

Income Sharing Amongst Medieval Peasants: Usury Prohibitions and the Non-Market Provision of Insurance

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Abstract: Traditional economic analysis posits market-based institutions as being substitutes for non-market based institutions. The process of development then tends to be seen as the process of substituting the more efficient market based institutions for their less efficient counterparts. This paper argues that non-market institutions are at times more efficient than market based institutions. Informal pooling arrangements constituted an important method of non-market consumption smoothing for medieval peasants. Usury prohibitions were promulgated in order to support such arrangements in the face of competition from more market-based alternatives, i.e., the capital market.

Keywords: Insurance, Income Sharing, Usury Prohibitions.

1. Introduction

Economists have long been sensitive to the role played by institutions—especially market based institutions. Adam Smith engaged in institutional analysis when he compared the relative efficiency of joint stock companies to sole proprietorships, arguing the former tended to overly dilute incentives toward effort and care. Especially important for economists is the role of institutions in facilitating growth over the very long-run (North, 1981, North, 1990, North and Weingast, 1989).¹ Many economic historians have made institutions and their evolution central to their analysis. North and Thomas (1973) argued that it was the formation of economically efficient institutions that allowed Britain (and eventually Northwestern Europe) to grow so much wealthier than their neighbors. Institutions are economically efficient for North and Thomas if they serve to equate private costs and benefits with public costs and benefits—efficient institutions being generally equated with market institutions.

Economists are also interested in the effects of culture on economic performance, although theoretical analysis of culture's impact on long-run growth is a relatively recent development. Culture's potential effects on all manner of economic variables—consumption patterns (Jones, 1988), savings, invention (Mokyr, 1990), commerce, science (Jacob, 1997), etc.—is fundamental to the growth success (or lack thereof) of many regions around the world. Recent work by Landes (1998) stressed the role of the west's unique culture in explaining Europe's developmental success.

But while market institutions and culture have had much

study, their interdependence has not. Economic logic mostly suggests that market-based institutions and cultural-based institutions are substitute arrangements. In this view, the very notion of development is often equated with the substitution of the market for traditional (non-market) based institutions. Recent work argues that this view may be misleading. Greif's (1994, p. 914) analysis suggests that culture plays an important role in determining the nature of institutions, both traditional and modern. Further, he argues that market institutions may be substitutes for, complements to, or even embedded in, traditional institutions, "The theoretical and historical analyses indicate the importance of a specific cultural element—*cultural beliefs*—in being an integral part of institutions and in affecting the evolution and persistence of diverse societal organizations."²

In his work on late medieval Mediterranean trade, Greif posits extended networks of friends and acquaintances—part of what he terms a "collectivist society"—as a substitute for formal contract enforcement mechanisms relied on by "individualist societies." Maghribi traders were Muslim merchants who competed with Genoese traders based in Italy. They belonged to a collectivist society and did not sue their agents when contracts were breached, as Genoese traders did, but simply choose to exclude the offending party from further trades. This was possible since personal histories were known in Maghribi society. The Genoese pursued a more formal legalistic model, with personal histories not being common knowledge, agents of the Genoese were sued when they breached a contract.

¹ From Greif (1994, p. 913), "The organization of a society—its economic, legal, political, social, and moral enforcement institutions, together with its social constructs and information transmission and coordination mechanisms—profoundly affects its economic performance and growth."

² On this topic also see Greif (1989, 1993).

Greif's (1994, p. 944) general conclusion is that the institutional forms the two cultures adopted were significantly different enough to effect their growth performance, and that this relationship between culture, institutions, and growth is pervasive,

“Past, present, and future economic growth is not a mere function of endowment, technology, and preferences. It is a complex process in which the organization of society plays a significant role. The organization of society itself, however, reflects historical, cultural, social, political, and economic processes.”

Greif finds that the legalistic Genoese approach proved more efficient than the personal networks of the Maghribi (they were able to dominate the trade of the region). But of course this need not always be the case. In some instances, traditional institutional arrangements may prove a more efficient way of organizing economic activity than markets.

In this paper we argue that the most efficient way for medieval peasants to purchase insurance was to pool their incomes³ and that such arrangements were facilitated by Roman Catholic usury prohibitions. Operating in a capital market requires the possession of physical assets while participating in income sharing arrangements required social capital. Peasants were relatively well endowed with the latter but not the former. The majority of the peasant population simply did not have the resources to smooth consumption via credit. Given that capital markets posed a threat to pooling arrangements, the Catholic Church sought to make pooling more attractive by forbidding borrowing and lending at interest. In other words, they sharpened usury prohibitions. Usury prohibitions fluctuate throughout the period we are interested in. While Christian theology has long contained at least some commentary on borrowing and lending at interest, usury prohibitions were not official Church policy until 1000 AD. Usury prohibitions were strengthened running up to the Black Death, loosened afterwards and eventually abandoned altogether. We exploit this variance in usury prohibitions to test the theory that they were primarily promulgated to protect pooling arrangements.

³ What we call a pooling arrangement here is usually termed an income sharing arrangement.

1.1 Risk and Harvests

Medieval peasants lived in a dire environment. Peasants faced a large dispersion in their seed yields, exposing them to a great deal of consumption risk. Medieval crops were susceptible to a lack of rainfall, too much rainfall, a flooding creek, frost, bugs, molds and all other manner of shocks. Further, seed yields in an average year—after replenishing one's seed stock and paying one's tithes—left many on the margin of physical subsistence.⁴

Highly variant subsistence cereal production meant that the threat of starvation and/or malnutrition was very real to medieval peasants. Data on seed yields collected by McCloskey (1976) suggests that a peasant farming 20 acres of scattered land faced a subsistence crisis once every 13 or so years; peasants on consolidated land faced it once every 7 years.⁵ This is consistent with attempts to estimate periods of particularly poor harvests using price data (Hoskins, 1968a, 1968b).

Evidence of repeated subsistence crises amongst the medieval peasantry does not exist. In fact, as far as we can tell, a peasant farming 20 acres⁶ of land faced almost no possibility of starvation. This suggests that the medieval peasantry had access to powerful methods of consumption smoothing. Medieval Europe, without such consumption smoothing mechanisms, may not have survived a single generation—certainly equilibrium population levels would have been much reduced. Capital markets were of course relatively underdeveloped in the medieval period and insurance markets all but nonexistent.⁷ Whatever insurance mechanisms peasants exploited, they must have developed alongside the market rather than within the market.

⁴ For those who worked outside the agricultural sector the evidence on unskilled wages suggests that they faced the same issues. Wages for the highly skilled were highly variant and often fell below subsistence.

⁵ Open field farming was the practice of scattering one's strips throughout a village in small plots of roughly an acre. Fields that were consolidated saw all of a peasant's holdings being held together in one large plot. For a description of scattering see (McCloskey, 1976).

⁶ Note, farming 20 acres of land actually made a peasant relatively wealthy.

⁷ This is especially true when one considers rural areas, the location of most agricultural activities, as opposed to cities.

1.2 The Efficacy of Pooling

Medieval peasants had the following methods of consumption smoothing available to them:⁸

1. Borrowing from manorial lords (e.g. in bad years rents could be lowered or forgiven entirely);
2. borrowing internally by consuming grain that normally would have been planted for next year's crop;
3. selling or leasing land in bad years;
4. storing grain;
5. scattering holdings;
6. engaging in illegal activities—stealing, urban food riots, peasant insurrections;
7. borrowing (against collateral) at positive interest rates through the private capital market
8. pooling incomes through the Church, through fraternal organizations, and through informal mechanisms supported by Church doctrine;
9. receiving charity directly and indirectly through the Church.

Methods 1 – 5 rely on the ownership of land; option 6 has no entry costs but is socially disruptive. Method 7 requires that a peasant have access to significant collateral or future earnings. Method 8 requires that the peasant belong to some form of insurance pool (either formal or informal, see Bekar and Reed). Anyone could receive charity and thus exploit method 9.

We have elsewhere employed simulation analysis to evaluate a selection of consumption smoothing mechanisms: storage, scattering, and pooling (see Bekar and Reed, 2001). These consumption-smoothing alternatives were ranked in terms of their costs and their ability to reduce a peasant's "Probability of Disaster."⁹ We found that the most effective method of insuring against consumption risk was the pooling of incomes. Storage was reasonably effective, while scattering was expensive and relatively ineffective. Thus, income sharing is one possible explanation for how peasants facing such low and variant yields escaped persistent starvation.

Assume a set of n individuals whose income is subject to both aggregate and idiosyncratic shocks. Each agent receives a "good" harvest realization, g , with probability p and a "bad" harvest realization, b , with probability $(1-p)$. The average harvest is simply $pg + (1-p)b$. Given risk averse agents, the utility of each agent would be increased by pooling the income of all agents and evenly splitting the resulting

"pool."¹⁰ Such pooling arrangements are capable of providing members of the pool with full insurance.¹¹ Economies for which data are available suggest that perfect insurance is rarely if ever achieved.

In practice, constraints on individual incentives or costs to supporting such a pool constrain us away from such outcomes. As noted above, the pooling of incomes is a very powerful mechanism for smoothing consumption. So powerful, in fact, that full income sharing is often not required to drastically reduce the variance in consumption. For example, even if pooling costs a great deal, and peasants pooled only a fraction of their income, (say 20%) a peasant would face only a 2% probability of disaster in a given year. This means that an average peasant would face disaster but once every 50 years. Compare this to once every 13 years for a peasant that scattered their land.

Pooling arrangements supportable solely by the threat of expulsion from the pool were therefore an extremely effective way to reduce the probability a peasant would face disaster in a given year.

Income sharing arrangements amongst peasants faced at least three challenges to their stability. First, as noted above, peasants required land in order to generate a harvest to share. Peasants with small landholdings would find pooling relatively difficult. Second, pools of heterogeneous agents can be harder to support since they require subsidies from the wealthy to the poor. So, as income inequality increased, pooling arrangements became threatened. Third, the capital market existed as a substitute to pooling arrangements. Thus, the more efficient the capital market became, the less viable were pooling arrangements.

Elsewhere we argue (Reed and Bekar, 2001) that the Church supported the viability of informal pooling arrangements and charitable donations to assist the rural poor. We further argue that they supported these efforts through usury prohibitions. The reason the Church was willing to spend the resources to promulgate and enforce costly usury prohibitions is that they were a major landowner and in the business of saving souls. A stable and growing population enhanced both of these positions and usury was the least cost way to protect such a population's viability.

⁸ See Reed and Bekar (2001) for a more complete discussion.

⁹ Where POD is defined as the chance that an average peasant in an average year faces a subsistence crisis.

¹⁰ Such sharing arrangements have been extensively studied. For a discussion of their formation and viability see Kimball (1988).

¹¹ Full insurance is defined by each member of the pool getting to consume the average level of consumption.

1.3 Usury prohibitions

Pooling is a potentially efficient way to smooth consumption but they may not always be stable, breaking down of their own accord or in the face of competition from alternative forms of insurance.

Importantly, pooling arrangements are susceptible to the formation of sub-groups (made up of single or multiple agents) which may smooth consumption with one another. Genicot and Ray (2000) call this process “endogenous group formation.”¹² The possibility of splinter group formation is problematic since it reduces the efficacy of the surviving pool by reducing the number of agents over which risk is shared. If the “wrong” agent types leave the group this may also threaten the pools stability. If the departing group forms based on a set of desirable shared characteristics (high income, low risk, possession of collateral), then the surviving pool may be harder to support. This is true for at least two reasons. First, due to diminishing utility of consumption, low-income agents are more likely to defect from a pool in a bad year. Second, a pooling arrangement amongst relatively low-income agents will provide reduced protection against consumption risk. Thus agents in a low income pool have a relatively high incentive to defect—convex preferences imply that each unit of consumption not shared is cherished that much more for poor agents—and a low incentive to cooperate—pooling buys less insurance amongst low income agents.

Pooling arrangements were also subject to competition from alternative sources of consumption smoothing. The capital market is a substitute form of consumption smoothing, but not a perfect substitute. Assets valued in the credit market—collateral, a credit history, income level—are not as valued in a pooling arrangement. What determines whether or not a peasant smoothed consumption in the capital market or through a pool? The relative costs of the two alternatives: the cost of pooling is the time, effort, and resource costs of maintaining a network of friends and relatives; the cost of the capital market is the transaction costs of writing and enforcing debt instruments. Thus, when transaction costs in the capital market are low relative to pooling costs the pool would be susceptible to breakdown. When the costs of pooling become relatively high the pool is similarly vulnerable.

The Church, however, had influence over the relative costs of pooling and the capital market. The usury doctrine preached that borrowing and lending at interest was a terrible sin. Church members that practiced usury spent eternity in hell. There were few exceptions, but importantly the restrictions

were not applied to investment loans.¹³ Thus, by increasing usury prohibitions, the Church could effect the relative price of pooling and the capital market. Why would the Church choose to do so? The Church owned a vast amount of land, an asset whose value is enhanced by a stable and growing population. Further, the Church was in the business of saving souls, something made easier if parishioners were kept alive. Lastly, it has been postulated that a tripartite division of labor existed in Europe in which the Church was charged with providing social services for the peasantry.

We thus have three variables determining the required level of usury prohibitions and a motivation for the Church to enforce them. All else equal, the Church should increase usury prohibitions when land ownership was relatively low, equality was low, or the capital market relatively efficient. Elsewhere (Reed and Bekar, 2001) we argue that the historical chronology of usury prohibitions is in fact well explained by this theoretical structure.¹⁴ A summary of those findings is presented in Table 1.

Table 1: Chronology of Usury Prohibitions and Determining Variables.

<i>Period</i>	<i>Land Ownership</i>	<i>Equality</i>	<i>Capital Market</i>	<i>Usury Prohibitions</i>
<i>500-1050</i>	High degree of land ownership	Relatively Equal	None exists	Poorly defined, applied primarily to clerics
<i>1050-1175</i>	High degree of land ownership	Increase in Inequality	None exists	Usury prohibitions tighten, any positive interest rate declared usurious
<i>1175-1350</i>	Many marginal peasants	Very low	Much more efficient	Usury prohibitions peak, the sin of usury meant excommunication
<i>1350-1500</i>	Land ownership increases (post plague)	Increasing equality	More efficient	Usury prohibitions return to those of period 1050-1175
<i>1500-1600</i>	Many marginal peasants	Very low	More efficient	Usury prohibitions increase again, the sin of usury means excommunication
<i>1600-1830</i>	Many marginal peasants	Relatively low	Efficient modern capital markets	Usury prohibitions are relaxed and finally ended in 1830

Thus, when peasant pooling arrangements are threatened either from an increased incentive to defect (more efficient capital market), or decreased source of insurance (falling land ownership or increased inequality), the Church had an incentive to intervene and support the pool. When the pool

¹² As any individual may be tempted to defect from a pooling arrangement if the payoff is high enough, so might a group of individuals. This possibility effects the stability of the pool.

¹³ Which suggests that the Church was concerned foremost with the market for small scale consumption loans and not with the general principle of charging interest.

¹⁴ For a more complete discussion see, Reed and Bekar, 2001.

became relatively more stable, the Church did not have such an incentive.

1.4 Conclusion

The efficiency of pooling arrangements made them a powerful source of non-market consumption smoothing for medieval peasants. Such traditional approaches to solving the problem of risk management relied heavily on the ability of peasants to punish those who failed to cooperate, but not through formal mechanisms such as courts. Medieval peasants had to rely much more on mechanisms that Greif would term collectivist. Peasant communities, knowing an individual's history, were able to exclude those who failed to cooperate from informal pooling arrangements. The capital market, an individualist solution to risk management, threatened these collectivist approaches.

In this case, market and non-market institutions were clearly substitutes. Ironically, the development of capital markets may not have always been a clear benefit to the peasantry. In fact, that the Church desired to slow the development of a capital market dealing in small-scale consumption loans suggests that an efficient capital market may have negatively impacted peasants in at least one dimension. It made their insurance more expensive.

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