private borrowing in early modern Germany.¹³⁵

Was it true that early modern rural people borrowed mainly for consumption – either to stave off starvation or to purchase luxuries beyond their means – and hence that most borrowing was for non-productive purposes? The answer is no. Production debts comprised 23 percent of specific-purpose debts by value, compared to only 10

¹³⁴ Wunder (1987), 33; Schuster (2008), 41.

¹³⁵ See Ogilvie (1999).

percent for consumption debts. Only in the worst wartime period (1634-48) did consumption and production account for nearly equal proportions (10 and 11 percent respectively), while in peacetime (1602-33, 1649-86) production debts were nearly three times as high as consumption debts. The share of consumption debts only rose after 1687, and even then remained lower than production debts. Even if some part of the “cloth” and “textile intermediate” debts were to be shifted from the “production” to the “consumption” category, since they are not in all cases unambiguously described as being owed by textile workers for professional purposes, consumption debts would still comprise a lower proportion than production debts for Wildberg borrowers in all periods of the seventeenth century.

The same low proportion of consumption debts compared to production debts as we observe in seventeenth-century Wildberg also emerges from the east Swabian village of Langenneufnach in the eighteenth century,¹³⁶ Göttingen in 1676-1755,¹³⁷ Harz mining villages in the early nineteenth century,¹³⁸ and the Württemberg village of Beuren in 1846-54.¹³⁹ These German findings contrast intriguingly with the primacy of consumption loans in probate accounts in seventeenth-century England, notoriously one of the cradles of the early modern Consumer Revolution.¹⁴⁰ People in early modern rural Württemberg did borrow to bridge consumption gaps, and even occasionally for luxuries such as clothing or weddings, but they borrowed much more often to invest in their own productive capacities.

Breaking down production loans between sectors (by value) yields just over one-third for agricultural purposes and just under two-thirds for industrial ones. Agricultural loans comprised those for land, two-thirds of the wage bill (the “unskilled” share), and

¹³⁶ Sczesny (2002), 317-20.

¹³⁷ Winnige (1996), 388-90.

¹³⁸ Laufer (2007), 108-11, Tables 3-4.

¹³⁹ Mauch (2009), 40-1, 92 (Anlage 6).

¹⁴⁰ Muldrew (1998), 104-05 (Tables 4.1-4.2), 118.

half the “miscellaneous production” category, totalling 8.6 percent of specific-purpose loans. Industrial loans comprised those for cloth, intermediate textile inputs, worsted-trading, the leather industry, tools, one-third of the wage bill (the “skilled” share), and raw materials, totalling 14.7 percent of specific-purpose loans. Since production loans comprised 23 percent of the total value of specific-purpose loans, agriculture accounted for just over one-third of them and industry for just under two-thirds. Even if “animals” were to be shifted from the “mixed” to the “production” category, as suggested by the widespread practice of borrowing on cattle in other pre-modern German economies, agriculture would only comprise 10.7 percent of the value of specific-purpose loans, still considerably less than industry.¹⁴¹

This finding, that loans for industrial production surpassed those for agricultural production, is consistent with the importance of proto-industry in this region in the seventeenth century and the low agricultural productivity growth in Württemberg as a whole before c.1850.¹⁴² It is borne out by Mauch’s findings for a (mainly agricultural) Württemberg village in the mid-nineteenth century, where craftsmen were disproportionately strongly represented among debtors.¹⁴³ But it contrasts intriguingly with the importance of agriculture-related loans in early modern Flanders, Holland, and England.¹⁴⁴

The findings for Wildberg also illustrate the importance of credit in facilitating the operation of other factor markets, particularly those for land but also those for labour. Loans for various forms of real estate (buildings, land and mixed real estate) made up a total of 53 percent of specified-purpose loans by value; the real estate market evidently relied heavily on borrowing. But even labour markets were assisted by credit

¹⁴¹ Gilomen (1998), 115-18.

¹⁴² Ogilvie/Küpker/Maegraith (2009a), 178, 184-8.

¹⁴³ Mauch (2009), 51-2.

¹⁴⁴ Holderness (1976), 99-104; Lambrecht (2009), 77, 79-80; Thoen/Soens (2009), 24-33; Van Cruyningen (2009).

markets, as shown by the fact that 13 percent of specific-purpose loans by number and 3 percent by value were for wages, both skilled and unskilled.¹⁴⁵

When it came to consumption, did people borrow for luxury or display, the objection so often levelled at peasant borrowing by pre-modern elites?¹⁴⁶ Again the answer is no. The largest tranche of consumption-debts was for grain and comestibles, which made up four-fifths of consumption-related borrowing by value. Some grain may have been purchased as seed, which would make it a production-debt, but even with the relatively low Württemberg yield ratio of 5:1 most grain would have been for consumption.¹⁴⁷ Borrowing to buy grain occurred not because people were too improvident to store food, since Table 4 showed stocks of grain and comestibles in one-third of Wildberg couples' inventories at marriage and two-thirds at death; Maisch found the same for eighteenth-century Württemberg villagers.¹⁴⁸ Debts to buy food more probably arose, therefore, from temporary cash-flow problems.

By comparison, debts for luxury and display – the clothing, weddings, and funerals castigated by seventeenth-century Württemberg elites and penalized in the sumptuary ordinances – made up only 2 percent of the value of all debts for known purposes, providing no evidence of any early modern “consumer revolution” fuelled by expanding credit. This is consistent with other Württemberg studies emphasizing the role of sumptuary regulations in constraining the consumption behaviour of ordinary people (especially in rural communities) and dating the spread of fashionable luxuries only to the later eighteenth or early nineteenth centuries.¹⁴⁹

¹⁴⁵ Pfister (2007), 508-09; Schofield/Lambrech, 14-15.

¹⁴⁶ Laufer (2007), 114-16.

¹⁴⁷ Ogilvie/Küpker/Maegraith (2009a), 178, 184-8 (Table 13).

¹⁴⁸ Maisch (1992), 101-02.

¹⁴⁹ Benschmidt (1985), 34-6, 226-30; Medick (1996), 384-7, 398-406, 414, 427; Frey (2000), 132-4; Ogilvie (2010), 304-12.

6.2. Were Debts Documented?

But does all this borrowing in rural Württemberg testify to the existence of highly developed, formal credit markets of the sort described for early modern France, England, or the Low Countries? Debt documentation is widely regarded as an indicator of the existence of a more formal credit market in which borrowing is more often intermediated, repayment is more easily enforced, and written financial instruments can be endorsed for transfer to third parties.¹⁵⁰

By this measure, as Tables 14 and 15 show, borrowing in seventeenth-century Wildberg was not highly formal, with only 4.7 percent of inventoried debts by value (2.6 percent by number) making any mention of documentation. This is very low compared to other early modern economies. In early modern rural Flanders, for instance, three-quarters of debts in probate inventories were documented as bonds or annuities,¹⁵¹ and in early modern Kent over one-quarter of debts in probate accounts were recorded as being supported by documentary instruments.¹⁵²

This is not to say that debt documentation was wholly unavailable in early modern Württemberg. The debts recorded in Württemberg inventories may have been largely unsupported by debt-specific documentation, but this does not mean that they were informal. The very fact that they were recorded in inventories drawn up by inventory-makers (who were community officials) and written and signed by the town clerk (who was a state bureaucrat), provided them with a strong degree of formality, albeit of a different type than manifested in the credit instruments so much more common in the early modern Low Countries or England.

¹⁵⁰ Hoffman/Postel-Vinay/Rosenthal (2004), 387-8; Schofield/Lambrecht (2009), 7-8, 13; Lambrecht (2009), 75-8; Limberger (2009), 66.

¹⁵¹ Lambrecht (2009), 78 (Table 5.1), 91-3.

¹⁵² Spufford (2000), 216-17.

Furthermore, the few Wildberg debts that were explicitly supported by additional documentation testify to the use of various types of account, register, inheritance record, legal court record, and miscellaneous documents ranging from the informal “Zettel” (slip of paper) to the formal “Urkunde” (debt certificate), “Gült” or “Obligation” (bond), or “Kontrakt” (contract). Closer analysis shows an intriguing pattern: most of these documents were not specific to the credit market. Rather, they had been generated for other purposes, often by state or community offices. Thus over 44 percent of all debts mentioning documentation were supported by “accounts”, over one-third of those being from state and community offices, the remainder from shopkeepers and craftsmen. A second major tranche (over 13 percent of debts mentioning documentation) was supported by other miscellaneous public documents – extracts, letters, lists, specifications. A third major tranche (over 10 percent of debts mentioning documentation) referred to the public administration of the inheritance system, particularly inventories and inheritance-divisions. A fourth tranche (over 5 percent) referred to “registers”, mainly those of state and community offices. Only the 24 percent of documented debts in the “miscellaneous private” category – less than 1 percent of total debts by value – were supported by any of the debt-specific instruments associated with the expansion of private finance in some other early modern European economies – annuities, bonds, debentures, deeds, letters of exchange, and so on.¹⁵³

In this respect, Württemberg differed from societies such as early modern France or the post-French-Revolution Rhineland, where debts were documented in notarial registers, although in such societies inventories and other sources also reveal non-trivial proportions of non-documented debts.¹⁵⁴ Württemberg also differed from early modern

¹⁵³ Holderness (1976), 98-101; Muldrew (1998), 103-19; Spufford (2000), 215-19; Lambrecht (2009), 76-8; Thoen/Soens (2009), 22; Limberger (2009), 65-9.

¹⁵⁴ Gilomen (1998), 136-7; Clemens/Reupke (2008), 223; Béaur (2009), 153, 155; Schofield/Lambrecht (2009), 4-5.

Flanders, where village clerks earned fees by writing up private debt contracts and peasants used non-documented IOUs only for small loans.¹⁵⁵ Württemberg differed from Holland, too, where early modern village debt consisted heavily of documented annuities.¹⁵⁶ And Württemberg differed from England, where although oral debt agreements were widespread, by the seventeenth century much borrowing was supported using sophisticated, credit-specific documentation.¹⁵⁷ Nor is there any evidence for early modern Wildberg of the use of negotiable debt instruments, of the type that were emerging in the North Atlantic economies in this period.

Some of the institutional features discussed earlier may have contributed to this relative paucity of credit-market-specific debt documentation in early modern Württemberg. As already mentioned, no ordinary citizen in Württemberg was allowed to borrow on a bond without approval from his community court for small sums and from the princely government for larger ones.¹⁵⁸ The rules governing letters of exchange (Wechselbriefe) were even more restrictive: only merchants and other high-status persons could use these freely, while “craftsmen and other ordinary citizens and farmers” had to get a special permit.¹⁵⁹ Obtaining such permits was expensive, as was the step of obtaining a formal debt certificate, for whose writing fees had to be paid to the public secretary’s office.¹⁶⁰

A further contributory factor may have been that the exhaustive public record-keeping in early modern Württemberg meant that most debts were in fact already recorded in public documentation, including marriage and death inventories themselves. The comprehensive documentary coverage provided by the high level of

¹⁵⁵ Lambrecht (2009), 78 (Table 5.1), 91-3.

¹⁵⁶ Zijderduijn (2009), 41-6.

¹⁵⁷ Holderness (1976), 98-101; Muldrew (1998), 103-19; Spufford (2000), 215-19.

¹⁵⁸ Reyscher (1828ff), 6:629, #422 (14.04.1781).

¹⁵⁹ Reyscher (1828ff), 6:534-9, #397 (24.03.1759).

¹⁶⁰ Reyscher (1828ff), 6:714, #455 (17.03.1798).

bureaucratization already observable in seventeenth-century Württemberg may have reduced incentives to develop the sophisticated private debt instruments of England or the Low Countries, or the quasi-private notarial instruments of France and the French-influenced Rhineland. As we have seen, when foreign notaries began to operate in Württemberg in the 1790s, legislation was passed to forbid or severely restrict their activities.¹⁶¹ The Württemberg government required debt documentation to be written up only by official public clerks (Amtschreiber) and sealed and certified only by princely or communal officials.¹⁶² Communal and state officials in Württemberg may even have played the debt-brokerage role in early modern Germany and Switzerland¹⁶³ that notaries played in France,¹⁶⁴ county attorneys in England,¹⁶⁵ or village clerks in Flanders.¹⁶⁶

6.3. Was Borrowing Personalized?

A rather different indicator of the formality or otherwise of credit markets is the extent to which credit extends beyond the boundaries of family and community. On the one hand, economists view extending credit ties beyond the family or community as important for rural development.¹⁶⁷ On the other, anthropologists regard placing credit in the hands of outsiders (Jews in Europe, Chinese in southeast Asia, Hausa and Lebanese in west Africa) as enabling traditional societies to export potentially conflictual relationships outside the family and neighbourhood.¹⁶⁸

¹⁶¹ Reyscher (1828ff), 6:705-6, #449 (2.12.1795).

¹⁶² Reyscher (1828ff), 12:364-5, #214 (11.11.1621).

¹⁶³ Pfister (1994), 1348.

¹⁶⁴ Hoffman/Postel-Vinay/Rosenthal (2004), 388-9.

¹⁶⁵ Holderness (1976).

¹⁶⁶ Lambrecht (2009), 91-3.

¹⁶⁷ See World Bank (1989); Basu (1997), 267-80; Ray (1998), 529-84.

¹⁶⁸ Binnenkade (2007), 165-6.

Tables 16 and 17 breaks down borrowing in seventeenth-century Wildberg according to the relationship between borrower and creditor. A first step is to categorize the creditors from whom Wildberg inhabitants had borrowed into persons, officials, institutions (guilds, religious foundations), and groups (children in guardianship, sets of heirs).

It might be argued that this exercise does not provide useful information because particular sources of credit were likely to go disproportionately unrecorded: landlords might forgive rent due, relatives might keep loans informal and thus not report them to inventory-makers, shopkeepers or other suppliers might provide short-term credit that was repaid before the inventory was drawn up, or creditors for very small debts might not report them. However, there is no evidence that this occurred. As Tables 12-13 already showed, Zins (which included rents on land) comprised a non-trivial proportion of debts,¹⁶⁹ and debts to shopkeepers for “wares” were frequently listed. Creditors did in fact report very small debts in their debtors’ inventories: in the seventeenth-century Wildberg inventories, debts worth as little as 0.003 fl were recorded, 58 percent of all debts were below 1 fl, and 78 percent were below 3 fl. Relatives, too, as we shall see in this section, did insist that debts due to them be included among the claims in an inventory. There is no evidence that any particular type of creditor – landlords, relatives, shopkeepers, suppliers, or small creditors – was left unrecorded.

Contrary to the assumption that pre-modern rural borrowing was highly personalized, nearly 19 percent of Wildberg debts by value were owed to non-personal creditors (mostly institutions and officials), rising from 11 percent in the first half of the century to nearly 23 percent 1649-86 and over 29 percent after 1687. Most of these debts to institutions and officials derived from arrears in payments of fiscal demands,

¹⁶⁹ In Tables 12 and 13, the rubric “Zins, no further description” includes “Zins” both in the sense of “interest on a debt” and in the sense of “rents or dues paid on land”. The German terminology does not permit further disambiguation.

although some arose because the borrower had taken out a loan from the funds of a public institution. The proportion of “impersonal” debts in this economy was thus non-trivial and rising. However, this was not because the growth of the market was encouraging exchange with strangers but rather because the growth of the state was swelling fiscal demands and increasing borrowing from public institutions.

Only about 81 percent of debts by value in seventeenth-century Wildberg were therefore owed to creditors who were persons, and even fewer – only about 18 percent – were owed to persons recorded as being linked to borrowers through kinship, employment, or guardianship. Table 17 shows that this proportion varied from one period to another, but showed no clear trend across the century, with the highest share of “personalized” borrowing in the 1602-33 period but the lowest proportion in the 1634-48 period, and intermediate proportions in second half of the century. Of course, these fluctuations may merely result from unsystematic recording. But insofar as they reflect economic practice, they cast doubt on two widely held views. First, borrowing was not predominantly personalized, since less than one-fifth of borrowing in Wildberg occurred between persons with recorded relationships. And second, borrowing was not becoming more impersonal over time, since both the highest and the lowest proportions of personalized borrowing occurred in the first half of the seventeenth century. Furthermore, Maisch’s study of another Württemberg rural community found 13-16 percent of inventoried borrowing among kin in the eighteenth century, almost identical to the proportion in post-1650 Wildberg.¹⁷⁰

A somewhat different measure of impersonality is the degree to which debt relationships extend beyond the local community.¹⁷¹ Tables 18 and 19 break down borrowing in seventeenth-century Wildberg according to whether it was recorded as

¹⁷⁰ Maisch (1992), 181-2.

¹⁷¹ Hoffman/Postel-Vinay/Rosenthal (2004), 388-9; Zuijderduijn (2009), 153-5.

being undertaken within the locality or outside it. Less than 18 percent of Wildberg borrowing by value took place within the community. The proportion of borrowing that was definitely within the community actually rose over time, from 13-15 percent before 1649 to 17-27 percent in the second half of the century. Even assuming that all borrowing with unrecorded locality was actually within Wildberg shows the highest proportion (79 percent) in the post-1687 period. These findings are consistent with the high proportions of intracommunal borrowing found in nineteenth-century Württemberg villages by both Maisch and Mauch, based on different documentary sources, suggesting that they reflect economic practice rather than recording conventions.¹⁷² It contrasts, however, with the low proportions (6-26 percent) of intracommunal borrowing found by Fertig in nineteenth-century Westphalia,¹⁷³ and by Clemens and Reupke for the nineteenth-century Saarland¹⁷⁴ – admittedly for larger loans secured with real property or recorded by notaries.

At least in seventeenth-century Württemberg, borrowing was not predominantly personalized. But nor did it become more impersonal as the early modern period passed. On the contrary. The proportion of borrowing between relatives fluctuated unsystematically across the seventeenth century in Wildberg, and literature on other localities suggests that it remained at similar levels well into the eighteenth. The proportion of borrowing between members of the same community actually increased in Wildberg across the seventeenth century, and literature on other localities shows the proportion remaining high into the nineteenth. Personalized borrowing in this economy was thus not the dominant pattern; but nor is there any evidence of depersonalization across the early modern period.

¹⁷² Maisch (1992), 180-2 with Tab 4.4.7.a; Mauch (2009), 47-8, 79.

¹⁷³ Fertig (2008), 168, 171-2; Fertig (2009), 179-80, 189-90.

¹⁷⁴ Clemens/Reupke (2008), 224-5, 228.

7. Conclusion

What can we conclude from these findings about financial activity in the “less developed” rural interior of early modern Europe? Württemberg was a relatively undynamic economy compared to Flanders, Holland, England, or many parts of France in the early modern period.¹⁷⁵ Nonetheless, borrowing was widespread, even in a remote rural community such as Wildberg. Borrowing was undertaken by women as well as men, the poor as well as the rich, young adults and the elderly, before marriage and near death, and by persons of all marital statuses. Although few lifelong celibates were inventoried, those that were recorded had all borrowed money, indicating that at least some even of this disadvantaged group had access to credit.¹⁷⁶ Almost every demographic and economic subgroup that was inventoried was able to borrow, and could thus smooth consumption, finance investments, and diversify risks.¹⁷⁷ In so doing, they enabled other rural people to hold their savings in financial form and diversify their investments.¹⁷⁸ In this, Württemberg resembles many other medieval and early modern European rural societies,¹⁷⁹ but contrasts sharply with less-developed economies where many people – especially women and the poor – are constrained to consume what they themselves produce and can only expand production using their own hoarded savings.¹⁸⁰

Credit markets in seventeenth century Württemberg were also quite variegated. Borrowing was not conducted purely on the basis of personalized relationships, but encompassed a wide range of institutions, groups, and individuals. People borrowed

¹⁷⁵ See, on different aspects, Ogilvie (1997); Ogilvie (2010).

¹⁷⁶ On the parlous position of the independent unmarried in pre-modern Württemberg, see Ogilvie (2003), ch. 6.

¹⁷⁷ As also found for sixteenth-century rural Württemberg by Boelcke (1964), 336.

¹⁷⁸ Boelcke (1964), 336.

¹⁷⁹ Gilomen (1998), 127; Muldrew (1998), chs. 3-4; Postel-Vinay (1998); Spufford (2000).

¹⁸⁰ World Bank (1989); Basu (1997), 267-80 Chayanov (1986), 5; Brunner (1986), 107; Kriedte/Medick/Schlumbohm (1981), 53; Figes (1989), 12; Pallot (1999), 14-16.

from the state, the community, the church, and the officials who conducted the finances of these institutions – even if this “borrowing” often consisted of getting into arrears with taxes or dues. They also borrowed from religious funds, charitable foundations, hospitals, and guilds – here, as in many other pre-modern German-speaking territories.¹⁸¹ They borrowed from groups of heirs or children in guardianship whose inheritances were typically lent out at interest.¹⁸² And they borrowed from other individuals – a testimony to the savings potential of rural people, even in relatively slow-growing early modern German economies.

The individuals ready and willing to provide credit in early modern Wildberg were also highly various, with the vast majority consisting not of family members or other close associates, but people with whom the borrower had no recorded relationship other than the debt itself. Well over one-quarter of borrowing by value was undertaken with creditors outside the local community. Nor does early modern Wildberg show any sign of being dominated by a Dorfkönig (village king) who monopolized local lending. As Boelcke found for the sixteenth century, rural Württemberg was teeming with a diversity of lenders, even the largest of whom did not monopolize supply.¹⁸³ In this respect, early modern Württemberg resembled seventeenth-century Swiss Ebikon,¹⁸⁴ the seventeenth-century Swabian village of Langenneufnach,¹⁸⁵ and Fertig’s nineteenth-century Westphalian villages.¹⁸⁶ This was not the type of rural economy described for modern developing economies, where local lending is often dominated by a single

¹⁸¹ Boelcke (1964), 321, 325-9; Wunder (1987), 36; Blömer (1990), 44-61; Ineichen (1992), 78-80; Winnige (1996), 361-75, 395-404; Sczesny (2002), 295-6, 301; Binnenkade (2007), 164-5; Häberlein (2007), 42; Laufer (2007), 104-05; Clemens/Reupke (2008), 233-5.

¹⁸² For similar findings, see Maisch (1992), 184-5; Sczesny (2002), 296, 301-02.

¹⁸³ Boelcke (1964), esp. 336-41.

¹⁸⁴ Ineichen (1992), 81.

¹⁸⁵ Sczesny (2002), 302, 313-14.

¹⁸⁶ Fertig (2008), 172; Fertig (2009), 189-91, 194.

village money-lender who can charge ruinously high interest-rates and keep peasants in “debt peonage” because he has no competitors.¹⁸⁷

Within this reasonably diversified Württemberg credit market, people behaved in ways consistent with the basic economic hypotheses about borrowing with which this paper began. Borrowing was not an indicator of distress or crisis.¹⁸⁸ Rather, it was higher for the owners of buildings, silver, and other durable and valuable assets, for males, for those who had achieved the married state, for substantial couples in middle life, and for other relatively well-off groups such as those in non-*proto-industrial* occupations. Associated as it was with economic substance rather than impoverishment, borrowing rarely meant economic ruin or even the “over-indebtedness” criticized by medieval and early modern elites and lamented by some modern historians.¹⁸⁹ The vast majority of borrowers in seventeenth-century Wildberg were evidently rational enough to avoid anything remotely approaching the risk of debt peonage or even insolvency, and the vast majority of lenders supplied loans only to the financially sound.

The composition of inventoried debts also suggests that borrowing was undertaken as a positive strategy to serve productive purposes. Borrowing made it possible to smooth consumption over time, funding purchases of necessities and enabling minor discretionary spending on clothing, medical care, weddings, and funerals. Borrowing also enabled people to smooth payment of the rising burden of taxes extorted by the early modern state. But above all, borrowing facilitated profitable investments, enabling farmers to purchase land and animals, employers to pay servants and labourers, and rural artisans to finance the delay between buying inputs and selling

¹⁸⁷ Basu (1997), 267-80.

¹⁸⁸ For similar assessments, see Gilomen (1998), 137 (medieval Germany); Sczesny (2002), 297 (early modern Swabia); Schuster (2008), 43 (medieval Nürnberg); Schofield/Lambrecht (2009), 14 (medieval and early modern Europe); Lambrecht (2009), 80, 86-8 (early modern Flanders); Fertig (2009), 178 (nineteenth-century Westphalia).

¹⁸⁹ Boelcke (1964), 324-35; Boelcke (1991), 195, 198, 200, 202, 207-11; Blömer (1990), 2-43; Blessing (1997), 879.

industrial goods. In short, credit markets made markets in land, labour, and output work better. In the absence of such micro-credit, many small farmers and rural craftsmen in developing economies are forced to close down operations periodically because of cash-flow problems.¹⁹⁰ The ubiquitous household borrowing we observe in seventeenth-century Wildberg played a positive role in enabling economic agents to survive as well as they did.

But borrowing in early modern Württemberg also – unsurprisingly – had a darker side. The fact that borrowing was associated with a more substantial socio-economic status meant that if you were female, never-married, very young, very old, propertiless, or proto-industrial, it could be difficult to obtain credit.¹⁹¹ The 5 percent interest-rate ceiling enforced by the Württemberg state was significantly lower than legal ceilings (or actual interest rates charged) in early modern England, Flanders, or Holland. It was probably inappropriately low for the Württemberg economy in the seventeenth century, as shown by the evidence that poor borrowers sought to borrow in the black market at implicit interest-rates that violated the rate-ceiling.¹⁹² As in modern developing economies, the low interest-rate ceiling in seventeenth-century Württemberg probably rationed credit to higher-risk borrowers such as women, the young, the elderly, the poor, and the propertiless, pushing them into the informal sector where they were more exposed to exploitation.¹⁹³

The credit market in seventeenth-century Württemberg appears not to have been as extensive or variegated as that of many North Atlantic economies and shows little sign of becoming more impersonal, intermediated, or formal over the period analysed here. In the early modern Netherlands, for instance, even poor families got credit via

¹⁹⁰ World Bank (1989); Basu (1997), 267-80; Ray (1998), 529-84.

¹⁹¹ As also pointed out in Fontaine (2008).

¹⁹² Reyscher (1828ff), 12:202-05, #49 (2.1.1552), 6:177-183, #212 (5.12.1692); Ogilvie (2003), 241-2.

¹⁹³ Lipp (2007), 32; Paxson (1990), 535-7, 542; World Bank (1989), 30, 83, 100, 128-9.

mechanisms not recorded for inhabitants of early modern Wildberg, including pawnshops and the formal credit markets of the public debt.¹⁹⁴ During a century in which English, Dutch, Flemish and French credit markets enjoyed a growing impersonality and sophistication which extended into the countryside, in Wildberg the proportion of extra-familial or extra-communal debt did not increase.

Nor do the debts recorded in Wildberg inventories show the level or sophistication of documentary support observed in England, the Low Countries, or France at the same period. Most forms of debt documentation mentioned for ordinary people in this German region were generated by bureaucratic accounts, official registers, or public administration of the inheritance system. Inventoried debts recorded few credit-market-specific documents hinting at formal or endorsable financial instruments.¹⁹⁵ This is not surprising, given Württemberg legislation requiring ordinary people to obtain communal or state permission before borrowing money even on bonds, let alone on more sophisticated credit instruments. Whether the institutional arrangements observed in this early modern German economy offered mechanisms for smoothing economic decisions and managing risks that (despite their differences) were as effective as those in the north Atlantic economies, or whether these differences alternatively contributed to slower German growth and development, poses a challenge for future comparative research.

¹⁹⁴ McCants (2007), 10, 21.

¹⁹⁵ One avenue for future research is to explore lending from the other side, by analysing the financial assets listed in inventories, to see if the same pattern of financial documentation is observable on this side of the Württemberg rural credit market.

References

- Basu, K. (1997). Analytical development economics: the less developed economy revisited. Cambridge, MA.
- Béaur, G. (2009). "Credit and land in eighteenth-century France". Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 153-168.
- Benscheidt, A. R. (1985). Kleinbürgerlicher Besitz: Nürtinger Handwerker-Inventare von 1660-1840. Münster.
- Bidlingmaier, R. (2001). "Inventuren und Teilungen. Entstehung und Auswertungsmöglichkeiten einer Quellengruppe in den württembergischen Stadt- und Gemeindearchiven." in Der furnehmste Schatz. Ortsgeschichtliche Quellen in Archiven. Eds. N. Bickhoff and V. Trugenberger. Stuttgart: 71-82.
- Binnenkade, A. (2007). "Haben oder Nicht-Haben. Jüdisch-christliche Schuldnetze im Kanton Aargau des 19. Jahrhunderts". Soziale Praxis des Kredits. 16.-20. Jahrhundert. Ed. J. Schlumbohm. Hannover: 153-174.
- Blessing, W. K. (1997). "'Ökonom' und Geld. Zum bäuerlichen Kredit im Bayern des 19. Jahrhunderts". Zeitschrift für Bayerische Landesgeschichte 60: 861-888.
- Blömer, M. (1990). Die Entwicklung des Agrarkredits in der preussischen Provinz Westfalen im 19. Jahrhundert. Frankfurt am Main.
- Boelcke, W. A. (1964). "Zur Entwicklung des bäuerlichen Kreditwesens in Württemberg vom späten Mittelalter bis Anfang des 17. Jahrhunderts." Jahrbücher für Nationalökonomie und Statistik 176: 319-358.
- Boelcke, W. A. (1991). "Der Agrarkredit in deutschen Territorialstaaten vom Mittelalter bis Anfang des 18. Jahrhunderts." in Kredit im spätmittelalterlichen und frühneuzeitlichen Europa. Ed. M. North. Cologne/Vienna: 193-216.

- Bracht, J. and G. Fertig (2008). “Wann sich verschulden, wann sparen? Vermögensstrategien und Lebenslauf im ländlichen Westfalen des 19. Jahrhunderts”. Schuldenlast und Schuldenwert. Kreditnetzwerke in der europäischen Geschichte 1300-1900. Ed. G. B. Clemens. Trier: 177-191.
- Brunner, O. (1968). “Das Ganze Haus und die Alteuropäische Ökonomik”. Neue Wege der Sozialgeschichte. Ed. O. Brunner. Göttingen: 103-127.
- Chayanov, A. V. (1986). “On the theory of non-capitalist economic systems”. A. V. Chayanov on the theory of the peasant economy. Eds. D. Thorner, B. Kerblay, and R.E.F. Smith. Manchester: 1-28.
- Clemens, G. B. and D. Reupke (2008). “Kreditvergabe im 19. Jahrhundert zwischen privaten Netzwerken und institutioneller Geldleihe”. Schuldenlast und Schuldenwert. Kreditnetzwerke in der europäischen Geschichte 1300-1900. Ed. G. B. Clemens. Trier: 211-238.
- Cressy, D. (1980). Literacy and the social order: reading and writing in Tudor and Stuart England. Cambridge.
- Erickson, A. L. (1993). Women and property in early modern England. London.
- Fertig, C. (2008). “Kreditmärkte und Kreditbeziehungen im ländlichen Westfalen (19. Jh.): Soziale Netzwerke und städtisches Kapital”. Schuldenlast und Schuldenwert. Kreditnetzwerke in der europäischen Geschichte 1300-1900. Ed. G. B. Clemens. Trier: 161-175.
- Fertig, C. (2009). “Urban capital and agrarian reforms: rural credit markets in nineteenth-century Westphalia”. Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 169-196.

- Figes, O. (1989). Peasant Russia, civil war: the Volga countryside in revolution (1917-1921). Oxford.
- Fontaine, L. (2008). L'économie morale, pauvreté, crédit et confiance dans l'Europe préindustrielle. Paris
- Frey, D. A. (2000). "Industrious households: survival strategies of artisans in a southwest German town during the eighteenth and early nineteenth centuries". Household strategies for survival, 1600-2000: fission, faction, and cooperation. Eds. L. Fontaine and J. Schlumbohm. Cambridge: 115-135.
- Fritz, F. (1911). 'Schuldenverzeichnis eines Tübinger Theologiestudenten aus dem 16. Jahrhundert [Timotheus Koch von Wildberg, 1566]'. Blätter für württembergische Kirchengeschichte 15: 132-137.
- Gelderblom, O. and J. Jonker (2011). "Public finance and economic growth: the case of Holland in the seventeenth century". Journal of economic history 71(1): 1-39.
- Gilomen, H.-J. (1998). "L'endettement paysan et la question du crédit dans les pays d'Empire au Moyen Âge". Endettement paysan & crédit rural dans l'Europe médiévale et moderne. Ed. M. Berthe. Toulouse: 99-138.
- Guinnane, T. W. (2001). "Cooperatives as information machines: German rural credit cooperatives, 1883-1914". Journal of economic history 61(2): 366-389.
- Häberlein, M. (2007). "Kreditbeziehungen und Kapitalmärkte vom 16. bis 19. Jahrhundert". Soziale Praxis des Kredits. 16.-20. Jahrhundert. Ed. J. Schlumbohm. Hannover: 37-51.
- Hoffman, P. T., G. Postel-Vinay, and J.-L. Rosenthal (2000). Priceless markets: the political economy of credit in Paris, 1660-1870. Chicago.

- Hoffman, P. T., G. Postel-Vinay, and J.-L. Rosenthal (2004). “Révolution et évolution: Les marchés du crédit notarié en France, 1780-1840”. Annales: histoire, sciences sociales 59(2): 387-424.
- Hoffmann, R. C. (1989). Land, liberties, and lordship in a late medieval countryside: agrarian structures and change in the Duchy of Wroclaw. Philadelphia.
- Holderness, B. A. (1976). “Credit in English rural society before the nineteenth century, with special reference to the period 1650-1720.” Agricultural history review 24: 97-109.
- Ineichen, A. (1992). “Bäuerliche Verschuldung im Ancien Régime: das Beispiel Ebikon bei Luzern”. Schweizerische Zeitschrift für Geschichte 42(1): 69-93.
- Kriedte, P., H. Medick and J. Schlumbohm (1981). Industrialization before industrialization: rural industry in the genesis of capitalism. Cambridge.
- Küpker, M. and J. C. Maegraith (2009). “Human well-being and the “Industrious Revolution”: consumption, gender and social capital in a German developing economy, 1600-1900”. AKA-Newsletter 25: 19-41.
- Lambrecht, T. (2009). “Rural credit and the market for annuities in eighteenth-century Flanders”. Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 75-98.
- Laufer, J. (2007). “ ‘Soziale Kredite’: Kredit als Element der Sozialordnung in den Oberharzer Bergstädten des 19. Jahrhunderts”. Soziale Praxis des Kredits. 16.-20. Jahrhundert. Ed. J. Schlumbohm. Hannover: 99-120.
- Limberger, M. (2009). “Credit, the land market and the connection between the rural and urban economy. The use of perpetual annuities in Aartselaar (Brabant) from the fourteenth to the sixteenth century”. Credit and the rural economy in north-

- western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht.
Turnhout: 63-74.
- Lindgren, H. (2002). "The modernization of Swedish credit markets, 1840-1905: evidence from probate records". Journal of economic history 62(3): 810-832.
- Lipp, C. (2007). "Aspekte der mikrohistorischen und kulturanthropologische Kreditforschung". Soziale Praxis des Kredits. 16.-20. Jahrhundert. Ed. J. Schlumbohm. Hannover: 15-36.
- Lorenzen-Schmidt, K.-J. (2006). "Über das Kreditverhalten von Elbmarschenbauern in der ersten Hälfte des 19. Jahrhunderts". AKA-Newsletter 20: 8-15.
- Maisch, A. (1992). Notdürftiger Unterhalt und gehörige Schranken: Lebensbedingungen und Lebensstile in württembergischen Dörfern der frühen Neuzeit. Stuttgart.
- Mannheims, H. (1991). Wie wird ein Inventar erstellt? Rechtskommentare als Quelle der volkskundlichen Forschung. Münster.
- Mantel, J. (1974). Wildberg. Eine Studie zur wirtschaftlichen und sozialen Entwicklung der Stadt von der Mitte des sechzehnten bis zur Mitte des achtzehnten Jahrhunderts. Stuttgart.
- Matthews, S. (2009). "Money supply and credit in rural Cheshire, c.1600–c.1680". Continuity and change 24: 245-274.
- Mauch, A. (2009). "Ländliches Darlehenswesen in wirtschaftlichen Krisenzeiten Eine Untersuchung am Beispiel der Beurener Unterpfandsbücher und -protokolle (1846-1854)". (MA thesis, University of Tübingen).
- McCants, A. (2007). "Inequality among the poor of eighteenth century Amsterdam". Explorations in economic history 44(1): 1-21.
- Medick, H. (1996). Weben und Überleben in Laichingen 1650-1900. Göttingen

- Moore, J. S. (1985). 'Probate inventories, problems and prospects'. Probate records and the local community. Ed. P. Riden. Gloucester: 11-28.
- Muldrew, C. (1998). The economy of obligation: the culture of credit and social relations in early modern England. New York/Basingstoke.
- Ogilvie, S. (1997). State corporatism and proto-industry: the Württemberg Black Forest, 1580-1797. Cambridge.
- Ogilvie, S. (1999). "The German state: a non-Prussian view." in Rethinking Leviathan: the eighteenth-century state in Britain and Germany. Ed. E. Hellmuth and J. Brewer. Oxford: 167-202.
- Ogilvie, S. (2003). A bitter living: women, markets, and social capital in early modern Germany. Oxford.
- Ogilvie, S. (2004). "Guilds, efficiency and social capital: evidence from German proto-industry". Economic history review 57(2): 286-333.
- Ogilvie, S. (2010). "Consumption, social capital, and the 'Industrious Revolution' in early modern Germany." Journal of economic history 70(2): 287-325.
- Ogilvie, S. (2011). Institutions and European trade: merchant guilds, 1000-1800. Cambridge.
- Ogilvie, S., M. Küpker and J. Maegraith (2009a). "Community characteristics and demographic development: three Württemberg communities, 1558-1914." Cambridge working papers in economics 0910.
- Ogilvie, S., M. Küpker and J. Maegraith (2009b). "Women and the material culture of food in early modern Germany." Early modern women: an interdisciplinary journal 4: 149-159.
- Overton, M. (1980). 'English probate inventories and the measurement of agricultural change'. Probate inventories: a new source for the historical study of wealth,

- material culture and agricultural development. Papers presented at the Leeuwenborch Conference (Wageningen, 5-7 May 1980). Eds. A. Van der Woude and A. Schuurman. Utrecht, HES Publishers: 205-216.
- Overton, M. (2000). 'Prices from probate inventories'. When death do us part: understanding and interpreting the probate records of early modern England. Eds. T. Arkell, N. Evans and N. Goose. Oxford, Leopards Head Press: 120-143.
- Overton, M., J. Whittle, D. Dean and A. Haan (2004). Production and consumption in English households, 1600-1750. London.
- Pallot, J. (1999). Land reform in Russia, 1906-1917: peasant responses to Stolypin's project of rural transformation. Oxford.
- Paxson, C. (1990). "Borrowing constraints and portfolio choice." Quarterly journal of economics 105(2): 535-543.
- Pfister, U. (1994). "Le petit crédit rural en Suisse aux XVIe-XVIIIe siècles". Annales: histoire, sciences sociales 49(6): 1339-1357.
- Pfister, U. (2007). "Rural land and credit markets, the permanent income hypothesis and proto-industry: evidence from early modern Zurich". Continuity and change 22(3): 489-518.
- Postel-Vinay, G. (1998). La terre et l'argent: l'agriculture et le crédit en France du XVIIIe au début du XXe siècle. Paris.
- Potter, M. and J.-L. Rosenthal (2002). "The development of intermediation in French credit markets: evidence from the estates of Burgundy". Journal of economic history 62(4): 1024-1049.
- Ray, D. (1998). Development economics. Princeton.
- Reyscher, A. L. (1828ff). Vollständige, historisch und kritisch bearbeitete Sammlung der württembergischen Gesetze. 19 vols. Stuttgart.

- Riecke, C. H., Ed. (1842). Das württembergische Landrecht vom 1. Juni 1610. Stuttgart
- Sabean, D. W. (1990). Property, production and family in Neckarhausen, 1700-1870.
Cambridge.
- Sabean, D. W. (1998). Kinship in Neckarhausen, 1700-1870. Cambridge.
- Schofield, P. R. and T. Lambrecht (2009). "Introduction: credit and the rural economy in north-western Europe, c.1200-c. 1800". Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 1-18.
- Schuster, P. (2008). "The Age of Debt? Private Schulden in der spätmittelalterlichen Gesellschaft". Schuldenlast und Schuldenwert. Kreditnetzwerke in der europäischen Geschichte 1300-1900. Ed. G. B. Clemens. Trier: 37-52.
- Szczesny, A. (2002). Zwischen Kontinuität und Wandel. Ländliches Gewerbe und ländliche Gesellschaft im Ostschwaben des 17. und 18. Jahrhunderts. Tübingen.
- Sneath, K. (2009). "Consumption, wealth, indebtedness and social structure in early modern England." (Ph.D. dissertation, University of Cambridge).
- Spufford, P. (2000). "Long-term rural credit in sixteenth- and seventeenth-century England: the evidence of probate accounts." in When death do us part: understanding and interpreting the probate records of early modern England. Eds. T. Arkell, N. Evans and N. Goose. Oxford, 213-228.
- Toen, E. and T. Soens (2009). "Credit in rural Flanders, c. 1250-c.1600: its variety and significance". Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 19-38.
- Van Cruyningen, P. (2009). "Credit and agriculture in the Netherlands, eighteenth - nineteenth centuries". Credit and the rural economy in north-western Europe, c. 1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 99-108.

- Wächter, C. G. v. (1839). Handbuch des im Konigreiche Württemberg geltenden Privatrechts. Stuttgart.
- Weatherill, L. (1996). Consumer behaviour and material culture in Britain, 1660-1760. London.
- Winnige, N. (1996). Krise und Aufschwung einer frühneuzeitlichen Stadt: Göttingen 1648 - 1756. Hannover.
- Winnige, N. (2004). "Kreditgeschäfte nach dem Dreißigjährigen Krieg. Göttingen, Hannover und Calenberg/ Kurhannover 1650-1755". Frühe Neuzeit. Festschrift für Ernst Hinrichs. Eds. K.-H. Ziessow et al. Bielefeld: 73-92.
- World Bank (1989). World development report 1989: financial systems and development. Oxford.
- Wunder, H. (1987). "Finance in the economy of Old Europe: the example of peasant credit from the late Middle Ages to the Thirty Years War". Wealth and taxation in Central Europe. Ed. P.-C. Witt. Leamington Spa: 19-47.
- Zuijderduijn, J. (2009). "Village-indebtedness in Holland in the fifteenth and sixteenth centuries". Credit and the rural economy in north-western Europe, c.1200-c.1850. Eds. P. R. Schofield and T. Lambrecht. Turnhout: 138-164.

Table 1:
Population, Taxpayers, and Land Ownership, Wildberg, 1565-1889

Year	Number of taxpayers	Number of taxpayers with land	Per cent of taxpayers with land	Total number of inhabitants
1565	227	159	70	-
1594	250	222	89	830
1599	283	-	-	750
1614	327	158	48	-
1629	401	190	47	1542
1639	340	-	-	1005
1640	340	-	-	1005
1642	307	-	-	1005
1643	302	-	-	1005
1645	293	177	60	-
1665	322	-	-	1405
1686	324	181	56	1566
1695	275	167	61	995
1705	308	-	-	1295
1711	332	-	-	1333
1722	372	-	-	1363
1737	354	-	-	1386
1740a	289	182	63	1402
1740b	363	-	-	1402
1744	368	-	-	1477
1748	387	-	-	1501
1753	424	-	-	1460
1757	384	-	-	1522
1760	390	-	-	1468
1770	429	-	-	1524
1780	588	-	-	1629
1807	503	-	-	1533
1824	437	296	68	1786
1831	443	288	65	1922
1841	444	318	72	1599
1850	408	294	72	1520
1860	383	292	76	1459
1870	419	293	70	1453
1880	423	302	71	1422
1889	415	273	66	1419

Notes:

Includes only taxpayers who are 'Bürger' (those with community citizenship rights) or 'Beisitzer' (those with legal settlement rights). Excludes inhabitants of other communities paying tax on pieces of property in Wildberg. Wildberg had an average of 3.8 inhabitants per taxpayer.

Two different tax registers were drawn up in 1740: the first (1740a) provided a detailed breakdown of all items of taxable wealth while the second (1740b) provided summary information only.

Source:

Taxpayers: HStAS A573 Bü. 1055-1145 (Steuerregister); HStAS A573 Bü. 5415 (Vermögensverzeichnisse); HStAS A573a Nr 197, 204 (Steuerregister).

Population: Ogilvie/Küpker/Maeraith (2009), Table 1.

Figure 1: Percentage of taxpayers inventoried at least once, Wildberg, 1565-1744

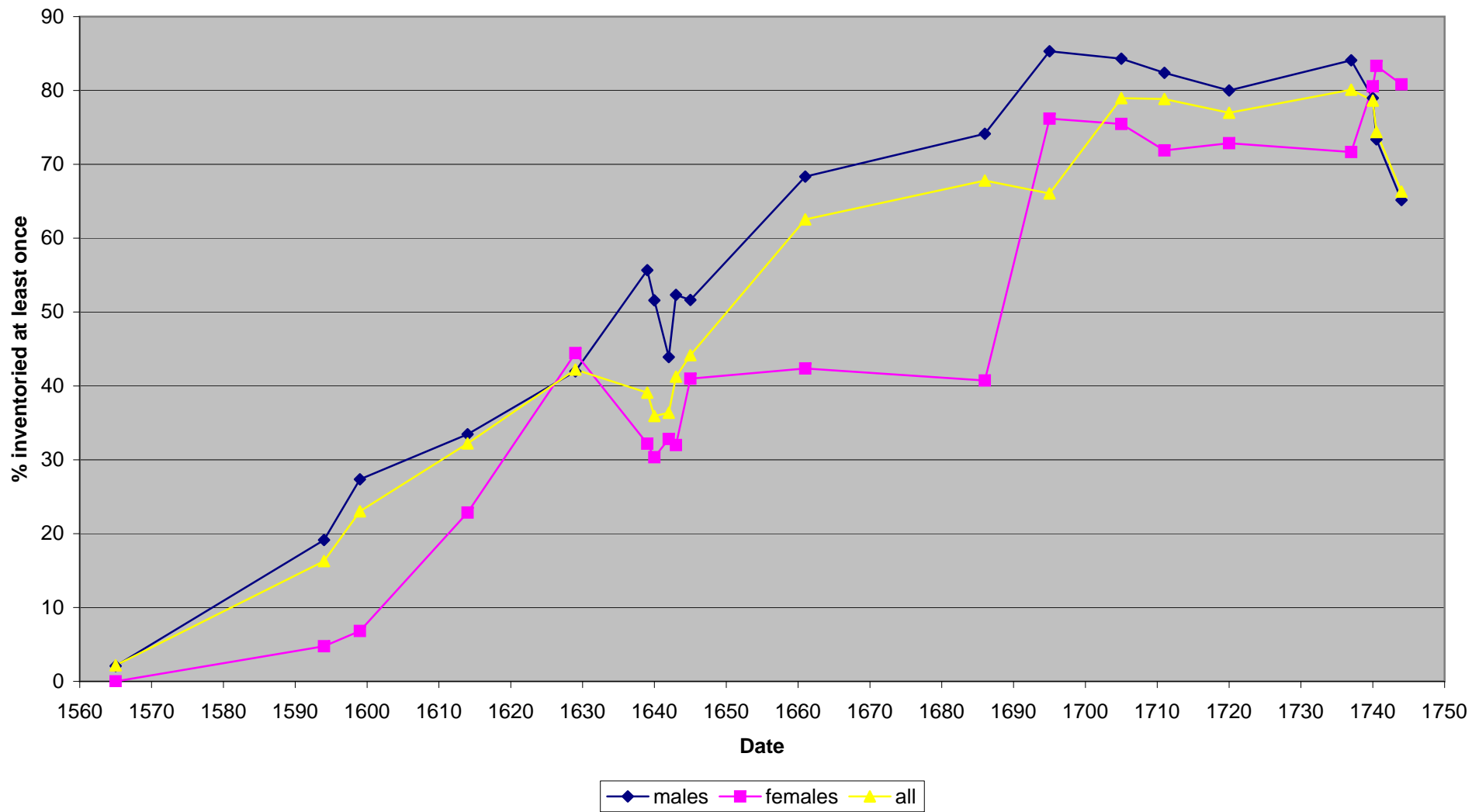


Table 2:
Individuals at Marriage, Ownership of Various Asset Categories, Wildberg, 1602-1700

Type of Item	Unmarried				Widowed				Unknown				Total			
	Male		Female		Male		Female		Male		Female		Male		Female	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Financial liabilities (<i>Passiva</i>)	85	18	40	7	149	88	68	67	5	50	1	13	239	37	109	17
Financial assets (<i>Aktiva</i>)	110	24	118	22	102	60	63	62	7	70	1	13	219	34	182	28
Both <i>Passiva</i> & <i>Aktiva</i>	38	8	17	3	94	55	46	46	5	50	0	0	137	21	63	10
Cash	216	47	336	62	59	35	49	49	1	10	4	50	276	43	389	60
Silver valuables	54	12	123	23	50	29	33	33	2	20	2	25	106	17	158	24
Buildings	56	12	41	8	118	69	58	57	4	40	0	0	178	28	99	15
Land	75	16	68	13	102	60	52	51	6	60	0	0	183	29	120	18
Both buildings & land	37	8	25	5	94	55	42	42	4	40	0	0	135	21	67	10
Clothing	405	88	486	90	158	93	83	82	9	90	8	100	572	89	577	88
Ornaments & jewellery	21	5	247	45	43	25	38	38	1	10	3	38	65	10	288	44
Weapons	326	71	9	2	126	74	28	28	7	70	0	0	459	72	37	6
Books	265	58	201	37	113	66	55	54	5	50	1	13	383	60	257	39
Music	10	2	2	0	5	3	2	2	0	0	0	0	15	2	4	1
Bedding	111	24	507	93	161	95	97	96	7	70	7	88	279	44	611	94
Household linen	173	38	524	97	160	94	97	96	7	70	8	100	340	53	629	96
Household vessels (<i>Geschirr</i>)	217	47	505	93	162	95	96	95	7	70	8	100	386	60	609	93
Furniture	204	44	486	90	162	95	97	96	7	70	7	88	373	58	590	90
Household goods (<i>Hausrat</i>)	275	60	435	80	163	96	92	91	7	70	4	50	445	70	531	81
Tools (farm & craft)	326	71	52	10	152	89	55	54	8	80	2	25	486	76	109	17
Animals	51	11	113	21	86	51	47	47	5	50	0	0	142	22	160	25
Food & grain stores	48	10	78	14	89	52	54	53	5	50	1	13	142	22	133	20
Wares (from workshop)	2	0	1	0	9	5	6	6	0	0	0	0	11	2	7	1
Miscellaneous	11	2	9	2	3	2	4	4	0	0	1	13	14	2	14	2
Total inventoried	460	100	543	100	170	100	101	100	10	100	8	100	640	100	652	100

Sources: HStAS, A573, Bü. 4798-4802, 4804, 4806-4808, 4814 (Abschriften); Bü. 4870-4871, 4874, 4876-4892, 4895-4897, 4901-4947 (Originale) (1602-1700).

Notes: Includes all marriage inventories (*Beibringungsinventare*) in which bride (n=652) or groom (n=640) is recorded separately.

Table 3:
Individuals at Death, Ownership of Various Asset Categories, Wildberg, 1602-1700

Type of Item	Unmarried				Widowed				Unknown				Total			
	Male		Female		Male		Female		Male		Female		Male		Female	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Financial liabilities (<i>Passiva</i>)	2	100	4	100	43	91	75	84	2	100	0	0	47	92	79	85
Financial assets (<i>Aktiva</i>)	2	100	3	75	38	81	71	80	2	100	0	0	42	82	74	80
Both <i>Passiva</i> & <i>Aktiva</i>	2	100	3	75	35	74	60	67	2	100	0	0	39	76	63	68
Cash	1	50	0	0	8	17	21	24	0	0	0	0	9	18	21	23
Silver valuables	0	0	1	25	6	13	15	17	0	0	0	0	6	12	16	17
Buildings	2	100	3	75	33	70	56	63	1	50	0	0	36	71	59	63
Land	1	50	1	25	32	68	59	66	1	50	0	0	34	67	60	65
Both buildings & land	1	50	1	25	24	51	45	51	1	50	0	0	26	51	46	49
Clothing	2	100	4	100	39	83	79	89	2	100	0	0	43	84	83	89
Ornaments & jewellery	0	0	1	25	4	9	17	19	0	0	0	0	4	8	18	19
Weapons	1	50	0	0	23	49	24	27	2	100	0	0	26	51	24	26
Books	0	0	0	0	26	55	45	51	0	0	0	0	26	51	45	48
Music	0	0	0	0	2	4	2	2	0	0	0	0	2	4	2	2
Bedding	2	100	3	75	45	96	86	97	2	100	0	0	49	96	89	96
Household linen	2	100	4	100	45	96	85	96	2	100	0	0	49	96	89	96
Household vessels (<i>Geschirr</i>)	2	100	4	100	46	98	87	98	2	100	0	0	50	98	91	98
Furniture	1	50	4	100	45	96	88	99	2	100	0	0	48	94	92	99
Household goods (<i>Hausrat</i>)	2	100	4	100	44	94	81	91	2	100	0	0	48	94	85	91
Tools (farm & craft)	2	100	1	25	39	83	52	58	2	100	0	0	43	84	53	57
Animals	0	0	0	0	11	23	31	35	1	50	0	0	12	24	31	33
Food & grain stores	1	50	0	0	16	34	38	43	1	50	0	0	18	35	38	41
Wares (from workshop)	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
Miscellaneous	0	0	0	0	1	2	0	0	0	0	0	0	1	2	0	0
Total inventoried	2	100	4	100	47	100	89	100	2	100	0	0	51	100	93	100

Sources: As for Table 2.

Notes: Includes all death inventories recording possessions of an individual rather than a couple.

Table 4:
Couples at Marriage and Death, Ownership of Various Asset Categories, Wildberg, 1602-1700

Type of Item	Marriage		Death		All	
	no.	%	no.	%	no.	%
Financial liabilities (<i>Passiva</i>)	293	46	286	94	579	62
Financial assets (<i>Aktiva</i>)	314	50	236	78	550	59
Both <i>Passiva</i> & <i>Aktiva</i>	203	32	226	74	429	46
Cash	484	76	114	38	598	64
Silver valuables	208	33	124	41	332	35
Buildings	248	39	264	87	512	55
Land	255	40	229	75	484	52
Both buildings & land	189	30	216	71	405	43
Clothing	584	92	261	86	845	90
Ornaments & jewellery	314	50	74	24	388	41
Weapons	468	74	144	47	612	65
Books	435	69	122	40	557	59
Music	19	3	4	1	23	2
Bedding	614	97	303	100	917	98
Household linen	625	99	303	100	928	99
Household vessels (<i>Geschirr</i>)	617	97	303	100	920	98
Furniture	608	96	304	100	912	97
Household goods (<i>Hausrat</i>)	585	92	302	99	887	95
Tools (farm & craft)	508	80	250	82	758	81
Animals	239	38	187	62	426	45
Food & grain stores	218	34	201	66	419	45
Wares (from workshop)	16	3	25	8	41	4
Miscellaneous	25	4	7	2	32	3
Total	634	100	304	100	938	100

Sources: As for Table 2.

Notes:

Marriage inventories = all *Bebringungsinventare* in which spouses are not listed separately (n=2) plus all which incorporate both a groom list and a bride list (n=632)

Death inventories = all contingent inheritance inventories (*Eventualteilungen*) (n=283) plus those actual inheritance inventories (*Realteilungen*) in which the two spouses died at the same time (n=21).

Table 5:
Indebtedness by Economic Stratum, Marriage and Death Inventories with Complete Values, Wildberg, 1602-1700

	Zero assets		1-49 fl		50-99 fl		100-199 fl		200-499 fl		500-999 fl		Over 1000 fl		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Individuals																
Zero debts	5	83.3	300	88.2	256	89.5	179	75.8	93	45.1	11	14.7	5	15.2	849	71.8
Debts 0.1-9.9% of wealth	0	0.0	11	3.2	15	5.2	20	8.5	39	18.9	31	41.3	13	39.4	129	10.9
Debts 10-19.9% of wealth	0	0.0	7	2.1	9	3.1	16	6.8	19	9.2	12	16.0	6	18.2	69	5.8
Debts 20-29.9% of wealth	0	0.0	5	1.5	2	0.7	8	3.4	19	9.2	10	13.3	4	12.1	48	4.1
Debts 30-39.9% of wealth	0	0.0	5	1.5	3	1.0	5	2.1	13	6.3	3	4.0	2	6.1	31	2.6
Debts 40-49.9% of wealth	0	0.0	2	0.6	1	0.3	2	0.8	9	4.4	2	2.7	1	3.0	17	1.4
Debts 50-59.9% of wealth	0	0.0	1	0.3	0	0.0	3	1.3	7	3.4	3	4.0	1	3.0	15	1.3
Debts 60-100% of wealth	0	0.0	2	0.6	0	0.0	3	1.3	7	3.4	2	2.7	1	3.0	15	1.3
Debts >100% of wealth	0	0.0	7	2.1	0	0.0	0	0.0	0	0.0	1	1.3	0	0.0	8	0.7
Positive debts, zero wealth	1	16.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Total individuals	6	100.0	340	100.0	286	100.0	236	100.0	206	100.0	75	100.0	33	100.0	1182	100.0
Couples																
Zero debts	0	0.0	20	57.1	70	78.7	104	67.1	73	39.0	16	15.0	3	4.6	286	44.8
Debts 0.1-9.9% of wealth	0	0.0	5	14.3	5	5.6	20	12.9	44	23.5	41	38.3	27	41.5	142	22.3
Debts 10-19.9% of wealth	0	0.0	3	8.6	4	4.5	13	8.4	23	12.3	20	18.7	14	21.5	77	12.1
Debts 20-29.9% of wealth	0	0.0	1	2.9	4	4.5	7	4.5	14	7.5	14	13.1	9	13.8	49	7.7
Debts 30-39.9% of wealth	0	0.0	2	5.7	3	3.4	3	1.9	16	8.6	5	4.7	8	12.3	37	5.8
Debts 40-49.9% of wealth	0	0.0	1	2.9	1	1.1	2	1.3	8	4.3	6	5.6	1	1.5	19	3.0
Debts 50-59.9% of wealth	0	0.0	0	0.0	0	0.0	0	0.0	3	1.6	0	0.0	2	3.1	5	0.8
Debts 60-100% of wealth	0	0.0	2	5.7	2	2.2	5	3.2	5	2.7	5	4.7	1	1.5	20	3.1
Debts >100% of wealth	0	0.0	1	2.9	0	0.0	1	0.6	1	0.5	0	0.0	0	0.0	3	0.5
Positive debts, zero wealth	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total couples	0	0.0	35	100.0	89	100.0	155	100.0	187	100.0	107	100.0	65	100.0	638	100.0

Sources: As for Table 2.

Notes:

Economic stratum is measured in inflation-adjusted Gulden (fl); index year is 1565.
Includes only those inventories for which monetary values are recorded for all items.
Columns do not always add up to 100% because of rounding.

Table 6:
Value of Debts as Proportion of Real Estate and Moveables,
Marriage and Death Inventories with Complete Values, Wildberg, 1602-1700

	Individuals		Couples	
	no.	%	no.	%
Real estate:				
Zero debts, zero real estate	756	64.0	229	35.9
Zero debts, positive real estate	93	7.9	57	8.9
Debts = 1-59% of real estate	178	15.1	217	34.0
Debts = 60-100% of real estate	38	3.2	44	6.9
Debts > 100% of real estate	16	1.4	21	3.3
Positive debts, zero real estate	101	8.5	70	11.0
Moveables (including financial assets):				
Zero debts, zero moveables	5	0.4	0	0.0
Zero debts, positive moveables	844	71.4	286	44.8
Debts = 1-59% of moveables	230	19.5	250	39.2
Debts = 60-100% of moveables	37	3.1	56	8.8
Debts > 100% of moveables	65	5.5	46	7.2
Positive debts, zero moveables	1	0.1	0	0.0
Total inventories	1182	100.0	638	100.0

Sources:

As for Table 2.

Notes:

As for Table 5.

Table 7:
Number of Marriage and Death Inventories for Individuals and Couples, Wildberg 1602-1700

Inventory type	no.
Marriage inventories: total documents	662
Marriage inventories: with any individualized list	660
Marriage inventories: with combined couple-list	2
Marriage inventories: with individual bride-list	652
Marriage inventories: with individual groom-list	640
Marriage inventories: with both bride-list and groom-list	632
Marriage inventories: total individual lists	1292
Marriage inventories: total couple lists	634
Death inventories: total documents	448
Death inventories for individuals: females plus males	144
Death inventories for individuals: females	93
Death inventories for individuals: males	51
Death inventories: couples	304

Sources:

As for Table 2.

Notes:

Of the 660 marriage inventories with individualized lists, 28 record only one spouse: in 8 cases it is groom only, in 20 cases bride only.

Table 8:
Number of Inventories According to Recording of Values, Wildberg, 1602-1700

Values missing for	Individual inventories						Couple inventories					
	Marriage		Death		Total		Marriage		Death		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
0% of items	1098	85.0	84	58.3	1182	82.3	477	75.2	161	53.0	638	68.0
<1% of items	1141	88.3	103	71.5	1244	86.6	536	84.5	197	64.8	733	78.1
<5% of items	1219	94.3	116	80.6	1335	93.0	594	93.7	239	78.6	833	88.8
0% of total value	1100	85.1	84	58.3	1184	82.5	479	75.6	164	53.9	643	68.6
<1% of total value	1169	90.5	105	72.9	1274	88.7	551	86.9	207	68.1	758	80.8
<5% of total value	1190	92.1	113	78.5	1303	90.7	562	88.6	223	73.4	785	83.7
Total inventories	1292	100.0	144	100.0	1436	100.0	634	100.0	304	100.0	938	100.0

Sources:

As for Table 2.

Note:

Percentages for "total value" are calculated using the estimated value of items for which no value is recorded, based on mean value of that item in other inventories.

Table 9:
Age Distribution of Inventoried Individuals, Wildberg, 1602-1700

Age	Marriage Inventories			Death Inventories			All Inventories		
	m	f	total	m	f	total	m	f	total
17	1	5	6	0	0	0	1	5	6
18	4	12	16	0	0	0	4	12	16
19	4	22	26	0	0	0	4	22	26
20	24	24	48	0	0	0	24	24	48
21	27	32	59	0	0	0	27	32	59
22	22	37	59	0	0	0	22	37	59
23	47	38	85	0	1	1	47	39	86
24	36	33	69	0	0	0	36	33	69
25	37	29	66	1	0	1	38	29	67
26	33	27	60	0	0	0	33	27	60
27	32	24	56	0	0	0	32	24	56
28	22	22	44	1	0	1	23	22	45
29	24	14	38	0	0	0	24	14	38
30	24	14	38	0	0	0	24	14	38
31	16	14	30	0	0	0	16	14	30
32	9	7	16	0	0	0	9	7	16
33	15	11	26	0	0	0	15	11	26
34	14	11	25	0	1	1	14	12	26
35	4	3	7	0	0	0	4	3	7
36	9	7	16	0	0	0	9	7	16
37	3	7	10	0	0	0	3	7	10
38	5	4	9	0	1	1	5	5	10
39	3	5	8	1	0	1	4	5	9
40	5	5	10	0	0	0	5	5	10
41	3	4	7	0	0	0	3	4	7
42	4	6	10	0	0	0	4	6	10
43	2	4	6	0	0	0	2	4	6
44	3	1	4	0	0	0	3	1	4
45	3	3	6	1	0	1	4	3	7
46	0	4	4	0	1	1	0	5	5
47	1	7	8	0	1	1	1	8	9
48	2	3	5	0	1	1	2	4	6
49	2	4	6	0	1	1	2	5	7
50	2	4	6	3	4	7	5	8	13
51	2	0	2	0	1	1	2	1	3
52	4	0	4	1	0	1	5	0	5
53	5	0	5	1	1	2	6	1	7
54	1	1	2	1	1	2	2	2	4
55	2	0	2	0	1	1	2	1	3
56	1	3	4	0	2	2	1	5	6
57	3	2	5	2	1	3	5	3	8
58	2	1	3	1	2	3	3	3	6
59	7	0	7	1	1	2	8	1	9
60	2	1	3	1	4	5	3	5	8
61	2	0	2	0	0	0	2	0	2
63	2	1	3	1	5	6	3	6	9
64	1	0	1	1	0	1	2	0	2
65	4	0	4	1	1	2	5	1	6
66	0	0	0	2	1	3	2	1	3
67	0	0	0	0	5	5	0	5	5
68	1	0	1	0	4	4	1	4	5
69	2	0	2	0	2	2	2	2	4
70	3	0	3	0	5	5	3	5	8
71	1	0	1	4	3	7	5	3	8
72	0	1	1	1	2	3	1	3	4
73	1	0	1	1	6	7	2	6	8
74	1	0	1	1	1	2	2	1	3
75	0	0	0	3	3	6	3	3	6
76	1	0	1	2	1	3	3	1	4
77	0	0	0	0	1	1	0	1	1
78	0	0	0	2	1	3	2	1	3
79	0	0	0	3	1	4	3	1	4
80	0	0	0	0	1	1	0	1	1
81	0	0	0	1	0	1	1	0	1
82	0	0	0	2	1	3	2	1	3
83	0	0	0	2	1	3	2	1	3
87	0	0	0	1	0	1	1	0	1
unknown age	150	195	345	8	23	31	158	218	376
total	640	652	1292	51	93	144	691	745	1436
% unknown	23.4	29.9	26.7	15.7	24.7	21.5	22.9	29.3	26.2

Table 10: Tobit Model of Value of Individuals' Borrowing, Wildberg 1602-1700

Variable	Tobit coefficient	Marginal effect
Period 1602-1633	-3.646*** (1.210)	-0.591*** (0.193)
Period 1634-1648	3.408* (2.042)	0.553* (0.330)
Period 1649-1686	-0.308 (0.585)	-0.0500 (0.0947)
Period 1687-1700	3.095* (1.666)	0.502* (0.267)
Female single	-30.44 (19.98)	-4.982 (3.298)
Male widowed	96.16*** (18.88)	22.52*** (5.578)
Female widowed	100.661*** (20.630)	28.007*** (8.079)
Husband migrated	-11.70 (10.99)	-1.898 (1.764)
Wife migrated	7.541 (8.889)	1.223 (1.433)
Death inventory	69.59** (27.47)	17.02* (8.794)
No. live children	-8.027 (6.189)	-1.302 (1.005)
No. non-child heirs	-0.554 (3.553)	-0.0899 (0.577)
Known proto-industrial occupation	-15.25* (9.182)	-2.459* (1.484)
Unknown if proto-industrial occupation	16.78 (15.53)	2.981 (2.977)
Buildings in marriage inventory for unmarried	0.943*** (0.136)	0.153*** (0.0213)
Buildings in death inventory for unmarried	0.583*** (0.152)	0.095*** (0.024)
Buildings in marriage inventory for widowed	0.369*** (0.074)	0.600*** (0.012)
Buildings in death inventory for widowed	0.009 (0.108)	0.001 (0.018)
Land	-0.0109 (0.0702)	-0.00177 (0.0114)
Furniture for unmarried	-4.303 (3.162)	-0.698 (0.493)
Furniture for widowed	7.423*** (1.957)	1.902*** (0.566)
Cash	-0.149 (0.120)	-0.0241 (0.0191)
Silver for males	11.58*** (4.166)	1.879*** (0.696)
Silver for females	-10.73 (8.649)	-1.740 (1.402)
Financial assets for unmarried	0.241*** (0.0689)	0.0391*** (0.0111)
Financial assets for widowed	0.036 (0.0463)	0.006 (0.007)
Personal items for males	0.287 (0.482)	0.0465 (0.0784)
Personal items for females	-0.766* (0.417)	-0.124* (0.011)
Non-durable hh goods for unmarried	0.855*** (0.314)	0.139*** (0.0485)
Non-durable hh goods for widowed	-0.151 (0.188)	-0.163*** (0.0502)

Notes:

N=1182. Robust standard errors in parentheses. Marginal effect is effect on mean value of dependent variable, assessed at sample mean of all other variables, conditional on dependent variable being positive or zero.

*** significant at 0.01 level; ** significant at 0.05 level; * significant at 0.10 level.

Occupations: omitted category is "Known non-proto-industrial occupation".

Table 11: Tobit Model of Value of Couples' Borrowing, Wildberg 1602-1700

Variable	Tobit coefficient (standard error)	Marginal effect
Period 1602-1633	-3.073*** (1.015)	-1.526*** (0.502)
Period 1634-1648	-1.964 (1.860)	-0.975 (0.920)
Period 1649-1686	0.891 (0.618)	0.442 (0.306)
Period 1687-1700	4.481** (1.937)	2.225** (0.951)
Husband migrated	-20.88 (13.86)	-10.37 (6.836)
Wife migrated	10.81 (11.06)	5.366 (5.481)
Death inventory	120.4*** (19.84)	71.66*** (12.89)
No. live children	-0.199 (5.812)	-0.0989 (2.886)
No. non-child heirs	0.928 (4.333)	0.461 (2.150)
Proto-industrial	-40.57*** (11.26)	-19.79*** (5.300)
Unknown if proto-industrial	-7.023 (17.48)	-3.426 (8.395)
Buildings in marriage inventory	0.602*** (0.118)	0.299*** (0.0550)
Buildings in death inventory	0.081 (0.068)	0.040 (0.034)
Land in marriage inventory	-0.132 (0.142)	-0.0655 (0.0698)
Land in death inventory	0.347*** (0.115)	0.172*** (0.057)
Cattle in marriage inventory	-0.867 (0.564)	-0.431 (0.281)
Cattle in death inventory	-2.832*** (0.765)	-1.406*** (0.380)
Furniture	2.731** (1.369)	1.356* (0.693)
Cash	-0.220** (0.0868)	-0.109** (0.0425)
Silver in marriage inventory	16.64*** (3.895)	8.260*** (1.998)
Silver in death inventory	4.598* (2.722)	2.238* (1.353)
Financial assets in marriage inventory	0.373** (0.162)	0.185** (0.0781)
Financial assets in death inventory	0.039 (0.030)	0.019 (0.015)
Work-related tools & wares	1.440*** (0.347)	0.715*** (0.169)

Notes:

N=638. Otherwise as for Table 10.

Table 12:
Number of Debts by Primary Purpose, Wildberg 1602-1700

	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	no.	%	no.	%	no.	%	no.	%	no.	%
Specific purpose										
Consumption										
Grain	34	4.6	14	4.3	78	5.2	38	6.6	164	5.2
Comestibles	118	15.9	32	9.9	132	8.8	51	8.8	333	10.6
Clothing & shoes	22	3.0	12	3.7	16	1.1	3	0.5	53	1.7
Wedding expenses	5	0.7	0	0.0	2	0.1	2	0.3	9	0.3
Medical expenses	12	1.6	7	2.2	45	3.0	18	3.1	82	2.6
Funeral expenses	2	0.3	7	2.2	36	2.4	51	8.8	96	3.1
Maintenance expenses	5	0.7	3	0.9	13	0.9	8	1.4	29	0.9
Misc	8	1.1	3	0.9	15	1.0	4	0.7	30	1.0
Consumption total	206	27.8	78	24.1	337	22.4	175	30.2	796	25.3
Production										
Land	31	4.2	11	3.4	40	2.7	9	1.6	91	2.9
Cloth	48	6.5	10	3.1	39	2.6	2	0.3	99	3.1
Textile intermediate	5	0.7	0	0.0	19	1.3	10	1.7	34	1.1
Worsted-trading company	0	0.0	0	0.0	24	1.6	8	1.4	32	1.0
Leather industry	24	3.2	2	0.6	27	1.8	24	4.1	77	2.4
Tools	13	1.8	2	0.6	7	0.5	9	1.6	31	1.0
Wages	79	10.6	45	13.9	221	14.7	58	10.0	403	12.8
Raw materials	76	10.2	13	4.0	115	7.7	39	6.7	243	7.7
Misc	0	0.0	0	0.0	6	0.4	1	0.2	7	0.2
Production total	276	37.2	83	25.7	498	33.2	160	27.6	1017	32.3
Mixed										
Buildings	81	10.9	43	13.3	146	9.7	53	9.1	323	10.3
Mixed real estate	3	0.4	1	0.3	2	0.1	4	0.7	10	0.3
Animals	23	3.1	11	3.4	45	3.0	7	1.2	86	2.7
Wares	13	1.8	1	0.3	69	4.6	14	2.4	97	3.1
Taxes	59	8.0	59	18.3	268	17.8	134	23.1	520	16.5
Fines	1	0.1	1	0.3	10	0.7	1	0.2	13	0.4
Inheritance-related	21	2.8	21	6.5	54	3.6	18	3.1	114	3.6
Charitable donation	1	0.1	5	1.5	6	0.4	0	0.0	12	0.4
Inventorying & writing costs	50	6.7	14	4.3	55	3.7	11	1.9	130	4.1
Misc	8	1.1	6	1.9	12	0.8	3	0.5	29	0.9
Mixed total	260	35.0	162	50.2	667	44.4	245	42.2	1334	42.4
Specific purpose total	742	100.0	323	100.0	1502	100.0	580	100.0	3147	100.0
General purpose										
Capital sum	199	56.1	103	53.9	286	45.7	165	46.1	753	49.2
Capital sum plus interest	3	0.8	1	0.5	6	1.0	0	0.0	10	0.7
Debts, no further description	17	4.8	2	1.0	26	4.2	1	0.3	46	3.0
Financial instruments	3	0.8	2	1.0	8	1.3	2	0.6	15	1.0
Installments	4	1.1	4	2.1	21	3.4	9	2.5	38	2.5
Moneys	25	7.0	13	6.8	37	5.9	7	2.0	82	5.4
Minor day-to-day debts	10	2.8	2	1.0	16	2.6	2	0.6	30	2.0
Zins on capital	5	1.4	1	0.5	19	3.0	4	1.1	29	1.9
Zins, no further description	89	25.1	63	33.0	207	33.1	168	46.9	527	34.4
General purpose total	355	100.0	191	100.0	626	100.0	358	100.0	1530	100.0
No purpose given										
Private persons	691	87.1	215	83.3	1413	81.1	564	79.5	2883	82.3
Officials	33	4.2	11	4.3	107	6.1	66	9.3	217	6.2
Institutions	33	4.2	11	4.3	132	7.6	40	5.6	216	6.2
Other	36	4.5	21	8.1	91	5.2	39	5.5	187	5.3
No purpose given total	793	100.0	258	100.0	1743	100.0	709	100.0	3503	100.0
Specific purpose given	742	39.3	323	41.8	1502	38.8	580	35.2	3147	38.5
General purpose given	355	18.8	191	24.7	626	16.2	358	21.7	1530	18.7
No purpose given	793	42.0	258	33.4	1743	45.0	709	43.0	3503	42.8
All debts	1890	100.0	772	100.0	3871	100.0	1647	100.0	8180	100.0

Sources: As for Table 2.

Notes:

Includes only those debts for which values were recorded (n=8,180).
Columns do not always add up to 100% because of rounding.

Table 13:
Value of Debts by Primary Purpose, Wildberg 1602-1700

	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	value	%	value	%	value	%	value	%	value	%
Specific purpose										
Consumption										
Grain	69.1	2.0	26.4	2.0	198.1	3.6	47.5	3.5	341.0	3.0
Comestibles	165.4	4.9	95.3	7.3	207.4	3.8	89.6	6.6	557.7	4.9
Clothing & shoes	42.1	1.2	1.9	0.1	6.6	0.1	7.1	0.5	57.8	0.5
Wedding expenses	7.3	0.2		0.0	0.9	0.0	0.2	0.0	8.4	0.1
Medical expenses	7.5	0.2	3.3	0.3	15.7	0.3	3.3	0.2	29.8	0.3
Funeral expenses	2.5	0.1	3.5	0.3	25.9	0.5	61.6	4.5	93.4	0.8
Maintenance expenses	2.0	0.1	2.5	0.2	34.6	0.6	7.8	0.6	46.8	0.4
Misc	4.7	0.1	11.9	0.9	19.6	0.4	7.9	0.6	44.1	0.4
Consumption total	300.5	8.9	144.9	11.1	508.8	9.4	224.9	16.5	1179.1	10.3
Production										
Land	304.0	9.0	46.2	3.5	377.6	6.9	35.7	2.6	763.6	6.6
Cloth	154.7	4.6	12.4	1.0	73.5	1.4	0.2	0.0	240.9	2.1
Textile intermediate	28.3	0.8	0.0	0.0	17.6	0.3	12.8	0.9	58.7	0.5
Worsted-trading company	0.0	0.0	0.0	0.0	42.4	0.8	3.9	0.3	46.3	0.4
Leather industry	81.1	2.4	1.6	0.1	19.3	0.4	12.5	0.9	114.5	1.0
Tools	14.1	0.4	0.1	0.0	0.9	0.0	92.3	6.8	107.5	0.9
Wages	84.7	2.5	30.0	2.3	235.9	4.3	14.2	1.0	364.8	3.2
Raw materials	228.4	6.8	57.1	4.4	588.7	10.8	107.7	7.9	982.0	8.5
Misc	0.0	0.0	0.0	0.0	7.8	0.1	0.0	0.0	7.8	0.1
Production total	895.4	26.5	147.5	11.3	1363.8	25.1	279.4	20.4	2686.1	23.4
Mixed										
Buildings	1742.1	51.6	629.4	48.1	2274.9	41.8	578.3	42.3	5224.7	45.5
Mixed real estate	21.1	0.6	3.5	0.3	23.5	0.4	49.2	3.6	97.3	0.8
Animals	45.8	1.4	14.3	1.1	148.8	2.7	34.6	2.5	243.4	2.1
Wares	56.1	1.7	10.6	0.8	141.9	2.6	16.7	1.2	225.3	2.0
Taxes	66.7	2.0	61.4	4.7	357.8	6.6	140.5	10.3	626.4	5.5
Fines	0.4	0.0	0.3	0.0	15.6	0.3	1.1	0.1	17.3	0.2
Inheritance-related	171.0	5.1	212.2	16.2	525.7	9.7	24.9	1.8	933.8	8.1
Charitable donation	17.6	0.5	31.7	2.4	11.3	0.2	0.0	0.0	60.5	0.5
Inventorying & writing costs	35.2	1.0	21.8	1.7	19.2	0.4	3.6	0.3	79.7	0.7
Misc	23.9	0.7	29.9	2.3	47.0	0.9	13.4	1.0	114.3	1.0
Mixed total	2179.8	64.6	1015.0	77.6	3565.6	65.6	862.3	63.1	7622.7	66.4
Specific purpose total	3375.7	100.0	1307.4	100.0	5438.2	100.0	1366.6	100.0	11487.9	100.0
General purpose										
Capital sum	1446.8	57.7	773.1	73.9	1645.5	64.3	965.2	77.7	4830.7	65.7
Capital sum plus interest	52.1	2.1	17.6	1.7	61.8	2.4	0.0	0.0	131.5	1.8
Debts, no further description	85.7	3.4	28.2	2.7	443.4	17.3	0.0	0.0	557.3	7.6
Financial instruments	24.6	1.0	3.0	0.3	19.5	0.8	0.2	0.0	47.3	0.6
Installments	23.5	0.9	40.5	3.9	92.2	3.6	110.3	8.9	266.6	3.6
Moneys	786.2	31.3	43.2	4.1	85.7	3.3	8.9	0.7	923.9	12.6
Minor day-to-day debts	8.9	0.4	3.5	0.3	27.0	1.1	0.5	0.0	40.0	0.5
Zins on capital	4.4	0.2	0.8	0.1	19.0	0.7	5.0	0.4	29.2	0.4
Zins, no further description	76.6	3.1	135.7	13.0	166.1	6.5	151.5	12.2	530.0	7.2
General purpose total	2508.8	100.0	1045.6	100.0	2560.2	100.0	1241.7	100.0	7356.4	100.0
No purpose given										
Private persons	1228.7	69.2	440.0	61.5	1578.4	66.5	814.9	82.1	4062.1	69.4
Officials	69.1	3.9	36.8	5.1	209.7	8.8	54.5	5.5	370.1	6.3
Institutions	133.7	7.5	52.4	7.3	423.4	17.8	59.9	6.0	669.5	11.4
Other	343.4	19.3	186.7	26.1	161.3	6.8	63.1	6.4	754.5	12.9
No purpose given total	1774.9	100.0	716.0	100.0	2372.9	100.0	992.4	100.0	5856.2	100.0
Specific purpose given	3375.7	44.1	1307.4	42.6	5438.2	52.4	1366.6	38.0	11487.9	46.5
General purpose given	2508.8	32.8	1045.6	34.1	2560.2	24.7	1241.7	34.5	7356.4	29.8
No purpose given	1774.9	23.2	716.0	23.3	2372.9	22.9	992.4	27.6	5856.2	23.7
All debts	7659.4	100.0	3069.0	100.0	10371.3	100.0	3600.7	100.0	24700.4	100.0

Sources: As for Table 2.

Notes: As for Table 12.

Table 14:
Number of Debts by Documentation, Wildberg 1602-1700

Documentation	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	no.	%	no.	%	no.	%	no.	%	no.	%
Accounts										
Public	4	8.9	3	14.3	26	22.2	5	19.2	38	18.2
Private	19	42.2	9	42.9	18	15.4	6	23.1	52	24.9
Unknown	1	2.2	0	0.0	2	1.7	2	7.7	5	2.4
Accounts Total	24	53.3	12	57.1	46	39.3	13	50.0	95	45.5
Registers & books										
Public	1	2.2	2	9.5	32	27.4	10	38.5	45	21.5
Private	0	0.0	0	0.0	4	3.4	0	0.0	4	1.9
Unknown	0	0.0	0	0.0	4	3.4	0	0.0	4	1.9
Registers & Books Total	1	2.2	2	9.5	40	34.2	10	38.5	53	25.4
Inheritance-related										
Will	0	0.0	0	0.0	2	1.7	0	0.0	2	1.0
Inventory	4	8.9	0	0.0	2	1.7	0	0.0	6	2.9
Division	1	2.2	4	19.0	4	3.4	0	0.0	9	4.3
Guardian	2	4.4	0	0.0	1	0.9	0	0.0	3	1.4
Specification	0	0.0	0	0.0	1	0.9	0	0.0	1	0.5
Inheritance Total	7	15.6	4	19.0	10	8.5	0	0.0	21	10.0
Legal court	4	8.9	0	0.0	1	0.9	0	0.0	5	2.4
Misc. Public										
Public: Auszug	0	0.0	0	0.0	2	1.7	0	0.0	2	1.0
Public: Brief	3	6.7	0	0.0	0	0.0	0	0.0	3	1.4
Public: Specification	0	0.0	0	0.0	2	1.7	1	3.8	3	1.4
Public: Verzeichnis	0	0.0	0	0.0	2	1.7	0	0.0	2	1.0
Misc. Public Total	3	6.7	0	0.0	6	5.1	1	3.8	10	4.8
Misc. Private										
Private: Auszug	0	0.0	0	0.0	1	0.9	0	0.0	1	0.5
Private: Bekenntnis	0	0.0	1	4.8	0	0.0	0	0.0	1	0.5
Private: Brief	3	6.7	0	0.0	0	0.0	0	0.0	3	1.4
Private: Handschrift	1	2.2	1	4.8	1	0.9	0	0.0	3	1.4
Private: Kontrakt	0	0.0	0	0.0	0	0.0	2	7.7	2	1.0
Private: Obligation	0	0.0	0	0.0	2	1.7	0	0.0	2	1.0
Private: Schreiben	1	2.2	0	0.0	0	0.0	0	0.0	1	0.5
Private: Urkunde	0	0.0	0	0.0	1	0.9	0	0.0	1	0.5
Private: Zettel	1	2.2	0	0.0	5	4.3	0	0.0	6	2.9
Misc. Private Total	6	13.3	2	9.5	10	8.5	2	7.7	20	9.6
Misc. Unknown										
Unknown: Auszug	0	0.0	0	0.0	1	0.9	0	0.0	1	0.5
Unknown: Caution	0	0.0	0	0.0	2	1.7	0	0.0	2	1.0
Unknown: Schreiber	0	0.0	1	4.8	0	0.0	0	0.0	1	0.5
Unknown: Urkunde	0	0.0	0	0.0	1	0.9	0	0.0	1	0.5
Misc. Unknown Total	0	0.0	1	4.8	4	3.4	0	0.0	5	2.4
Total with documentation	45	100.0	21	100.0	117	100.0	26	100.0	209	100.0
No documentation recorded	1845	97.6	751	97.3	3754	97.0	1621	98.4	7971	97.4
Grand Total	1890		772		3871		1647		8180	

Sources:

As for Table 2.

Notes:

As for Table 12.

Table 15:
Value of Debts by Documentation, Wildberg 1602-1700

Documentation	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	value	%	value	%	value	%	value	%	value	%
Accounts										
Public	8.2	3.0	27.2	20.6	151.8	27.4	2.0	1.0	189.2	16.4
Private	97.0	35.6	45.7	34.6	80.1	14.4	90.6	45.8	313.4	27.1
Unknown	0.4	0.1	0.0	0.0	11.5	2.1	2.6	1.3	14.5	1.2
Accounts Total	105.5	38.7	73.0	55.2	243.5	43.9	95.3	48.1	517.1	44.7
Registers & books										
Public	0.2	0.1	0.6	0.5	36.4	6.6	25.0	12.6	62.2	5.4
Private	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.3	0.0
Unknown	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.5	0.0
Registers & Books Total	0.2	0.1	0.6	0.5	37.2	6.7	25.0	12.6	63.1	5.4
Inheritance-related										
Will	0.0	0.0	0.0	0.0	3.5	0.6	0.0	0.0	3.5	0.3
Inventory	46.6	17.1	0.0	0.0	3.3	0.6	0.0	0.0	49.8	4.3
Division	0.7	0.3	43.3	32.8	6.8	1.2	0.0	0.0	50.8	4.4
Guardian	11.7	4.3	0.0	0.0	2.5	0.5	0.0	0.0	14.2	1.2
Specification	0.0	0.0	0.0	0.0	1.6	0.3	0.0	0.0	1.6	0.1
Inheritance Total	59.0	21.6	43.3	32.8	17.7	3.2	0.0	0.0	119.9	10.4
Legal court	7.4	2.7	0.0	0.0	3.5	0.6	0.0	0.0	10.9	0.9
Misc. Public										
Public: Auszug	0.0	0.0	0.0	0.0	14.4	2.6	0.0	0.0	14.4	1.2
Public: Brief	52.4	19.3	0.0	0.0	0.0	0.0	0.0	0.0	52.4	4.5
Public: Specification	0.0	0.0	0.0	0.0	84.9	15.3	0.2	0.1	85.1	7.4
Public: Verzeichnis	0.0	0.0	0.0	0.0	2.3	0.4	0.0	0.0	2.3	0.2
Misc. Public Total	52.4	19.3	0.0	0.0	101.7	18.3	0.2	0.1	154.3	13.3
Misc. Private										
Private: Auszug	0.0	0.0	0.0	0.0	1.1	0.2	0.0	0.0	1.1	0.1
Private: Bekenntnis	0.0	0.0	5.5	4.1	0.0	0.0	0.0	0.0	5.5	0.5
Private: Brief	40.5	14.9	0.0	0.0	0.0	0.0	0.0	0.0	40.5	3.5
Private: Handschrift	2.8	1.0	2.6	2.0	4.4	0.8	0.0	0.0	9.8	0.9
Private: Kontrakt	0.0	0.0	0.0	0.0	0.0	0.0	77.4	39.1	77.4	6.7
Private: Obligation	0.0	0.0	0.0	0.0	35.0	6.3	0.0	0.0	35.0	3.0
Private: Schreiben	3.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.3
Private: Urkunde	0.0	0.0	0.0	0.0	3.8	0.7	0.0	0.0	3.8	0.3
Private: Zettel	1.1	0.4	0.0	0.0	96.1	17.3	0.0	0.0	97.2	8.4
Misc. Private Total	47.9	17.6	8.1	6.1	140.5	25.3	77.4	39.1	273.9	23.7
Misc. Unknown										
Unknown: Auszug	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.3	0.0
Unknown: Caution	0.0	0.0	0.0	0.0	10.6	1.9	0.0	0.0	10.6	0.9
Unknown: Schreiber	0.0	0.0	7.1	5.3	0.0	0.0	0.0	0.0	7.1	0.6
Unknown: Urkunde	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Misc. Unknown Total	0.0	0.0	7.1	5.3	10.9	2.0	0.0	0.0	18.0	1.6
Total with documentation	272.4	100.0	132.1	100.0	554.9	100.0	197.9	100.0	1157.3	100.0
No documentation recorded	7387.0	96.4	2937.0	95.7	9816.4	94.6	3402.7	94.5	23543.1	95.3
Grand Total	7659.4		3069.0		10371.3		3600.7		24700.4	

Sources:

As for Table 2.

Notes:

As for Table 12.

Table 16:
Number of Debts by Relationship between Debtors and Creditors, Wildberg 1602-1700

Creditor relationship	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	no.	%	no.	%	no.	%	no.	%	no.	%
Persons										
Kin	119	6.3	50	6.5	240	6.2	110	6.7	519	6.3
Servants and masters	12	0.6	28	3.6	79	2.0	10	0.6	129	1.6
Guardians and wards	7	0.4	2	0.3	6	0.2	1	0.1	16	0.2
No relationship given	1512	80.0	562	72.8	2679	69.2	1118	67.9	5871	71.8
Total persons	1650	87.3	642	83.2	3004	77.6	1239	75.2	6535	79.9
Non-persons										
Officials	88	4.7	25	3.2	259	6.7	128	7.8	500	6.1
Institutions	146	7.7	94	12.2	553	14.3	265	16.1	1058	12.9
Groups	6	0.3	11	1.4	55	1.4	15	0.9	87	1.1
Total non-persons	240	12.7	130	16.8	867	22.4	408	24.8	1645	20.1
Total debts	1890	100.0	772	100.0	3871	100.0	1647	100.0	8180	100.0

Sources:

As for Table 2.

Notes:

As for Table 12.

Table 17:
Value of Debts by Relationship between Debtors and Creditors, Wildberg 1602-1700

Creditor relationship	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	value	%	value	%	value	%	value	%	value	%
Persons										
Kin	2143.9	28.0	270.0	8.8	1534.9	14.8	443.2	12.3	4392.0	17.8
Servants and masters	7.1	0.1	23.9	0.8	88.3	0.9	10.2	0.3	129.5	0.5
Guardians and wards	31.3	0.4	17.6	0.6	10.5	0.1	0.9	0.0	60.2	0.2
No relationship given	4698.3	61.3	2316.9	75.5	6366.5	61.4	2093.4	58.1	15475.0	62.7
Total persons	6880.5	89.8	2628.4	85.6	8000.2	77.1	2547.6	70.8	20056.8	81.2
Non-persons										
Officials	137.5	1.8	55.0	1.8	406.9	3.9	108.9	3.0	708.3	2.9
Institutions	618.4	8.1	273.9	8.9	1829.1	17.6	930.7	25.8	3652.2	14.8
Groups	22.9	0.3	111.7	3.6	135.1	1.3	13.5	0.4	283.2	1.1
Total non-persons	778.9	10.2	440.6	14.4	2371.1	22.9	1053.1	29.2	4643.7	18.8
Total debts	7659.4	100.0	3069.0	100.0	10371.3	100.0	3600.7	100.0	24700.4	100.0

Sources:

As for Table 2.

Notes:

As for Table 12.

Table 18:
Number of Debts by Locality of Creditors, Wildberg 1602-1700

Locality of creditor	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	no.	%	no.	%	no.	%	no.	%	no.	%
Definitely Wildberg	324	17.1	115	14.9	702	18.1	394	23.9	1535	18.8
Definitely non-Wildberg	447	23.7	157	20.3	924	23.9	308	18.7	1836	22.4
Place not given	1119	59.2	500	64.8	2245	58.0	945	57.4	4809	58.8
Total	1890	100.0	772	100.0	3871	100.0	1647	100.0	8180	100.0

Sources:

As for Table 2.

Notes:

As for Table 12.

Table 19:
Value of Debts by Locality of Creditors, Wildberg 1602-1700

Locality of creditor	1602-1633		1634-1648		1649-1686		1687-1700		1602-1700	
	value	%	value	%	value	%	value	%	value	%
Definitely Wildberg	1,156.0	15.1	412.3	13.4	1,847.0	17.8	985.3	27.4	4,400.6	17.8
Definitely non-Wildberg	2,070.1	27.0	1,067.2	34.8	2,974.0	28.7	755.6	21.0	6,866.9	27.8
Place not given	4,433.3	57.9	1,589.6	51.8	5,550.3	53.5	1,859.8	51.7	13,432.9	54.4
Total	7,659.4	100.0	3,069.0	100.0	10,371.3	100.0	3,600.7	100.0	24,700.4	100.0

Sources:

As for Table 2.

Notes:

As for Table 12.