



RESEARCH ARTICLE

Famines in the manorial economy of eighteenth-century Poland

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Abstract

On the basis of eight available terriers of a large royal estate of Niepołomice in southern Poland and of the vital records of two parishes located on its area, all dating from the early eighteenth century, this article examines the effect of famines on the economic situation of both feudal lords and their peasant tenants. The restrictive framework of the second serfdom in Poland did not prevent two severe mortality crises at the time triggered by crop failures. The key hazards caused by the famines for demesne economy were shortages of corvée labour and peasant-owned draught animals. While the famine mortality that affected the peasants reported as farmers in the terriers was not high, the famines were conducive to peasant impoverishment and reshuffled groups of various financial statuses.

Introduction

Subsistence crises and famines in Western Europe have been the subject of widespread discussion.¹ Studies in this area have evolved from identification and description to more complex causal analyses, in particular distinguishing between natural (Food Availability Decline) and human (Food Entitlement Decline) impacts.² Historians' interest has been increasingly drawn by social, economic and institutional vulnerability and resilience to catastrophes that may lead to famine. The mixture of market, externalities (such as the state) and society's internal structure also seem key to understanding the different frequencies and extents of subsistence crises in the past.³ This is not the case for Eastern Europe, where the rural population used to be strictly subjected to feudal lords (second serfdom), while farming production for the market and trading in produce were dominated by the lords' large demesne farms (Pol. *folwark*). With reference to Polish lands it has even been suggested that under such circumstances, large-scale famines might not have taken place at all as a result of a 'moral economy', where the lord of the manor was responsible for the subsistence of his subjects in the face of crop failures and famines.⁴

This article sets aside the recent vehement discussion on the social and economic distinctions between Eastern and Western Europe, including issues such as the essentiality of subjection, the sources of serfdom or the scope of market engagement of the rural subjects.⁵ Instead, the principal purpose of this analysis is to ask whether – and if so, how – famines in southern Poland affected the demesne economy from the perspectives of both the lord and the rural subjects in the eighteenth century. These perspectives are hardly present in mainstream research on subsistence and other mortality crises, though they make it possible to track reactions to crisis from two economies – manorial and peasant – which coexisted in the same place and time.

There is a tradition of studying demographic and economic crises on Polish lands, yet the focus has mostly been on the effects of wars, wartime destruction, and epidemics (predominantly in cities). Before the Second World War, research was started on a catalogue of natural disasters,

but it was unfinished by the outbreak of the war and interrupted after it. Therefore, knowledge about subsistence crises and famines in pre-industrial Poland is woefully inadequate. Witold Kula wrote:

It appears that Poland did not know such severe general and periodic famines during the sixteenth to eighteenth centuries as those which were a part of the rhythm of France's economic life during the same era. Is this a mistaken impression that results from our lack of knowledge? Or is it actually true? And if so, how can it be explained, given that one cannot assume that the returns on labour and land or the commercialisation of agricultural production were higher in Poland than in western countries? Here, again, is a problem of enormous importance.

Elsewhere, he also expresses doubt about whether the economic development of Poland and the degree of urbanisation created adequate conditions for famines to develop.⁶ Some discussion on this subject is found in some collective studies on the rural economy and population.⁷ Given what we know about the causes and consequences of crop failure in Western Europe, it is unlikely that Poland was a particular exception, the more so that famines also occurred in areas with similar social structures and economies (for example, Prussia and Bohemia in 1771–2).⁸ It is only Cezary Kuklo in his survey of the demographics of pre-partition Poland who has pointed to famines as sources of powerful mortality crises.⁹

Similarities to countries west of Poland do not, however, apply to the engagement of the state in the face of crisis. While countless lands of the Holy Roman Empire intensified their law-making activity and expanded their agendas in the first half of the eighteenth century, in the Polish Commonwealth there was a peak of central impossibilism and decentralisation that took the form of local assemblies of the nobility that took ad-hoc and limited action.¹⁰ The Catholic Church in Poland did not respond in any substantial way to the crises of the era, a practice markedly different from that of the Protestant Church or even Catholic France.¹¹ These various aspects of famines have not been studied with reference to Poland.

Global discussions on the status of the rural population in the demesne lordship makes little reference to the lands of the Polish Commonwealth, which should occupy a prominent place in this type of research, firstly because the territory was fairly vast, and secondly because the variant of second serfdom that existed there was rather extreme.¹² Unfortunately, after an abundance of research in the 1960s and 1970s, which followed – more or less loosely – the Marxist research model, interest in the economy of the pre-partition period dwindled.¹³ As a result, there is still not enough local research to provide a basis for new generalisations and the verification of old theories.¹⁴ According to these, the entire rural population (with the minor exception of settlers brought from abroad) was personally subjected to feudal lords, and peasant farmsteads (and the landless population) were essentially required to serve the seigniorial demesne farms by supplying labour, draught teams, and performing guard duty at the farm buildings. In the interest of the lords, tenant farmsteads were therefore of a size that ensured only a minimum level of subsistence for the family and in addition as much working stock as was necessary for the manor. Any intensification of tenant production above the minimum made the lord take steps to take over the surplus.¹⁵ This, combined with the fact that the peasants satisfied many of their needs via the manor or even out of the demesne's products (for example, they drank the lord's beer or vodka in the lord's inn), led to a presumption that their contact with the market was limited. On the other hand, we know of the peasants' increased, at least temporary, demand for cash, which they needed to pay to be discharged from *corvée* labour or when the church tithe in kind was replaced with a monetary tithe. Also, the needs of the noble demesnes cannot entirely explain why market rights were widely granted to numerous villages and fair privileges to small private towns from the second half of the seventeenth century onwards.¹⁶

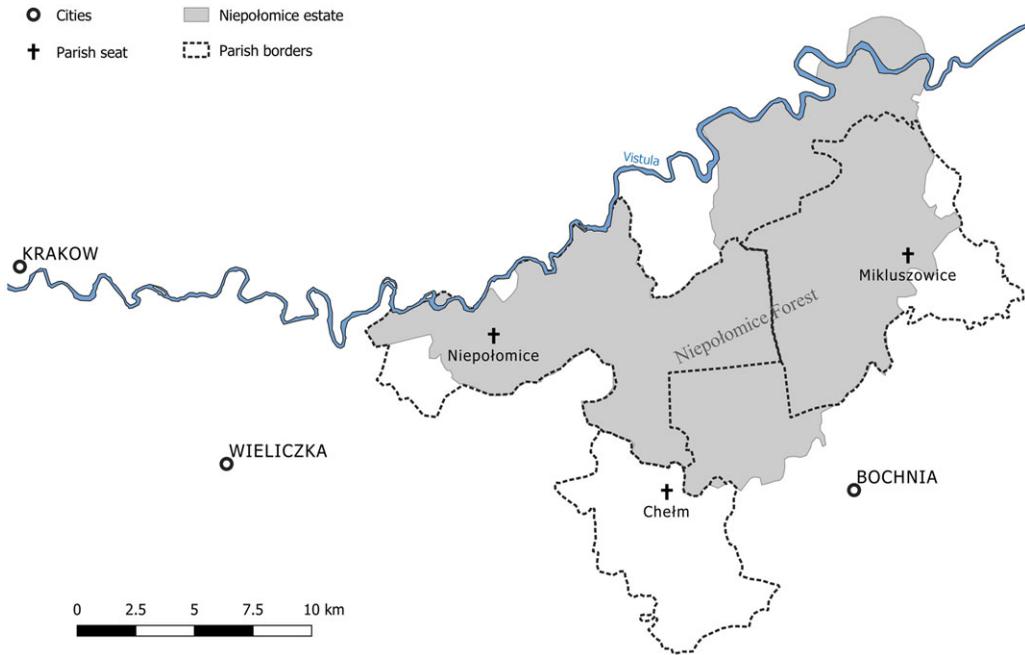


Figure 1. The Niepołomice estate (seventeenth to eighteenth centuries).

Source: Created by the author based on *Ziemie polskie Korony w XVI w. Przestrzenna baza danych*, Instytut Historii PAN im. Tadeusza Manteuffla <<https://atlasfontium.pl>> and K. Ostafin, M. Troll, K. Ślusarek et al., *Historical Dataset of Administrative Units for Galicia 1857–1910* (2021) <<https://doi.org/10.7910/DVN/PXDP41>> Harvard Dataverse, V2.

Scholarly research in Poland has not devoted much attention to how the lords supported their subjects. It is known that tenants could use the lords' oxen and horses (called draught teams) if they lost theirs. There are also records of demesne owners building peasant cottages or extending grain loans.¹⁷ For want of all-in studies of the real effects of such support in the region of traditional 'second serfdom', we should recall the conclusions of a case study of Swedish Skania, where villages of subject or free status existed side by side. That study demonstrated that longer crop failures had milder effects on the subject villages in the first year, yet in the following crisis years the status of the village population turned out rather immaterial in this respect.¹⁸

The possible effects of famines on the feudal economy will be looked at in a case study of the Niepołomice estate, a large royal estate in the south of Poland. There is a royal castle in the village of Niepołomice, located by a large forest on the right bank of the Vistula River, 30–40 km east of Krakow. In the first half of the eighteenth century the Niepołomice estate comprised 8–9 demesne farms and 16 villages (949 households with land or cottage in 1736). Niepołomice had just been granted the status of marketplace village and, apart from farmers, was inhabited by settled people providing services for the castle, as well as craftsmen. There were two parish churches within the estate (Mikluszowice, Niepołomice), although their territories did not overlap entirely with the estate (Figure 1).¹⁹ The estate mainly produced grain, probably for the local market, which it also processed in its breweries and distilleries.²⁰ Among the typical peasant obligations (duties in kind, small money land rent, transport) the most important duty of the peasants was forced, unpaid labour (*corvée*): with the tenant's own animal team (draught labour) required from full tenants (full peasants), or without an animal team (pedestrian labour). For example, in 1744, the obligations were convertible to 2,313 pedestrian days.²¹

The Niepołomice estate casts a valuable light on the economic mechanics of a 'typical' demesne economy in eighteenth-century Poland in both royal lowland estates and big latifundia of other

property types (noble and church lordships).²² Extensive estates were quite common in this part of Poland. One example was a populous demesne east of the Niepołomice estate, owned by the bishop of Krakow. The impact of famines was likely different in the case of the as numerous but smaller estates of the petty nobility and lower-ranking clergy; however, some of the effects of and reactions to famine were universal in demesne lordships.

At the Niepołomice crown-owned estate, management was exercised via leases, usually made for terms of several years. At the time the lease contracts were signed, detailed surveys of seignorial properties and tenant duties (terriers) were obtained, listing all peasant farms by the name, surname, and type of tenant: *kmieć* (full tenant), *zagrodnik* (smallholder or half tenant, lit. crofter), *chałupnik* (cottager), or *komornik* (lodger). The surveys were taken for the following years: 1710, 1715, 1725, 1730, 1733, 1736, 1739 and 1744.²³ Moreover, parish registers are available for the two parishes in the Niepołomice estate, Mikłuszowice and Niepołomice, which will yield information such as births and deaths at the time of famines. Apart from quantifiable sources, chronicles kept by the priests of the nearby rural parish (Chełm) were used for reference as they covered the 1737 famine (Figure 1).²⁴ While not a collection of exhaustive data essential for analysis of the demesne economy, this roster of sources is quite unique. One observation that can be made on the basis of the existing publications on landed estates in southern Poland (Małopolska or Lesser Poland) is that terriers dating from the first half of the eighteenth century have survived in small numbers, likewise annual accounts and crop inventories.²⁵ In order to find points of reference for the Niepołomice estate data for selected yearly periods and smaller estates in other regions of southern Poland are utilised here.

For a better understanding of the Polish context, some concepts used in this text require clarification:²⁶

Peasants were villagers under a condition of serfdom, both those who held land and those who held no property at all;

Ploughland (Pol. *rola*) was a standard measure of cultivated land, corresponding in size roughly to the English hide (*laneus*, Ger. *Hufe*, Pol. *lan*), on which the total of feudal obligations was calculated; we know that in some villages on the Niepołomice estate in the eighteenth century, the standard ploughland comprised 10–12 hectares of arable land and 3–6 hectares of meadows, which is likely half of the original medieval full tenant farmholding.²⁷ In fact, it could be shared between 2 to 4 farmers in the seventeenth and eighteenth centuries;

A **Farmstead** (croft) was a smallholding liable for labour services; in the village of Drwinia on the Niepołomice estate, farmsteads had 4.5 hectares of arable land and occasionally as much meadowland. Farmsteads were not shared as frequently.

Lease of corvée, corvée rent was a money fee for not performing corvée (except a few days a year during the most urgent fieldwork); in the Niepołomice estate one day a week was convertible to 10–20 zlotys of annual fee.

Famines in the eighteenth century

According to the latest findings, pre-partition Poland was not free of famines, that is, food shortages (mostly grain) that generated a growth in prices, and causing a severe mortality crisis. In the eighteenth century, two great famines plagued the lands of southern Poland: one in 1714–15 and the other, even more gruesome, in 1737. There were also some minor subsistence crises at that time, when prices of the staple grain – rye – rose significantly (1727, 1745–6, 1758, 1772–3). The nature of all these crises has not been clearly investigated as yet, though most probably weather shocks were the immediate trigger in each case. According to notes for the years 1701–48 by the parish priests of Jazowsko, a village located in the foothills, both famines followed years that saw heavy rains, floods and poor crops of grain.²⁸ Both famines were part of a spate of crises triggered by wars and epidemics, which until now have been highlighted in studies as the main contributor

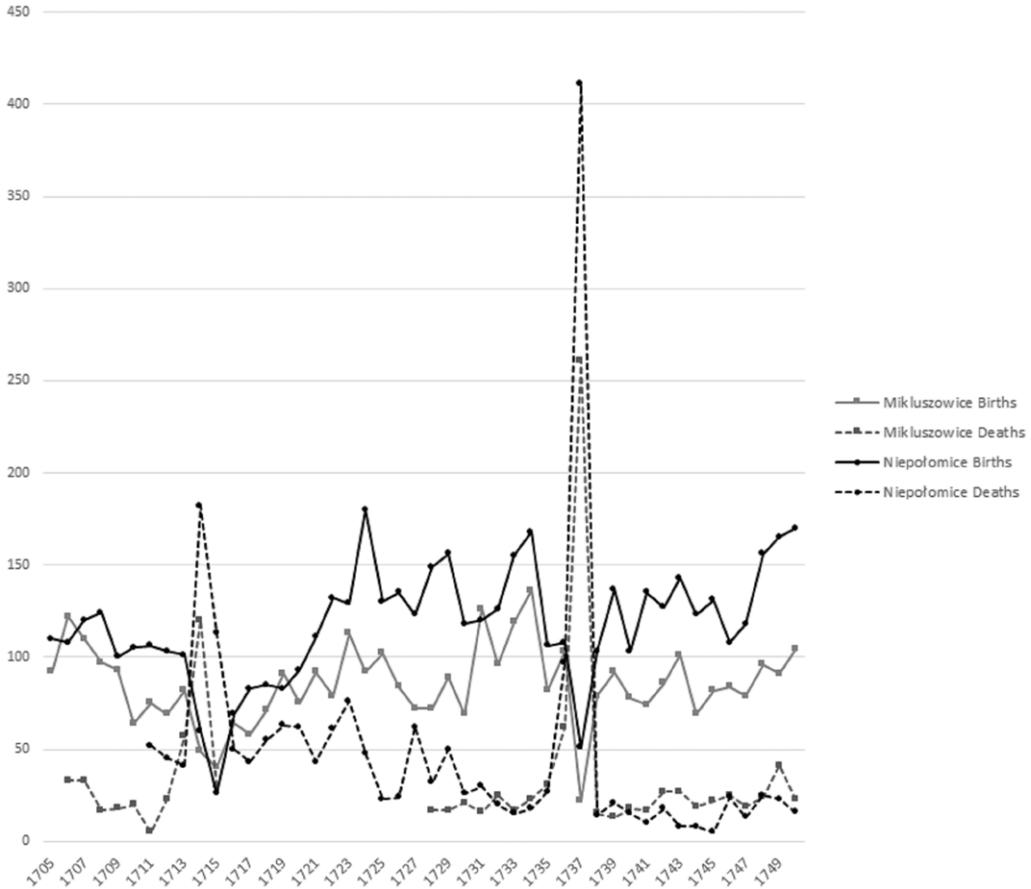


Figure 2. Registered births and deaths in Mikluszowice and Niepołomice parishes (1705–50).

Source: Mikluszowice parish, Liber baptisatorum (LB) 1697–1711, 1711–23, 1723–40, Liber mortuorum (LM) 1660–1715, 1728–59; Niepołomice parish, LB 1668–1729, 1730–52, LM 1710–29, 1730–65.

to the demographic and economic downturn in Poland from at least the mid-seventeenth century to the mid-eighteenth century.²⁹

Nonetheless, only the two famines mentioned had a significant impact on the demographics of southern Poland over that period, with a clear slump in births and a sharp increase in deaths, evident despite the shortcomings of the deaths registers of the day.³⁰ Demographic crises were also observed in two parishes in the area we are going to deal with more closely (Figure 2). It was very infrequent for Polish records dating from that period to state the cause of death, yet in November 1736, in Mikluszowice parish, starvation was given as cause of death, with the annotation *tempore famis*. Amid a surge in casualties, such annotations were later abandoned.³¹ In autumn 1736, in the neighbouring parish of Chełm, where no death records have survived, the parish priest noticed a higher mortality driven by famine and the diseases spreading in the aftermath. The following spring deaths were still on the rise and during the Easter confessions the churchman saw he had lost over eight hundred soul out of more than two thousand previously confessed.³² These figures are hard to verify but the Mikluszowice parish can roughly be said to have had a congregation of 2,600 in the 1730s. The toll of the subsistence crises was thus between 7 and 10 per cent of the population.³³ At the current stage of research the impact of migration on total population cannot be determined. All we know is that immigrant deaths were recorded at the

time mortality peaked, while the post-1737 famine terrier mentions people who left the Niepołomice estate.

The famine at the turn of 1714 and 1715 was caused by crop failures resulting from poor weather conditions, and additionally exacerbated by the Great Northern War that had recently swept across Polish lands with continuing internal unrest until 1717. Troops marching back and forth across the country during the War of the Polish Succession (1733–5), heavy summer rains, floods and several years of crop failures preceding the famine of 1737 were described in detail in the chronicle of the Chełm parish noted below.³⁴ The extent of the disaster was much wider than regional and covered Mazovia, eastern Pomerania and Silesia, and possibly also other regions within the borders of what is today Poland.³⁵

Closer in date but geographically distant, famines in India and China in the nineteenth and twentieth centuries resulted in demographic change that was not very acute in the long run, studies conclude. In terms of age distribution of the fatalities, people of reproductive age were relatively less affected, which allowed for a fairly fast return to the pre-famine numbers of population.³⁶ Similarly detailed data are unobtainable for the parishes in the region under discussion, but the situation followed a dual track. In the Niepołomice parish located around the seat of the estate, the first famine triggered a short-lived crisis: in the early 1720s the number of baptisms already began to exceed the pre-famine figures. The other famine brought a demographic stagnation for some ten years, reversing only in the late 1740s. The final tally of that half-century indicates a considerable growth in the population of the parish. The plight of the Mikłuszowice parish was significantly different: while the population had more than recovered soon after the 1714–15 famine, the 1737 hunger caused much greater stagnation. As a result, in the late 1740s, the number of dwellers may not have reached back to the level recorded at the beginning of that century (Figure 2).

Peasants in southern Poland in the eighteenth century

The peasant economy under the feudal system in Poland has yet not been fully examined, indeed it has been almost entirely disregarded as a research topic in Poland.³⁷ Detailed studies devoted to single demesnes or to specific aspects across larger areas do appear but in terms of more general reflection, particularly with reference to the seventeenth and eighteenth centuries, we need to fall back on Witold Kula's model and Jacek Kochanowicz's synthetic study. Kula concluded that the observable progressive decrease in size of the average serf farmstead was triggered by the feudal lords, particularly the nobility, seeking to reduce the farm size to a minimum sufficient for subsistence. That minimum, which differed between full tenant and smallholder farms, had to sustain not only the tenant's family but also his livestock that provided labour on the seignorial fields, and to pay rent in kind or in coin. Kochanowicz focused more attention on the peripheral variants of the model, for example in southern, highland Poland where demesne farms were not as numerous due to unfavourable geographical conditions, and on certain opportunities for modernisation in suburban areas.³⁸

Researchers generally agree that full tenants grew more and more pauperised. Originally, a full tenant was a holder of a full-size, one-hide-large farm, which in the south of Poland meant around 25 hectares. Meanwhile, a lot of sources, particularly tax records, indicate that already in the second half of the sixteenth century, an average full-tenant farm was 0.5 hide in size, and that smaller ones not exceeding a quarter of a hide were also recorded.³⁹ In fact, the tenant situation could vary quite a lot, depending on the lordship (royal, church or noble), size of the estate, geographic location, farmstead size, land productivity, etc. Relative to these factors, a fullholding could comprise below 10 hectares of arable land as well as up to 30 hectares; a farmstead could be below 5 or over 10 hectares in size. Generally, it is observed that in highland areas, where demesne farms were few in number, the majority of land was attended to by tenants who were liable to little or no corvée.

Scantier records are available to show that tenant holdings on royal estates were less varied in terms of area and more fragmented, and on noble estates (particularly in the lowlands) they were more polarised, with infrequent but large fullholdings (over 20 hectares) or farmsteads that were not much smaller.⁴⁰

Can we say anything definite about how the peasant class tolerated food crises if their variation in wealth status has not been fully determined? A fairly obvious conclusion is that peasants in the highlands owned farms that could not produce enough grain to sustain their families' livelihood, the reason being not so much their small size but the meagre yields from poor quality soils. Essentially, spring crops dominated across the foothill and highland regions, particularly oats, so the crop volume of own-grown rye, a fundamental bread cereal, was too small. It remains an open question to what extent other farming activities (typically cattle and poultry breeding) helped supplement consumption and increase the monetary income. It seems, however, that given the heavy financial obligations imposed on the farms, the local peasant economy required non-farming activity as well (forest exploitation or crafts such as linen weaving). Villages on noble estates, especially those situated in the valleys of the larger rivers and therefore benefiting from commercial ties with the grain market of Gdańsk, were the exact opposite. They not only allowed full-tenant holdings to satisfy their demand for the consumption of cereal (rye, barley, partly oats), but also made it possible for some of them to produce significant quantities of wheat, probably for sale. It is interesting to note the situation of peasants in the villages south of Krakow. The distribution of cereal produce appears self-sustenance-oriented (evidenced by no wheat) yet as a large portion of land was held by lords of the manor, tenant farms were too small to sustain their livelihood. This is what transpires from a 1772 book of inventories of Libertów village, which emphasised the fact that peasants were involved in trading, probably with Krakow.⁴¹

The Niepołomice estate was poised between these variants. In the classification model of pre-industrial communities with respect to their capacity for coping with crises constructed by Daniel R. Curtis, the local community should fall under 'polarised-persisted', that is prone to subsistence crises.⁴² In terms of rural community resilience, there are selective real statistics to lean on, namely the overall output of grain from all peasant farms. The example of a section of the Niepołomice estate comprising the villages centred around Mikuszowice shows relatively low resilience. It is estimated based on data from the first land cadastre (the Josephine Cadastre, 1785) that the average annual cereal crops (including oats and excluding grain for sowing) could feed a community of more than two thousand, which is more or less what the local population was before the 1737 famine. Presumably, the peasants teetered on the verge of underfeeding even in the productive years, and the manor's resources proved critical. Using analogous conversion rates, the output of demesne farms – in principle intended for sale – was sufficient for little more than six hundred people.⁴³

Famines and the peasants

Oddly enough, the two most devastating famines in eighteenth-century Poland were not particularly devastating in the terriers of the Niepołomice estate. They only mention a crop failure in 1726, which did not result in any major demographic collapse (Figure 1), and poor crops before 1739. However, the 1736 terrier reports devastation of arable land in villages on the river Raba in the aftermath of a recent flood.⁴⁴ The large number of surviving terriers capture some aspects of the socio-economic condition of the peasantry, doubtless related to the two great famines mentioned above. One of them is change in size of land used by full peasants and smallholders over time, measured by the number of ploughlands and farmsteads or parts of them that remained in use (Figure 3).

The first of the terriers (1710) shows the effects of a long-lasting crisis caused by war (the Great Northern War), epidemic and a severe winter (1709). According to this, the cultivated ploughlands only slightly outnumbered the abandoned ones. The situation of smallholdings was much

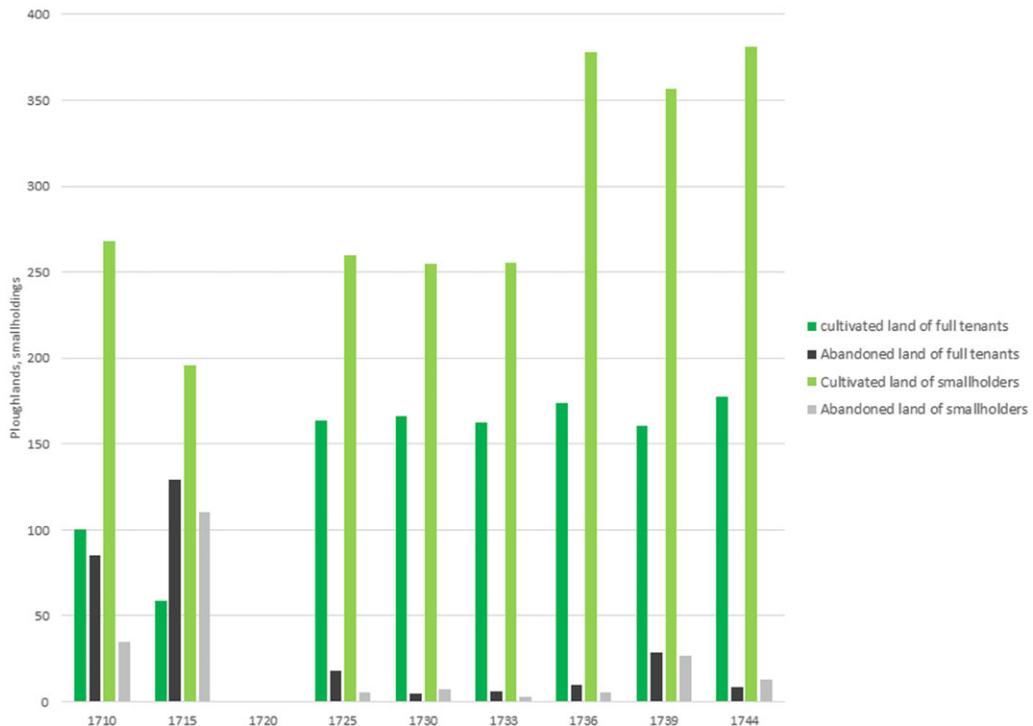


Figure 3. Number of cultivated and abandoned ploughlands (Pol. *role*) and smallholdings (Pol. *zagrody*) in the Niepotomice estate.

Source: CAHR, Zbiór Popielów, pp. 282, 283, 285, 286, 287, 288, 290.

better (only 11.5 per cent were deserted). The next terrier, drawn up during a famine, is a record of catastrophe. Only 31 per cent of the full tenant ploughlands and 64 per cent of the smallholders' farms were occupied. Over the 1720s and early 1730s, peasant land was remodelled. In 1733, only 4 per cent of the fullholdings and 1 per cent of the small farms were deserted. The famine of 1737 had a negative, though not dramatic, impact on the development of peasant land. Again, ploughlands of full peasants were more afflicted: 15 per cent of them were vacant in 1739, versus only 7 per cent of smallholdings. In the 1740s, the situation went back to the pre-famine condition.

The total number of peasant households, not only full tenants or smallholders but also cottagers (with small plots of land) and lodgers-with-cottages, changed depending on the area of land cultivated in the terrier year by local peasants (Figures 3 and 4). The graph shows, however, that throughout the first half of the eighteenth century, despite many adverse factors including two famines, the group including smallholders was the most stable. In the 1730s, it even grew significantly, mainly in two villages, in part because some cottagers moved up the social ladder. The likely long-term effect of the famine of 1737 is a lower number of lodgers, which category declined to only 8 per cent of all households in 1744. The above two graphs show that the overall number of peasant households was predominantly affected by the situation within the class of smallholders.

A closer look is needed at the relationship between cultivated land and full tenants, a group more sensitive to shocks than the theoretically poorer smallholders (Figure 5).

The first famine (1714–15), which left two-thirds of the peasant land fallow, did not turn out conducive to the existing peasant farms growing larger. On the contrary, they shrank relative to what they had been five years earlier. The following years saw a rebuilding of the estate economy and a densification of peasant farms; as a result, in 1736 the average size was less than 0.7 of 'standard' ploughland. The second famine increased the average size of full-tenant farmholding only

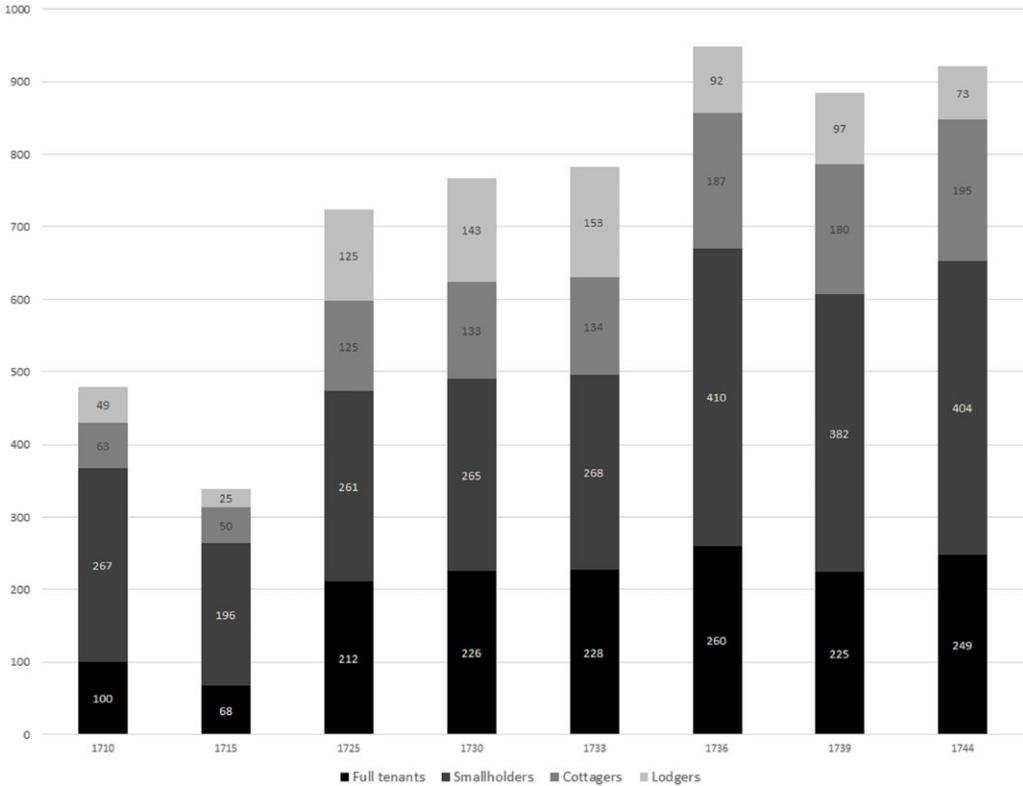


Figure 4. Distribution of peasant households in the Niepołomice estate.
Source: See Figure 3.

slightly, and stabilised it at this level. In the feudal economy, taking in more land meant higher levies (corvée labour, duties) and required many draught animals. Also, the demesne administration found it easier to exact, for example, five days of labour per week from two (or even three) tenants living on a piece of ploughland than from a single tenant who, for example, did not possess enough horses or oxen.

Data on draught animals in peasant farms is incomplete (Figure 6). The most interesting are details of full tenants. The 1715 terrier shows the situation was disastrous; after that, the terriers pass over the subject. However, we can assume that in 1736 the situation was back to that desired (about six hundred animals, convertible to horses). The famine of 1737 resulted in a small, albeit significant, loss of draught animals that was, however, quickly compensated for with an excess. Nevertheless it should be noted that in 1744 the cheaper, but less efficient, oxen had a greater share in draught animal power. This may be indicative of the progressive penury of the full tenants.

The large number of vacant ploughlands and smallholdings in 1710 and 1715 should be put down to abandonment rather than the deaths of the holders.⁴⁵ Lodgers were installed on some of the farmsteads, apparently for a period, to attend to the cottage in compensation for one day of labour (pedestrian corvée). Sometimes, a full-tenant farmholding or farmstead (*zagroda*) was empty in 1710, but by 1715 the same full tenant/smallholder was back in attendance and paid the levies due. And there were cases like Józef Cieślik, a smallholder in Mikłuszowice, who appeared in records in 1710, in 1715 the farmstead was empty, but ten years later old Józef Cieślik and his son Mateusz again paid the full feudal levies due.⁴⁶

The data presented so far show that the economic situation of all the tenants of the estate of Niepołomice was moderately affected by the famine of 1737, which – in demographic terms – was

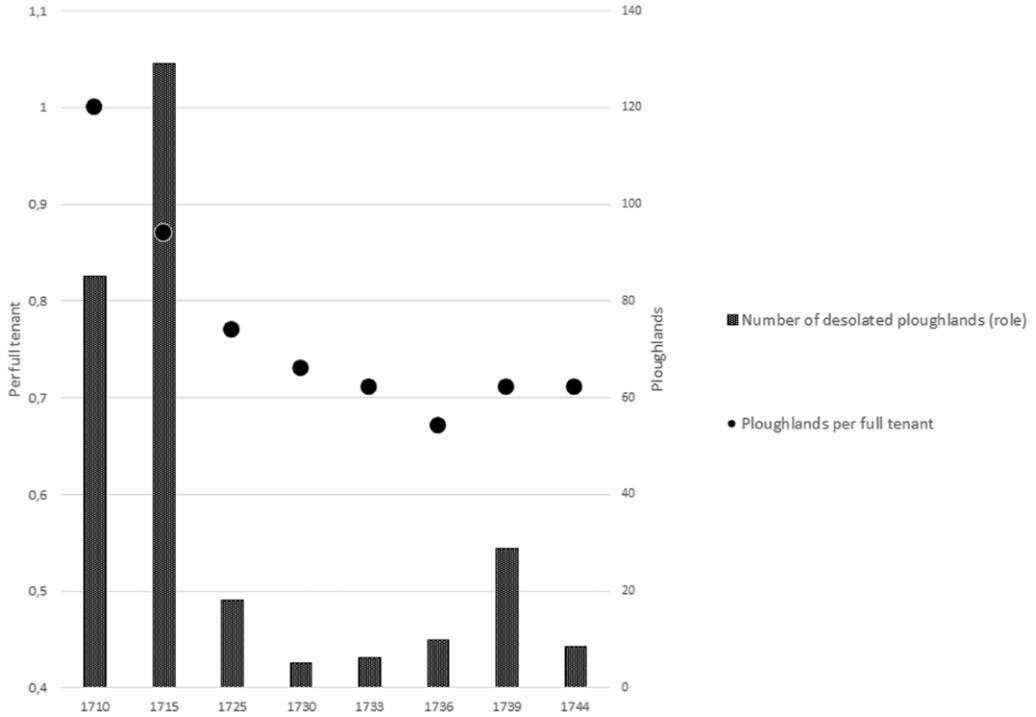


Figure 5. Abandoned vs cultivated ploughlands per full tenant in the Niepotomice estate.
 Source: See Figure 3.



Figure 6. Draught animals owned by full tenants in the Niepotomice estate.
 Source: See Figure 3.

very severe. The good identification of the tenants and the accurate data in the 1739 terrier reflecting the changes that took place over the course of three years, permit us, however, to trace the recomposition of the farms of all categories in one part of the estate – the Mikuszowice complex (206 farms in 6 villages in 1736), as shown in the graph (Figure 7).

More detailed analysis of changes in the farm holdings that took place between 1736 and 1739 will show the consequences of the 1737 famine for the peasant community. No more than half of those who were full tenants in 1736 kept the same status in 1739. Almost a quarter (22 per cent) moved to smaller farms, many became mere lodgers. Lastly, 29 per cent left their farms (died or

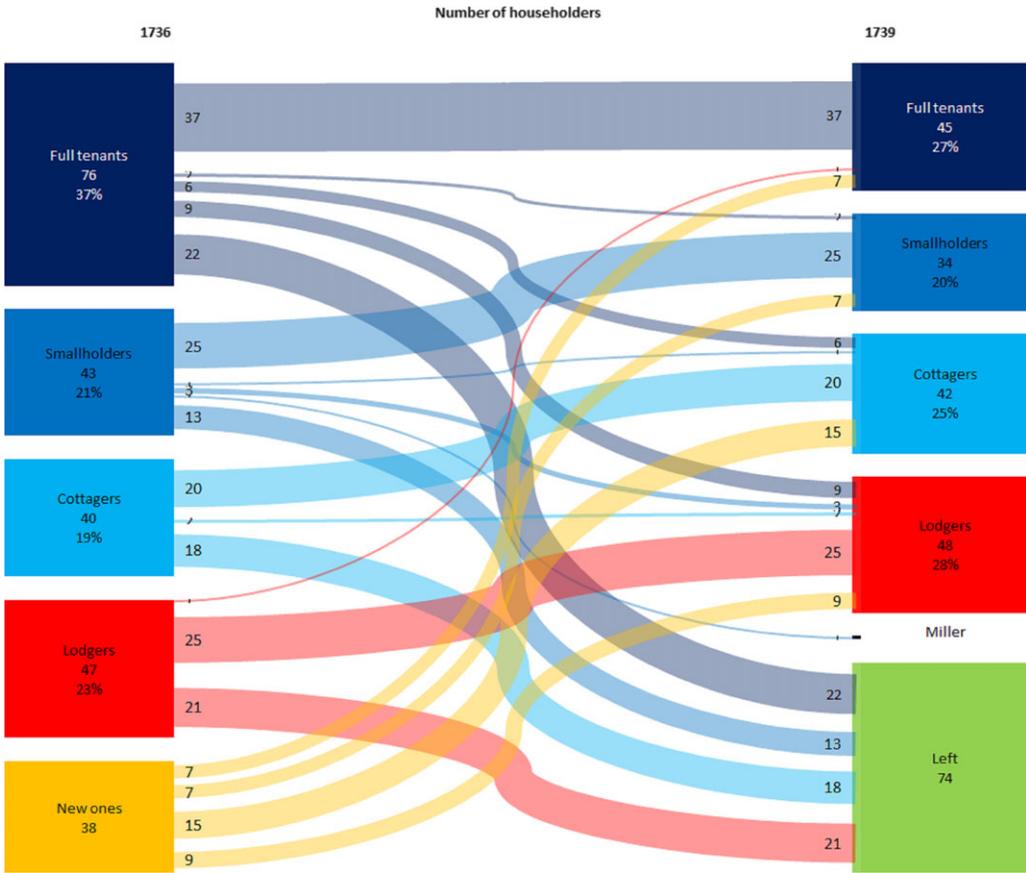


Figure 7. Changes in the tenant composition in the Mikluszowice complex between 1736 and 1739. Source: See Figure 3.

fled). The group of smallholders was the most stable, but a similar proportion of them left the region permanently too. Cottagers and lodgers suffered fewer personal losses, and additionally, thanks to inflows from other classes, they grew in number. The famine opened opportunities for thirty-eight new farmers (previously unregistered) to take over farms. This group includes heirs to deceased tenants. These represented 22 per cent of the farms in 1739, and were the largest group of cottagers. The most dynamic changes took place just among the cottagers. When the famine retreated, the cottagers were the only group a minor part of which were former cottagers, and a majority of which was represented by degraded full- and smallholders. Among those who permanently left their farms, only twenty-four died, sixteen of them definitely during the famine. The others moved to poorhouses, became real lodgers (without a cottage), or fled the property (the terrier usually states where to).

The situations of peasants in Niepołomice and other estates are hard to compare. For one thing, reliable sources are lacking, particularly for that region. And for another, the scales of the 1714–15 and 1737 disasters are not well known, and have received little historical attention. This is the reason Jerzy Topolski attributed the considerable increase in the number of abandoned peasant farmsteads in the 1739 terrier of the Gniezno bishop’s estate located in Mazovia to the ravages of war in the early eighteenth century.⁴⁷ But we do come across conclusions that the crisis saw the number of full-tenant farmsteads drop most dramatically.⁴⁸ In southern Poland, the consequences of the 1737 famine are found in other large estates in the possession of the most important of

Polish senators, the Castellan of Krakow. Its 1741 terrier still listed empty full-tenant farms with, interestingly, a larger proportion of them in so-called lower villages (five villages, 9 per cent of land unfarmed) where *corvée* was delivered, compared to mountain villages (six villages, 3 per cent of land abandoned), where *corvée* was converted to money.⁴⁹

Smaller but well managed estates had a more stable situation. Out of twenty-eight farmers (specifically full tenants and smallholders) in two villages that belonged to the Krakow Chapter in 1712 and were located on the river Dunajec, only one full-tenant farm was empty in early 1715. However, the famine may have had deferred consequences since a review of the estate in late 1721 reported 'vacant settlements' in the plural. A 1743 review, the first after the famine of 1737, reported no unfarmed fullholdings or smallholdings but the situation of two full tenants was so bad that the idea of having the manor sow their land was even considered.

Famines and manorial demesnes

The staple produce of manorial farms was grain. Like in other *latifundia* in southern Poland, rye and wheat were the major commodity sold for the domestic or foreign (via Gdańsk) market.⁵⁰ Grain (rye and barley) in liquid form was also sold for the domestic market as beer or vodka. During times of famine, alcohol production usually ceased but high profits could still be achieved by selling previously stockpiled grain. This, however, was only true for the larger demesnes or owners of lands located in various parts of the country, who could move the stocks from the better-supplied regions.⁵¹ This was not the case for smaller landowners, like the parish priest of Chelm, who complained in 1736: 'Now that grain is expensive, there is nothing to sell', only to note bitterly early the following year 'Whoever had old grain stashed away in these parts, collected enough money. I did not have enough to do the sowing.'⁵² These quotations bring up the major question of whether famine is a natural or man-made catastrophe. Even with very poor crops, demesne farms, having satisfied their supply needs, had certain quantities of grain available to sell on the market and take advantage of price increases, or to distribute to their subjects on satisfactory terms. As the accounting books of the Niepołomice estate from that period are missing, it is impossible to say what quantities of grain were available at the time and how they were distributed. All we know is that in 1737 the subjects received certain quantities of grain from local demesne farms.

The question is: did famines have a lasting effect on the landlords' farms? Unfortunately, manorial accounts dating from the period under study have not survived in Niepołomice. We can only compare the volume of winter crops sown (wheat and rye) on eight farms (nine were established around 1730), assuming it reflects changes in the area of cultivated land, but only for the years in which the inventory was taken. The values obtained are obviously approximate, as various measures of cereal volume used over the years have to be converted. Particular note should be taken of sowing volume for the agricultural year 1714–15, as it stood at just 77 per cent of that for 1710, and 53 per cent of the maximum recorded in 1730. The reason was not a shortage of grain: the previous years' respective stocks were listed in the inventory. No such significant effect was noted after the famine of 1737. Sowing for the agricultural year 1738–9 corresponded to 92 per cent of that in 1735–6, but, interestingly, it was lower in 1743–4.⁵³ Likely, the farms had stocks of grain from previous, more fertile years, hence shortage of grain for sowing was not a major problem, especially in the long run. If needed, grain was bought (this was expressly stated in 1736). A bigger problem lay elsewhere. Since the demesne's production hinged on the labour of all the tenant groups, the supply of labour days available to the manor over a given period was key (Figure 8). Let us look at how the supply of *corvée* changed (one working day with draught animals counts as two 'pedestrian' days).

The outset of the century saw a great shortage of peasant forced labour. In 1715, the insufficiency of draught labour was particularly acute, as animals were needed to transport grain to

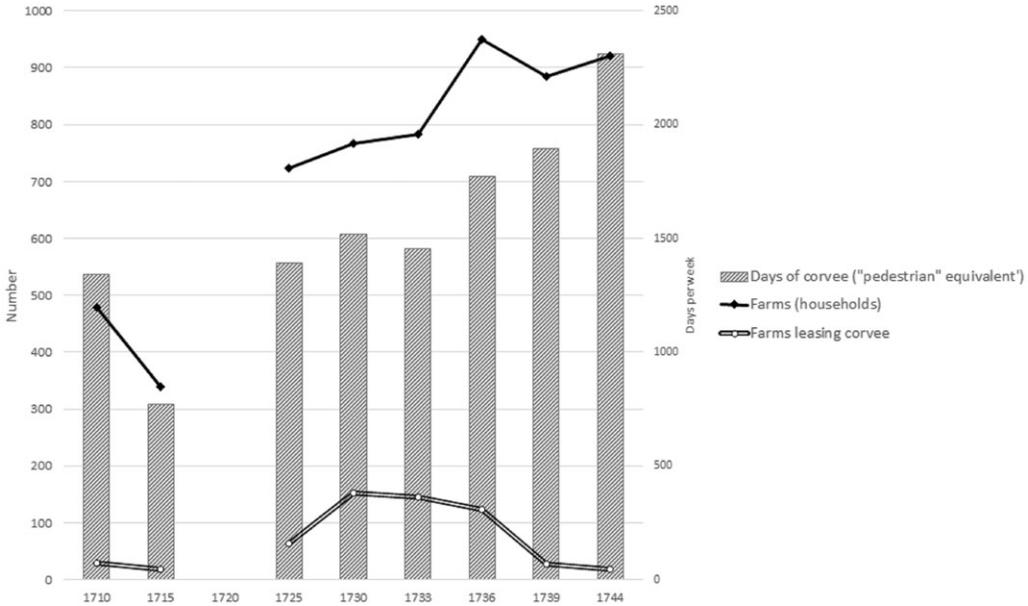


Figure 8. Peasant labour in the Niepołomice estate.

Source: See Figure 3.

markets.⁵⁴ In periods of less distress, the draught labour equivalent represented over half the total labour days available to the demesnal farm – in 1715 it was around one-third. Shortage of unpaid labour resulted in lower demesnal production. It is hard at present to estimate the scope of famine outside Małopolska, but small and stable quantities of corn carried to Gdańsk in 1716–20 may be indicative of a crisis that was much more extensive in terms of territory.⁵⁵ Around 1730, the situation on the Niepołomice estate stabilised at about 1,500 days of pedestrian labour weekly. At that time, the potential number of working days was even higher, as over one hundred full tenants and smallholders paid annual rent in cash in place of corvée. The famine of 1737 changed the situation for the next few years at least. The number of corvée renters fell to only eighteen households in 1744, and the number of days of labour, especially draught labour (53 per cent of its equivalent value), grew. This should be explained as due to a long-term impoverishment of the peasant population rather than the landlords acting intentionally.

There was a greater problem faced by small estates. The parish priest of Chełm, who only owned around 54 hectares of arable land and in the aftermath of the 1737 famine lost the majority of his subjects, was forced to hire workforce for the harvest that year. Anticipating problems in finding people ‘because they have died out’, he hired over a dozen people before harvest began.⁵⁶

The manor and the tenants

The estate terriers quite often mention the destruction of peasant land by river floods and an ensuing reduction in manorial duties. There is no information, however, on a systemic solution to crop failures. Thus, the only form of help was granting temporary reliefs of dues or loans in grain or cash. The majority of tenants were in need of such support in periods of poor harvest, considering that an average full-tenant farmholding in the Niepołomice estate was 7–8 hectares in size, which was 0.7 of standard ploughland (the standard was likely half the Frankish hufe). At the peak of the famine the support boiled down to sending peasants off to buy grain in autumn 1736 and bringing it to the manorial granaries so it could be distributed to them before the sowing

season at higher prices. This way, the manor would make a 12.5 per cent gain on rye. In addition, the peasant complained that the grain was dry and clean at purchase but contaminated and damp (cooked). The value of grain and cash loaned at the turn of 1736 and 1737 (using an official conversion rate) was 9,970 zlotys for the entire estate.⁵⁷ In 1744, a list of unpaid peasants' debts from the past ten years was drawn up. The oldest ones dated back to 1734 and 1735, that is, years of catastrophic rains and floods. The value of unpaid debts reached 309 zlotys at the time. For the famine years of 1736 and 1737, the peasants owed 893 zlotys, which was less than 10 per cent of the original sum. The next list refers to the years 1738–44 yet it is unclear whether it actually applies to all the years of the period or just some of the worse seasons. The total debt arising, mainly from borrowed cereals, was 2,535 zlotys due from 139 peasants (15 per cent of all farmers). The debtors included representatives of all tenant groups. The grain prices quoted next to the debtors were likely as at the date of the loan and reflect prices in Krakow.⁵⁸ The priest of the nearby parish of Chełm described this 'support' mechanism for the subjects in more detail in connection with the famine of 1737. He had nine serfs of his own, and until the summer of 1736 none of them had died thanks to his assistance. But, he noted, they owed him outstanding debts carried over from the previous years. But another poor harvest left him with grain that was hardly enough for sowing and his own maintenance. As a result, five of his serfs died and two left their farms. The foresightful priest made a register of debts, which amounted to 162 zlotys. As he noted directly, the grain prices were current at the date of the loan, that is, when they peaked. The priest also allowed working off the debt – he deducted one-third zloty for a day's labour (in 1737 he paid two-thirds zloty to hirelings). Some of the debts were partially repaid by 1740, and at that time forgiven. To borrow grain or cash was a common practice. In early 1715, serfs from two villages (out of a total of fifty-two farms of all categories) owed almost 500 zlotys to the Krakow Chapter as owner. In 1743, in turn, the local peasants still owed some 300 zlotys, and some of the full tenants still demanded rudimentary support. All in all they were allowed to take out loans from the nearby estates on condition that the loans were repaid from the following year's crops and the debt amount did not exceed 300 zlotys.⁵⁹

Without any precautions taken by the landowner, the situation of the peasants was taking an increasingly tragic turn. A terrier drafted when the famine peaked (April 1737) for a small estate 26 km south of Niepołomice (Gruszów, Kwapinka) owned by a petty nobleman, shows that only seven out of twenty-nine farmers sowed anything for the winter and kept grain to sow in spring and to feed on. The others had either died, or sowed their fields only in part, many others were hard up for food. They put the blame for their hardships on the landowner, who had died. Yet while in spring 1737 three farms were abandoned, in December the same year the number doubled.⁶⁰ Village lessors were hardly helpful to the peasants. This is what happened in Bienkówice, a village located nearby, where five out of six peasant fullholdings had no possessors in 1741, neither did one smallholding and two cottages. For fugitive peasants, lack of support from the leaseholder was stated expressly as the reason.⁶¹

It was the famines of 1714–15 and 1737 that most likely resulted in stronger control over the tenants and their resources for the provision of *corvée*. Thus, the 1715 terrier contains extra information about the draught animals owned by the peasants (horses and oxen). The next two (1725 and 1730) bring no such data but name peasants' male descendants. The terrier of 1733 contains data that is as modest as that of 1710, but information about the number of sons and the number of horses and oxen already reappears in 1736 and in the following two terriers. Besides, the 1739 terrier gives precise details of where peasants had fled to and the current whereabouts of their offspring. Detailed registration of peasant human and animal resources is common to many other eighteenth-century terriers. The 1744 terrier of the Sandomierz starosty lists married, unmarried and deceased offspring (in relation to the previous terrier of 1737?) as well as peasant-owned oxen, horses and cows. Another terrier of this property, put together in 1750, lists the offspring of both sexes by name and age. In the 1757 and 1767 terriers of the noble estates of Rytwiany, Łubnice, Kotuszów and Łysaków, draught animals and offspring of both sexes were listed (with only

draught animals in 1705). The 1725 terrier of the noble estate of Dębica specifies, apart from children, servants of both sexes, horses, oxen and horned cattle.⁶² These data appear to have been noted less frequently in areas where actual serfdom was rarely used or not used at all, for example on the estate of Myślenice, 1752.⁶³

Conclusions

The above example of a large feudal landed estate in southern Poland, with agricultural production dominant, does not warrant any definitive conclusions as to the impact of famine on the manorial and peasant economy. Related research is hampered by an approach to solving subsistence crises that was highly inward-oriented and confined to the feudal estate. Major crop failures recurred every few years, and the *seigneur*s would address that with a policy of attempting to retain the most valuable workforce, the full tenants and smallholders. Yet when extreme weather conditions and crop failures cumulated over at least two consecutive years there was no way a demographic slump could be prevented, as it was not prevented in Sweden. In the Curtis model, based on the similarity of the characteristics of the communities in western and southern Europe, the peasants of the Niepołomice estate belonged to the community class 'vulnerable' to crises.⁶⁴ The severe famines in the first half of the eighteenth century may be looked on as a proof, though the scale of the havoc following the 1714–15 famine may suggest the estate had the status of 'highly vulnerable'. Famine never in itself led to the collapse of the manorial economy. Possibly, grain output would shrink periodically, yet only if adequate labour (peasants and draught animals) was lacking, not grain. This type of large estate either had reserves of grain stocks from previous years or they had cash, and they benefited from rising grain prices. Even support for the tenants through loans converted to current 'hunger' prices was a form of profitable, though not necessarily secure, investment. In the Niepołomice property, there was a surplus of workforce where the number of labour days available as feudal obligations that all peasants inhabiting a real property were required to deliver. When there was no crisis, tenants would redeem this surplus for money, yet in periods directly following famines the manor would prefer the full use of *corvée* labour to cash. Therefore, efficient management of human resources (peasants of all groups) and draught animals in their possession was critical for the manor, and required detailed tracking of peasant offspring and migration, as well as horses and oxen.

To make it worse, *demesnes* of all ownership types (villages or strings of them) were typically leased short term, so the leaseholders inevitably put their minds on making profits rather than on upholding the estate's demographic sustainability over the long run. Nevertheless, the smaller an estate, the more modest its human reserves, and even a small drop in population (whether due to death or flight) could prove fateful. If nothing else, it could mean a need to hire people for work in the fields in the circumstances of growing wages.⁶⁵ The example of the small *demesne* of the Krakow Chapter shows that careful control by the estate administrator could prevent that.⁶⁶

From the perspective of the tenants who owned any property (if only a cottage) within the Niepołomice estate, famine, such as that in 1737, did not appear as a complete catastrophe at first regard either. These groups were affected not more than others by abrupt and drastic increases in mortality. Nevertheless, famine observably impoverished and reshuffled various tenant populations. This is especially true of full tenants, who were liable for the most onerous feudal obligations. The destitution of the tenants who used bigger plots of land would come through, for example, in the growing number of oxen at the expense of horses, or their inability to pay rent in lieu of labour days. Tenant indebtedness with the lords over long terms opened the door for the latter to exert economic pressure, especially in the absence of any state intervention (except for royal *demesnes*).⁶⁷ That could hardly be called a moral economy, and a fear of excessive migration (outflow) of tenants was in all probability the only thing that curbed the feudal lords' behaviour.⁶⁸ In this sense, the consequences of the 1737 famine were profound, continued for at least a decade

and restrained the marketisation of the serfs' economic activities as manorial debt had to be repaid not necessarily in cash but, for example, in labour days instead.

If the conclusions that the Niepołomice estate records and other lesser sources cited above lead to are confirmed by further research on various types of demesnes, we will be able to accept that famines themselves had generally rather mild economic effects. There were certain differences though: larger estates appear to have coped with such crises more effectively than smaller ones, while famines were more severe for peasants and less so for their feudal lords. On the whole, they solidified the existing social and economic model by binding the tenant to the lord more tightly. Apparently, the Domar model seems to work well here in the sense that as a result of excess famine-related deaths, the increased land-labour ratio further fossilised peasant dependencies and serfdom. Klein's and Ogilvie's argumentation supporting the model on the basis of evidence from Bohemian lands, where the situation was similar (faint impact of towns' labour market), is also reflected in the Niepołomice estate: in reaction to the 1737 famine, the number of corvée labour days went up, mostly because peasants waived conversion of labour days and served them out instead.⁶⁹ Another issue that has been highlighted is the concept of famine as a 'man-made catastrophe' on Polish lands, which should be explored at length in the future by determining to what extent grain reserves at demesne farms mitigated famines in local peasant communities (and under what conditions) and to what extent the reserves were traded on the market, exacerbating mortality among the subjects.

What we can, however, state for certain, is that contrary to claims by Kula and others, Poland, which was a grain exporter and a classic example of second serfdom, saw famines on a scale comparable to those in countries in Eastern and northern Europe. Mitigation – rather than prevention – of subsistence crises, was in the hands of the landowners, and the peasants were thrown back on their activity. The economic consequences of famines were of general nature as well, involving subjects going into debt, peasant relocations between farms, increased population on tenant farms, enforcing corvée labour, supply of working stock, etc. The differences between estates of various ownership types or sizes boiled down to migration losses or the time required to rebuild working human and stock resources. Forthcoming research should give a more complete answer to the question of whether the impact of famines varied compared to other economic shocks, such as plagues or wars. Another issue that seems to be reasonably worthy of asking is whether an accumulation of natural disasters and warfare over certain periods had a more robust effect on long-term economic trends in feudal husbandry.

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Notes

1 I wish to name just two of the latest publications that sum up studies, which, tellingly, make little reference to Eastern Europe and no reference at all to Polish lands: D. Collet and M. Schuh, eds, *Famines During the 'Little Ice Age' (1300–1800): Socionatural Entanglements in Premodern Societies* (Cham, 2018); G. Alfani and C. Ó Gráda, eds, *Famine in European History* (Cambridge, UK, 2017). One of the few examples is the article by M. Wang, P. Koryś and M. Tymiński, 'Centralized vs. Decentralized: Dealing with Famines in China and Poland (A Long-Term Analysis)', in J. Dijkman and B. van Leeuwen, eds, *An Economic History of Famine Resilience* (New York, NY, 2020), pp. 227–47. Unfortunately it gives a very general picture and does not benefit from the latest Polish studies.

2 Collet and Schuh, eds, *Famines*, pp. 6, 7.

3 D. Curtis, *Coping with Crisis: The Resilience and Vulnerability of Pre-Industrial Settlements* (Farnham, UK, 2014), pp. 1–61; J. Dijkman and B. van Leeuwen, 'Resilience to Famine ca. 600 BC to Present: An Introduction', in Dijkman and van Leeuwen, eds, *An Economic History of Famine Resilience*, pp. 1–10.

4 Strictly speaking, in Kula's interpretation, it was not the feudal lord who was supportive but it was the peasants who actively shifted the burden of a poor harvest and food deficit onto the manor. Witold Kula, *An Economic Theory of the Feudal System: Towards a Model of the Polish Economy, 1500–1800* (London, 1976), pp. 62–5, 163; J. Kochanowicz, 'Between Submission and

- Violence: Peasant Resistance in the Polish Manorial Economy of the Eighteenth Century', in F. D. Colburn, ed., *Everyday Forms of Peasant Resistance* (New York, NY, 1989), p. 47; J. Kochanowicz, *Spór o teorię gospodarki chłopskiej: Gospodarstwo chłopskie w teorii ekonomii i w historii gospodarczej* (Warsaw, 1992), pp. 127, 128; Wang, Koryś and Tympiński state in 'Centralized v. decentralized . . .', pp. 236, 237, 243 that famines were 'rather rare'. The practical operation of the seigneur's paternalism in the feudal economy is dealt with by: M. Seppel, 'The landlords' obligation to maintain their serfs in the Baltic provinces', *Social History*, 34:3 (2009), 284–300; M. Dribe, M. Olsson and P. Svensson, 'Manorialism and risk management in pre-industrial society: Sweden in the eighteenth and nineteenth centuries', *Annales HSS*, 67:2 (2012), 337–53; K. Lust, 'The question of moral economy and famine relief in the Russian Baltic provinces of Estland and Livland, 1841–68', *COLLeGIUM: Studies across Disciplines in the Humanities and Social Sciences*, 22 (2017), 46–66; T. Iida, 'Coping with Poverty in Rural Brandenburg: The Role of Lords and State in the Late Eighteenth Century', in M. Tanimoto and R. Bin Wong, eds, *Public Goods Provision in the Early Modern Economy: Comparative Perspectives from Japan, China, and Europe* (Oakland, CA, 2019), pp. 118–29.
- 5 S. Ogilvie, 'Communities and the "second serfdom" in early modern Bohemia', *Past & Present*, 187 (2005), 69–119; M. Cerman, *Villagers and Lords in Eastern Europe, 1300–1800* (2012); P. Guzowski, 'The Role of Enforced Labour in the Economic Development of Church and Royal Estates in 15th and 16th-Century Poland', in S. Cavaciocchi, ed., *Serfdom and Slavery in the European Economy 11th–Eighteenth Centuries* (Florence, 2013), pp. 215–34; M. Olsson, 'Manorial economy and corvée labour in southern Sweden 1650–1850', *The Economic History Review*, 3 (2006), 481–97; M. Malinowski, 'Serfs and the city: market conditions, surplus extraction institutions, and urban growth in early modern Poland', *European Review of Economic History*, 2 (2016), 123–46.
- 6 Kula, *An Economic Theory*, p. 163; Witold Kula, *The Problems and Methods of Economic History* (Aldershot, UK, 2001), pp. 374–88.
- 7 B. Baranowski and J. Topolski, eds, *Zarys historii gospodarstwa wiejskiego w Polsce*, vol. 2 (Warsaw, 1964), p. 369; S. Inglot, ed., *Historia chłopów polskich*, vol. 1 (Warsaw, 1970), p. 55, vol. 2 (Warsaw, 1972), pp. 20–1.
- 8 W. Abel, *Massenarmut und Hungerkrisen im vorindustriellen Europa* (Hamburg, 1974); D. Collet and D. Krämer, 'Germany, Switzerland and Austria', in Alfani and Ó Gráda, eds, *Famine in European History*, pp. 101–18; L. Steinbachowa, 'Demograficky vyvoj za hladomoru v letech 1771–1772', *Historická demografie*, 25 (2001), 101–29.
- 9 C. Kuklo, *Demografia Rzeczypospolitej przedrozbiorowej* (Warsaw, 2009), pp. 252–4.
- 10 Collet and Krämer, 'Germany, Switzerland and Austria', pp. 113–16; R. Butterwick, *The Polish-Lithuanian Commonwealth, 1733–1795: Light and Flame* (New Haven, CT, 2020), p. 44.
- 11 Karen J. Cullen, *Famine in Scotland: the 'Ill Years' of the 1690s* (Edinburgh, 2010), pp. 93–117; J. Dijkman, 'Poor Relief and Famine in Northwestern Europe, 1500–1700', in Dijkman and van Leeuwen, eds, *An Economic History of Famine Resilience*, pp. 102–07.
- 12 E. Melton, 'Gutsherrschaft in East Elbian Germany and Livonia, 1500–1800: a critique of the model', *Central European History*, 21:4 (1988), 318–21; E. Melton, 'Manorialism and Rural Subjection in East Central Europe, 1500–1800', in D. Eltis and S. L. Engerman, eds, *The Cambridge World History of Slavery, Vol. 3: AD 1420–AD 1804* (Cambridge, UK, 2011), pp. 299, 320; E. Melton 'The Agrarian East', in H. Scott, ed., *Early Modern European History, 1350–1750, Vol. 1: Peoples and Place* (Oxford, 2015), pp. 437–39; M. Malinowski, 'Serfs and the city', p. 123; P. Guzowski and R. Poniat, 'Propozycja indeksu mierzącego zróżnicowanie systemu folwarczno-pańszczyźnianego', in D. Michaluk, ed., *Chłopi na ziemiach dawnej Rzeczypospolitej do czasów uwłaszczenia* (Ciechanowiec-Warsaw, 2019), pp. 27–9; M. Szoltysek, *Rethinking East-Central Europe: Family Systems and Co-Residence in the Polish-Lithuanian Commonwealth* (Bern, 2015), p. 9.
- 13 A complete low-down on Polish historiography relating to the socio-economic history of the pre-Modern era is given by J. Kochanowicz and A. Sosnowska, 'Economic History of Pre-industrial Poland: An Obsolete Subject?', in F. Ammannati, ed., *Dove va la storia economica?: Metodi e prospettive: secc. XIII–XVIII [Where is Economic History Going?: Methods and Prospects from the 13th to the Eighteenth Centuries]* (Florence, 2011), pp. 153–71. See also Kochanowicz, 'Between Submission and Violence', pp. 35–7. It was only recently that a proposal arose to design a universal tool, the serfdom index, to be used to determine the degree of peasant subjection to and dependency on the feudal lords, see Guzowski and Poniat, 'Propozycja Indeksu', pp. 25–41.
- 14 The region encompassing the Niepołomice estate, that is, the former Krakow Voivodeship, is discussed in studies such as I. Rychlikowa, *Klucz wielkoporski Wodzickich w drugiej połowie XVIII wieku* (Wrocław, 1960); E. Trzyzna, *Położenie ludności wiejskiej w królewskich województwach krakowskiego w XVII wieku* (Wrocław, 1963); A. Falniowska-Gradowska, *Świadczenia poddanych na rzecz dworu w królewskich województwach krakowskiego w drugiej połowie XVIII wieku* (Wrocław, 1964); J. Muszyńska, *Gospodarstwo folwarczne w starostwie sandomierskim w latach 1510–1663* (Kielce, 1984); J. Muszyńska, *Gospodarstwo chłopskie w starostwie sandomierskim w latach 1510–1663* (Kielce, 1991).
- 15 Kula, *An Economic Theory*, p. 62.
- 16 By using free tenant carriage services the nobility could send their produce to markets and fairs in the most distant destinations, usually having a choice of several larger or smaller towns. For trading privileges for villages, see J. Maroszek, *Targowiska wiejskie w Koronie Polskiej w drugiej połowie XVII i w XVIII wieku* (Białystok, 1990).
- 17 *Zarys historii gospodarstwa wiejskiego*, pp. 45, 81, 200; *Historia chłopów*, pp. 267, 283, 350, 351.

- 18 M. Dribe, M. Olsson and P. Svensson, 'Was the manorial system an efficient insurance institution? Economic stress and demographic response in Sweden, 1749–1859', *European Review of Economic History*, 16 (2012), 292–307; Dribe, Olsson and Svensson, 'Manorialism and risk management', pp. 350–3. Basing his studies on qualitative sources, Seppel, ('The landlords' obligation', pp. 298–300) also confirms that the landlord's assistance in the time of famines was of little significance.
- 19 These two parishes comprised eight of the estate's villages but a majority of its peasant population (about two-thirds).
- 20 According to official estimates of the early 1660s, soon after the Second Northern War corn sales yielded 83 per cent of revenue; see A. Falniowska-Gradowska and F. Leśniak, eds, *Lustracja województwa krakowskiego 1659–1664, Vol. 2* (Warsaw, 2005), pp. 676–85.
- 21 One day with draught animals was counted as two 'pedestrian' days in the sources examined and generally in academic literature; see J. Kochanowicz, *Pańszczyźniane gospodarstwo chłopskie w Królestwie Polskim w I połowie XIX w.* (Warsaw, 1981), p. 90.
- 22 There seems to be no consistent view among Polish historians on possible differences in peasant situation between royal estates and noble (and church) lordships. However, better legal status of the former is often emphasised (a dedicated court for royal villages) while their economic circumstances were similar, hinging on the size of estate rather than on ownership – Trzyna, *Położenie ludności wiejskiej*, pp. 292–4; Falniowska-Gradowska, *Świadczenia poddanych*, pp. 42–52, 208–16.
- 23 The Central Archives of Historical Records (hereafter CAHR), Zbiór Popielów, pp. 282, 283, 285, 286, 287, 288, 290.
- 24 The vital records and the chronicle are kept in the original parishes of Chełm, Mikluszowice and Niepołomice.
- 25 In *Folwark i wieś: Gospodarka dworska i społeczność chłopska Tenczynka w latach 1705–1845* (Wrocław, 1987). K. Zamorski had access to only two terriers from the first half of the eighteenth century but to twenty-six for the second half, including for every year after 1780. The accessibility of manorial accounts was similar. Likewise in R. Lipel, *Stosunki społeczno-gospodarcze w dobrach małopolskich księcia Jerzego Ignacego Lubomirskiego w pierwszej połowie XVIII wieku* (Rzeszów, 2002), or A. Niedojadło, *Hrabstwo tarnowskie w XVII i XVIII wieku: Dzieje społeczno-gospodarcze* (Tarnów, 2011). No inventory dating from that period has survived from the Krakow bishop's vast estate located a short distance from Niepołomice.
- 26 Concepts unexplained in the glossary in Cerman, *Villagers*, pp. XIV–XVII.
- 27 Ten hectares of arable land in Dziewin, ca. 12 hectares in Drwinia and Wola Drwińska. Ploughlands in Kłaj were smaller, the largest ones comprising ca. 7 hectares of arable land and 4 hectares of meadow.
- 28 S. Grodziski, ed., *Kronika Jazowska: Zapiski do dziejów sądeckich z lat 1662–1855* (Kraków, 2015), pp. 25–64.
- 29 W. Berelowitch and I. Gieysztorowa, 'Russie, Pologne, pays Baltes', in J-P. Bardet and J. Dupaquier, eds, *Histoire des populations de l'Europe, Vol. 1* (Paris, 1997), pp. 568–70.
- 30 P. Miodunka, 'Kryzysy demograficzne w Małopolsce w końcu XVII i pierwszej połowie XVIII wieku: zarys problematyki', *Przeszłość Demograficzna Polski*, 37:4 (2015), 7–37; P. Miodunka, 'Kryzysy żywnościowe a anomalie klimatyczne od XVII do połowy XIX wieku na przykładzie Małopolski', *Historyka Studia Metodologiczne*, 46 (2016), 209–27; P. Miodunka, 'Famines in Eighteenth Century Poland: Social or Environmental Causes?', paper presented at First Baltic Conference on the Environmental Humanities and Social Sciences (BALTEHUMS), Riga, 8th–9th October 2018.
- 31 Mikluszowice parish, *Liber Mortuorum 1728–1759*.
- 32 *The Chełm Chronicle*, pp. 22, 24, 25, 38.
- 33 We know the population of the parish in 1786 and 1807 (3510 and 4057, respectively). Population cannot be retrocalculated on the basis of natural movement data, mostly due to the limited reliability of the registration of deaths (funerals), which normally left out children. Nevertheless, assuming that the yearly average population growth rate for 1738–85 was slightly above that for 1786–1807 (ca. 0.8 per cent), we arrive at roughly 2,390 inhabitants shortly after the famine. To calculate excess 'starvation' deaths is a greater challenge. In total, 280 were recorded between the fourth quarter of 1736 and the second quarter of 1737. If the level of unreported deaths, which was very high in 'normal' times, was actually similar in the time of the famine, we get some 260 excess deaths; if the reporting level improved (and there are certain indications that it did) there might have been only some 180 additional deaths. The pre-famine population of the parish was in the region of 2,600 and it would have had a birth rate of 41 per cent or so (number of baptisms taken as an average for 1732–6), which may be slightly underrated but is probable on the whole, so it appears to support the population estimate. The number of those who went to confession for Easter at 1748 (two thousand excluding little children) ties in with that. I should note, however, that the number of births after 1737 was clearly lower than before, which seems to suggest a drop in population equal at least to the maximum estimate above – National Archives in Krakow, *Teki Schneidra*, 1801.
- 34 The spring and summer of 1734 were rainy, with two severe floods in June and August; the next year was wet too, with grain prices soaring in spring 1736. The crops were full of promise but heavy rains returned in June and July, devastating even garden vegetables. *The Chełm Chronicle*, Chełm parish, vol. 1, pp. 97–9, 104–08, 129–34, vol. 2, pp. 5, 11–13, 18, 19, 22.
- 35 Kuklo, *Demografia*, p. 253; L. Wiatrowski, *Gospodarstwo wiejskie w dobrach pszczyńskich od połowy XVII do początku XIX wieku* (Wrocław, 1965), p. 40.
- 36 S. C. Watkins and J. Menken, 'Famines in historical perspective', *Population and Development Review*, 11:4 (1985), 658–65.
- 37 The most fertile period of research into demesne economy, including the peasant economy, is summed up in A. Kamiński, 'Neo-serfdom in Poland-Lithuania', *Slavic Review*, 34:2 (1975), 253–68.
- 38 Kochanowicz, 'Between Submission and Violence', pp. 43, 44.

- 39 *Zarys historii gospodarstwa wiejskiego*, pp. 79–81; *Historia chłopów polskich*, pp. 259–62; L. Żytkowicz, 'The peasant's farm and the landlord's farm in Poland from the 16th to the middle of the eighteenth century', *Journal of European Economic History*, 1 (1972), 149–51.
- 40 P. Miodunka, 'The Diversity of the Agrarian System in Southern Poland in the Second Half of the Eighteenth Century' paper presented at the Twelfth European Social Science History Conference, Belfast, 4th–7th April 2018; R. Rozdolski, *Stosunki poddańcze w dawnej Galicji* (Warsaw, 1962), vol. 1, p. 273, vol. 2, pp. 354–7; Falniowska-Gradowska, *Świadczenia poddanych*, pp. 77–89.
- 41 Central State Historical Archives of Ukraine, Lviv, 146/16/357.
- 42 Curtis, *Coping with Crisis*, pp. 23–38; In terms of property distribution (at the user level, as opposed to social distribution of property at the owner level) demesne farms of the Niepołomice estate represented 25 per cent of all farmland, which was an average proportion at the time. The inclusion of woodland would have increased it considerably in favour of the manor to nearly 70 per cent. A. Falniowska-Gradowska, *Studia nad społeczeństwem województwa krakowskiego w XVIII wieku: Struktura własności ziemskiej i użytkowanie gruntów w świetle katastru józefińskiego* (Warsaw, 1982), pp. 58–65.
- 43 Central State Historical Archives of Ukraine, Lviv, 19/1/137, 19/1/144, 19/1/145, 19/1/146, 19/1/147.
- 44 CAHR, Zbiór Popielów, 287, pp. 158, 159, 206, 210, 288, 328.
- 45 Due to the imperfect methods of tenant identification in older inventory books, the number of deaths among full tenants and smallholders cannot be reliably calculated.
- 46 Usually the continuity of tenancy (despite breaks in the times of crisis) can only be determined indirectly as the abandoned full holdings/farmsteads were only identified with the surname of its previous holder, which reappeared in 1725 as assigned to a specific person known additionally by their first name.
- 47 Sixty-four per cent of peasant land was uncultivated. This large proportion was certainly not only down to famines in the first half of the eighteenth century or to the wars and plagues seen in that period as even in the prosperous 1680s almost half of ploughland was abandoned. J. Topolski, *Gospodarstwo wiejskie w dobrach arcybiskupstwa gnieźnieńskiego od XVI do XVIII wieku* (Poznań, 1958), pp. 123, 127, 128.
- 48 W. Szczygielski, *Produkcja rolnicza gospodarstwa folwarcznego w wieluniem od XVI do XVIII wieku* (Łódź, 1963), pp. 43, 44.
- 49 Vasyl Stefanyk National Scientific Library of Ukraine, Lviv, Archiwum Baworowskich 209/708, fols 28v–35.
- 50 A. Homecki, *Produkcja i handel zbożowy w lityfundium Lubomirskich w drugiej połowie XVII i pierwszej XVIII wieku* (Wrocław, 1970), pp. 51–6.
- 51 In *Produkcja i handel*, p. 36, unaware of the famine, Homecki does not draw a link between grain transports within Prince Sanguszko's estates in winter and spring 1737 and the famine.
- 52 *The Chełm Chronicle*, vol. 2, pp. 23, 38.
- 53 Topolski notes the lowest amounts of grain sown in the demesne farms of the Archbishop of Gniezno in 1749 (where 1685 was a previous point of reference): *Gospodarstwo wiejskie*, p. 177
- 54 The annual number of labour days (converted to pedestrian corvée) was even slightly lower in 1715 than in the early 1660s after the ruinous war against Sweden, and clearly lower than in 1615, when corvée per household was lower, see Trzyna, *Położenie ludności wiejskiej*, pp. 225, 238.
- 55 In 1716–20 the quantity of grain brought to Gdańsk from Polish lands ranged from 16,900 to 21,900 lasts, while in 1712 and 1713 it was some 40,000 annually. See C. Biernat, *Statystyka obrotu towarowego Gdańska w latach 1651–1815* (Warsaw, 1962), pp. 76–81.
- 56 *The Chełm Chronicle*, vol. 2, pp. 44, 49.
- 57 The sum could feed some 250 people for a year, that is, 5–6 per cent of the estate population, CAHR, Archiwum Kameralne, II/30, pp. 414–18.
- 58 CAHR, Zbiór Popielów, 290, pp. 257–63. The prices of borrowed grain are given only for the years 1734–5 and 1738–44; for the years 1736 and 1737 only the amounts due are given; current prices for Krakow; after: E. Tomaszewski, *Ceny w Krakowie w latach 1601–1795* (Lwów, 1934), pp. 6–16.
- 59 Archives of the Krakow Cathedral Chapter, Rev.V.767, Rev.V.770.
- 60 National Archives, Krakow, *Acta Castrensia Cracoviensia Relationes*, 161, pp. 1162–5, 3842–5.
- 61 National Archives, Krakow, *Acta Castrensia Cracoviensia Realliones*, 165, pp. 1343–59.
- 62 Biblioteka Zakładu Narodowego im. Ossolińskich, II/1580; CAHR, Archiwum Skarbu Koronnego, LVI 225, Metryka Koronna, Lustracje XVIII/70; National Archives, Krakow, Archiwum Potockich z Krzeszowic, 29/635/0/7.3/2340, 29/635/0/7.3/2343, 29/635/0/7.3/2354.
- 63 CAHR, Archiwum Skarbu Koronnego, LVI 112.
- 64 If not 'highly vulnerable', Curtis, *Coping with Crisis*, pp. 19, 60, 61.
- 65 The conclusions drawn from the data on the wages in Krakow that have been collected so far are not all that clear. Generally, after the 1714–15 famine, the wages of the unskilled workforce and construction helpers would even drop temporarily; after the 1737 famine, a distinct albeit short-lived (1738) pay rise was seen by unskilled workers, and construction helpers did not experience it until 1740s. Robert C. Allen, 'Data: Age and Price History' <<https://www.nuffield.ox.ac.uk/people/sites/allen-research-pages/>> 7th February 2022. It would be hard to say, however, whether the situation in the biggest

city of Małopolska is relatable to rural workers in the provinces. Famines triggered migration, doubtless also to larger cities, which might have resulted in their surplus of manpower leaving the countryside shorthanded.

66 Their small, two-village estate on the Dunajec River was regularly audited by two members of the Chapter, and often leased to one of the canons.

67 This path towards dependency has long been identified; see E. D. Domar, 'The causes of slavery or serfdom: a hypothesis', *The Journal of Economic History*, 30:1 (1970), 25.

68 Following the famine of 1737, the Niepołomice estate terriers reported a considerable number of examples of flight, a situation not recorded previously. The Chełm parish priest was threatened with flight by his only full tenant.

69 Domar, 'The causes of slavery or serfdom', pp. 19–23; A. Klein and S. Ogilvie, 'Was Domar Right? Serfdom and Factor Endowments in Bohemia', Centre for Competitive Advantage in the Global Economy, The University of Warwick, Working Paper (2017), pp. 1–6, 40–2.