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The European Economy in the Seventeenth century: The debates
about demography, agrarian capitalism and proto-
industrialization.

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THE EUROPEAN ECONOMY IN THE SEVENTEENTH CENTURY: THE DEBATES
ABOUT DEMOGRAPHY, AGRARIAN CAPITALISM AND PROTO-

INDUSTRIALIZATION.

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Introduction

Since the 1950s, historians have seen the seventeenth century as a period of economic stagnation, decline and even of "general crisis", one that contrasts with the rapid economic growth characteristic of the centuries on either side.¹ Originally, such decline was explained by the tailing off of silver imports from Spanish America after 1610, monetary-fuelled growth thus giving way to deflation and recession. The key problem with this explanation is that it now seems that the fall in silver imports was restricted to the years from the 1630s to the 1650s and that, in fact, imports after 1660 exceeded levels set at the start of the century. Then, in the 1960s and 1970s, under the influence of Malthusian demographic theory, historians explained the crisis of the seventeenth century as the outcome of the population growth of the previous century. Population growth eventually outstripped the supply of food which, given the failure to innovate in agriculture, led to subsistence crises which, in turn, destabilized the wider economy. A Marxist inflection of this theory stresses that this failure to innovate was itself the product of the social limits on growth imposed by a society of peasant farmers and urban craftsmen, petty producers of village and town who were hostile to economic change.

¹ A revised form of this essay will appear in J. Bergin (ed.), The Shorter Oxford History of Europe: The

The major problem with the idea of a "general crisis" is that it is impossible to identify a period in which all or most of the European economy was simultaneously gripped by a depression. In Spain, for example, economic and population decline was at its worst from 1590-1630 a period in which, however, the Dutch "economic miracle" reached its height. Likewise, when Spain embarked on a fragile economic recovery after 1670, the Low Countries, southern France and much of eastern Europe tumbled into deep and protracted economic recessions. This diversity makes it impossible to reduce to a simple formula a series of regional economic crises which, while exhibiting certain similarities, varied widely in their timing and intensity.

Despite an understandable scepticism about the existence of a general crisis, historians nevertheless agree that the European economy experienced profound problems in the seventeenth century and they continue to use the concept of crisis as a major organising theme of the economic history of the period. However, the defining feature of the crisis is now seen as the divergence rather than convergence in the economic performance of Europe's major economic regions. First, there was the diverse character of the regional cycles of growth and depression spread over the period 1590-1720. Second, the divergence between the economic development of western Europe, whose economy was based on free labour, and eastern Europe, where serfdom was greatly extended in the seventeenth century. Third, in western Europe, economic recession in the Mediterranean contrasted with economic expansion in north-west Europe, although even in the north-west there was a divergence between France, where cycles of growth alternated with deep agrarian recessions, and England, where the crisis was conspicuous by its absence.

These divergent regional developments are central to the approaches adopted by historians since the 1970s to explain economic developments in population, agriculture, and in trade and industry. First, research on population has identified that demographic trends in north-west Europe, where population grew quite rapidly from 1600 to 1650 and then stagnated, contrasted with the rest of Europe, where population fell sharply to 1650 and then regained its former levels by 1700. Historians have vigorously debated the relative weight which should be given, in accounting for these contrasting regional trends, to Malthusian positive checks, that is mortality crises, and to Malthusian preventive checks, in which population was controlled by late marriage and low fertility rather than by upsurges in mortality. (Section I). Second, historians have explained divergences in regional economic development in terms of the differing outcomes of rural class struggles between landlords and peasants. Thus, in eastern Europe, landlords imposed the economically-crippling system of serfdom whereas in much of western Europe the state protected peasant communities against predatory landlords. Even in the West, however, peasant agriculture could not escape the cyclical crises inherent in the system's static technology and lack of investment. Economic progress was thus fastest in England, where landlords expropriated the peasants and created a dynamic agrarian capitalism. Other historians argue, however, that the crisis of peasant farming was the result of forces external to agriculture, principally the crushing increase in state taxation on the rural sector; taxation peaked at different times in different countries, providing the best explanation of the diffused pattern of economic crises (Section II). Third, the collapse of Europe's great urban industries in the period has been explained, within the proto-industrialization model, in terms of the advantages enjoyed by rural industry, such as access to cheap peasant labour. The competition between urban and rural industry occurred at the international

level, that is between rather than within regional economies, which explains the shift of industrial power from the declining urban industries of central and Mediterranean Europe to the rising rural industries of the north-west. The thesis that industrial development was dominated by the dynamic properties of rural industry has been vigorously challenged on the grounds that urban and state institutions continued to curb the growth of manufacturing in both town and countryside.(Section III).

1.POPULATION AND THE ECONOMY

Given that there was little improvement in the productivity and per capita output of the pre-industrial workforce, aggregate production in the European economy was closely linked to total population size. The demographic trend was the key determinant of the economic trend: rising population meant an increase in aggregate output; a stagnant or falling population brought about the opposite. In the seventeenth century, Europe's population grew by less than 5% compared with 30% in the sixteenth century and 50% in the eighteenth [Table 1.] Moreover, such growth as did occur was concentrated in north-west Europe before 1650. Elsewhere, population fell from 1600 to 1650, with very sharp falls of 15-20% registered in Germany and Mediterranean Europe, and then merely regained its preceding levels by 1700. Consequently, historians regard the sixteenth and eighteenth centuries as eras of economic expansion while the seventeenth century is seen as one of economic stagnation and crisis. Why, then, did population stagnate in the seventeenth century, compared with the startling growth in the centuries on either side?

The modern discussion of this issue has taken place in a neo-Malthusian framework. Malthus argued that populations had an inherent tendency to grow faster than the means of subsistence, resulting eventually in falling incomes and even in catastrophic famines and epidemics. Malthus assumed that rising population would not be offset by increasing agricultural productivity; indeed, he argued that average productivity would fall, as population pressure led to diminishing returns to labour on the existing stock of land and promoted the extension of cultivation into marginal, less fertile lands. The positive check of mortality crises could only be avoided if populations were regulated by preventive checks. These restraints came into operation if falling living standards induced people to marry at a later age, or not to marry at all, which had the largely unintended effect of reducing the birth rate and hence the rate of population growth. Which did most to curb population growth in seventeenth century Europe, the positive or the preventive check or some combination of the two?

The prediction that rising population would lead to falling per capita incomes was certainly borne out by events in the sixteenth and early seventeenth centuries, when the standard of living of the mass of Europe's population fell to historically low levels. This impoverishment was associated with mortality crises, years in which "normal" death rates doubled or worse. These crises were more frequent in the seventeenth century, than in the sixteenth or eighteenth, and they did much to prevent long-term demographic growth in most major western European countries by wiping out the population increases of the inter-crisis years. Mortality crises were at their worst from the 1590s to the 1660s, largely because bubonic plague broke out in the most virulent cycle of epidemics seen since the Black Death. Such epidemics caused enormous mortalities in France, Germany and the Mediterranean countries, where they were invariably preceded by major harvest failures. The worst

crises occurred when plague was combined with famine and warfare, as in Germany in the 1630s, when many districts suffered population losses in excess of 30%, or in Catalonia in 1647-51, when 20% of the population died. The frequency and severity of mortality crises was much reduced from the 1660s to the early 1690s, which allowed a strong recovery of population, for three reasons. First, plague disappeared from western Europe, mainly because central and municipal governments adopted stringent steps to prevent the spread of the disease. Second, an improvement in the level of harvests which, because of better weather conditions, were adequate or abundant across western Europe in these years. Finally, the reduction of warfare and troop movements, which before 1650 did so much to spread disease and disrupt agricultural output. However, generalised warfare, famine and mortality crises, although not bubonic plague, returned from ca.1690. France, for example, experienced three major crises, in 1693-94, 1709-11, and 1718-19, all of which followed on harvest failures; crises which caused mass mortality through epidemics of typhus, smallpox and dysentery, and which prevented any population growth in France from 1690-1720.

Mortality trends in the Netherlands and England, where population increased by 25% from 1600 to 1650 and then stagnated, followed a different path from that found in the major Continental societies. The Netherlands, which modernized its agriculture in the sixteenth century, experienced no subsistence crises, but as Europe's most urbanized society it suffered inevitably from high rates of plague and later smallpox mortality, as infectious diseases in this period struck much harder in towns than in the countryside. In England, periodic food shortages were associated with higher death rates before 1650, but such mortality crises were small-scale and localised compared with those which afflicted continental Europe and they did not prevent vigorous national population growth to mid-century. From 1650, as agricultural improvement in England gathered pace, mortality crises disappeared altogether, although normal mortality rates rose, the result of England's rapid urbanization which, as in the Netherlands, increased the proportion of the population most at risk from endemic diseases like smallpox.

Mortality crises in most countries then, as Malthus argued, combined famine and disease, although the relationship between the two was an intricate one. Indeed, recent research has minimized the role of famines in seventeenth-century mortality crises: famines neither caused mass mortality through starvation nor even prepared the ground for epidemics, given that individual immunity to the major diseases of pre-industrial Europe, smallpox, typhus and above all plague, was not increased by poor nutrition. Demographers now highlight the autonomous role of disease, demonstrating that epidemics often occurred in years when food supplies were abundant and, conversely, that famines not followed by epidemics had little impact on mortality levels. However, while there was no systematic correlation between famine and disease, it remains true that the major mortality catastrophes of the seventeenth century followed a clear pattern -- famine followed by epidemics. But if the malnourishment of the population did not prepare the ground for disease, why did the most devastating crises combine famine and epidemics? The primary role of famines in mortality crises was a powerful, albeit an indirect one: they provoked the mass movement of the poor in search of food and work, a geographic mobility which knitted together isolated pools of endemic diseases into major epidemics. For example, deaths from disease were rising slowly in some areas of northern France from the late 1680s, outbreaks of mortality, however, which remained localised until they were drawn together into mass epidemics by the frantic population mobility

engendered by the famines of 1693-94.

Finally, current demographic research is shifting the focus more and more from the positive to the preventive check, arguing that restraints on marriage and fertility, rather than mortality crises, were mainly responsible for halting Europe's population growth in the seventeenth century. The picture is clearest for England and the Netherlands, where population growth ceased from ca.1650. In England, fertility was checked by the late seventeenth-century increase in the age at which women married and, more importantly, in the proportion of both sexes who never married, which rose from 6-8% of the population in 1600 to the historically high level of 25% in 1700. In the Netherlands, where there was an huge out-migration of young men for service in Dutch East Indies and elsewhere, urban rates of female non-marriage reached similar levels by the end of the century and the country's population would have shrunk if it had not been bolstered by a heavy in-migration from neighbouring countries. Demographers also argue that preventive checks were strengthened greatly in France, Spain, and Italy in the seventeenth century and that here too such checks provided a more effective brake on population growth than mortality crises. However, the demographic data, when viewed from a comparative perspective, and extended into the eighteenth century, suggest that preventive checks functioned at a relatively weak level in these countries. In France, for example, from 1660 to 1700, marriage ages were lower and marital fertility rates much higher than in England and the Netherlands in the same period, while rates of female non-marriage, seen by demographers as the key preventive mechanism, oscillated around 5% of the population, rates so low as to indicate that marriage was a near-universal experience for French women. In fact, preventive checks on population were much intensified in the eighteenth century in France, Spain and Italy; for example, in France, marriage ages and female celibacy rates rose steadily from the late seventeenth to the late eighteenth century. Despite this strengthening of the preventive checks, population from ca.1720 grew rapidly all across western Europe. As continental death rates fell in the eighteenth compared with the seventeenth century, reflecting reductions in infant mortality and in the incidence and severity of mortality crises, this suggests that fluctuations in mortality had more significance than variations in marriage and fertility rates in determining population growth in the major continental societies over the period 1600 to 1800.

2. AGRICULTURE AND AGRARIAN SOCIETY

The agrarian sector was by far the largest in the European economy and in most countries it employed 70-80% of the labour force. In western and Mediterranean Europe the land was worked by free peasants, whose taxes, rents and tithes provided the bulk of the revenues drawn by the state, the landowning nobility and the Church. These transfer payments, paid in kind rather than in money, supplied the urban and rural markets for food while the peasants retained most of what was left over for their subsistence needs. There were also more substantial farmers who used hired labour to produce for the market and who were most numerous in the Low Countries, England and northern France. In eastern Europe, the majority of peasants were serfs who paid rents for the land they cultivated not in cash or in kind but in the forced labour services they rendered to the lords' demesnes; a system revived in east-Elbian Germany and Poland in the sixteenth century and which swept across most of the rest of central and eastern Europe in the seventeenth century. The agrarian systems of western and eastern Europe thus followed radically different paths of development and hence it is helpful to treat them separately.

2.i Western and Mediterranean Europe

The achievements of the agricultural sector in the seventeenth century were not impressive; total output in nearly every country in 1700 was the same or lower than a hundred years or so earlier, a dismal performance which reflected the general failure to raise farming productivity through better techniques and management and higher investment. Two economies, England throughout the century and the Netherlands before 1650, did improve their agriculture, the basis of their fast rates of economic growth and their freedom from subsistence crises. Robert Brenner explains such divergences in agricultural performances in terms of the intricate social interaction between the state, noble landlords and peasants. In those countries ruled by absolutist regimes, like France, the peasants paid the bulk of taxation and hence their property was protected by the state, which guaranteed their hereditary tenures and common rights against expropriation at the hands of noble landlords. This persistence of peasant farming, explained by socio-political not economic causes, perpetuated the cycle of stagnation and subsistence crises, since peasant farms were too small, undercapitalised and conservatively-managed to act as the vehicles for agrarian innovation. In England, where the propertied classes' alliance with the state facilitated the expropriation of the peasants' property rights, agrarian capitalism emerged, a system in which scattered peasant plots were amalgamated into large farms run by capitalist and improving tenants who paid market rents to landlords, and who revolutionised agricultural methods and organisation. Three key issues thus need to be addressed. Why did so many western European regions experience prolonged agricultural slumps in the seventeenth century? Are these crises best explained by the persistence of peasant farming? Why was agricultural improvement in this period limited to England and the Low Countries?

2.ii Agricultural Stagnation and Crisis

In nearly every western European country the expansion of population and agriculture which had begun

ca.1500 eventually gave way to a sequence of agrarian crises, encompassing dramatic falls in agricultural output and profits. However, these crises varied greatly in timing, duration and causes. The first and most important cluster of crises occurred from 1590-1650, in a context of rising markets and inflated agricultural prices. [Figure 1.] In central Spain, the crisis began with the harvest failures and plague epidemics of the 1590s. But these merely initiated an enormous and protracted slump in agrarian production, when cereal production fell by between 30% and 50%, depending on the locality, for periods of forty years or more. In northern Italy, the subsistence crisis and plagues of 1630-1 inaugurated a collapse in output which rivalled that of Spain in severity and which persisted until the 1660s or later. In France, the crisis was centred in the north and east where, from the 1630s to the early 1660s, cereal production fell by 20-40%. Germany experienced enormous losses of population and agricultural production from the 1620s to the 1650s, in the Thirty Years War and its aftermath. The second cycle of crises came after 1660, in a climate not of rising but of falling markets and prices, and had its greatest impact in western and southern France and the Netherlands.

The economic model commonly used by historians to explain agricultural crises assumes that rising population caused a steep rise in the relative prices of cereals, for which demand was inelastic. This induced farmers to expand grain output, not by improving their methods but by converting pasture and hitherto uncultivated waste and woodland to cereal production. This led to declining agricultural productivity as the contraction of pastoral farming starved the old grain lands of manure, the only source of fertilizer, while the new grain lands, assuming that the best lands were used first, were of an intrinsically lower fertility. Many historians have argued that this model provides an explanation of the first cycle of agricultural crises in western and Mediterranean Europe. In Spain, for example, the sixteenth-century increase in rural and urban demand for bread led to the ploughing up of marginal lands and the widespread conversion of pasture to arable to feed humans and mules, which replaced oxen as draught animals and which fed on oats rather than natural pasture. The difficulties of Spanish agriculture were worsened from ca. 1550 by the mass sale and conversion into arable of community pasture lands which made up 30-40% of land in most districts.

However, while rising food prices indicate a growing pressure of population on land, there is in fact little evidence of a progressive Malthusian crisis of productivity in European agriculture from the late sixteenth century. Rising prices, and falling wages, suggest that labour productivity was declining, but data on agricultural yields, though arising from well-capitalised tenant farms and directly-managed ecclesiastical domains rather than peasant farms, do not show a decline in the productivity of land in the decades which preceded agricultural crises. In Spain, there was a rough stability in agricultural yields in the decades 1550-90, indicating that there was no general crisis in productivity before the general slump of the 1590s. In northern France, the years 1600-1630, which preceded the mid-century crises, were ones of rapid recovery from the devastation caused by the French Religious Wars in the 1580s and 1590s; in the Paris basin this was a period of farming prosperity, increasing investment and rising arable output. For Italy, there is evidence of a decline in land productivity on large estates in the central provinces, but across the north of the country, where many regions supported an advanced agriculture, yields were stable.

There was also no decline in average yields in European agriculture during the protracted slumps in production, although of course yields fell in years of poor harvests. For example, in the Ile-de-France, average

cereal yields were as high in the crisis period from 1630-1660 as in the period of prosperity from 1600-1630. Indeed, the clearest evidence of declining yields in western European agriculture occurs in the final decades of the century, in a context of falling demand and plummeting prices, when low profits discouraged farmers from devoting enough labour and cash to thoroughly manure and plough the land. But if arable yields did not fall either before or during the agrarian crises, then what explains the prolonged slumps in total output? There are two possible explanations. First, the fall in population triggered a classic Malthusian response in the form of the widespread abandonment of marginal land and the conversion of land from cereals to other forms of production. Second, a general decline in output on the smaller units owned or leased by peasants, which provided the bulk of production, but about which we possess no information. There is some evidence that production ceased on marginal lands in regions which suffered severe falls in population, as in Lombardy in the 1630s, where the Milan government took the extreme step of offering full ownership rights to anyone prepared to resume cultivation on abandoned farms. It is impossible to assess the general extent of deserted farms in Europe as a whole, although the fact that average yields did not rise in periods of crisis suggests that there was no general move to concentrate cereal production on more fertile lands. We have better evidence about land converted from cereals to livestock and other products but this suggests that these alternative forms of production did not compensate for the decline in cereal output. In northern Italy, the fall in cereal output from 1630-60 was in fact accompanied by a decline in wine and olive oil production. In Spain, in the Tierra de Campos region north of Valladolid, where cereal production fell by 30-40% from the 1590s to the 1630s, there was a simultaneous decline in wine production and a massive fall in the size of sheep flocks. The main disincentive to reallocating land use in Spain and Italy was the depressed prices for livestock and other products, caused by the extraordinary collapse in the city economies, which reduced demand for meat, oil and wine (Section 3.) The main agricultural response to depression in these regions was therefore a switch from wheat to inferior cereals such as rye and barley, and later maize, which required less labour and which did better on poorly-prepared land.

Logically, then, it seems that the general slump in agricultural production in seventeenth-century Europe must reflect the second explanation given above; i.e., a decline in the output and productivity of peasant farming. This crisis in peasant agriculture was invariably triggered by clusters of subsistence and mortality crises which had multiple effects. First, epidemics killed productive workers in large numbers, population losses which reduced the supply of labour to peasant farms. The shortage of labour is shown by the way in which wages rocketed in post-crises years, as in Spain from 1600-1620 and in northern Italy in the 1630s and 1640s. Second, crises also impoverished the peasantry, reducing their stocks of money and livestock, as resources were liquidated to pay for food and seed-corn. Even worse, crises led to an extensive dispossession of the peasant's land and its transfer to other, privileged owners, rent-extracting rather than investing classes. The small-to-middling peasant proprietors were the chief victims of the peasant expropriation which followed crises; they now paid high rents on land which they had formerly owned or even sank into the ranks of the day labourers [Section 2.iii.]

The greatest burden on the peasants, however, was caused not by crises but by the increase in their tax obligations, and there is a remarkable coincidence between the emergence of centralised governments with strong-tax raising powers and the difficulties of peasant agriculture. In Castile, the real burden of taxation fell

from 1530-70, when the economy was growing, but then increased threefold from 1570 to 1600, precisely when population and agriculture stagnated and then collapsed. Gross taxation, although not the per capita burden, fell slightly from 1600-1630, and then increased to a new peak in 1630-80, preventing any sustained recovery of Castile's agriculture. In France too there was a close fit between tax increases and the rise and fall of the agrarian economy. Taxes were low from 1600-1630, when the French peasant economy prospered, and then increased threefold in real terms under Richelieu and Mazarin from 1630-60, when northern France was gripped by agrarian crises. In Germany, there were rising levels of tax from 1600-1620, and enormous increases in the "contributions" levied by the civil authorities and by occupying armies from 1618-48, a period which coincided with the collapse of German agricultural production. Taxation increased even further after 1648, as stronger governments built up standing armies and this thwarted the recovery of the agrarian economy.

Rising taxation was also instrumental in the second major cycle of European agrarian crises which had their greatest impact in two very different economies, the Netherlands and southern France from the 1670s. The agrarian problems of these regions were not linked to subsistence crises which were absent from the Netherlands and muted in southern France, a region not of corn-monoculture but of a diversified and hence less crisis-prone "Mediterranean" agriculture of cereals, wine, olives and maize. Rather, the context of these "late" crises was the European-wide depression in agricultural prices from 1650 coupled with a recession in the Netherlands' urban manufacturing and trading economy from the 1660s and a slump in the Languedoc woollen industry from 1650; depressions exacerbated by tax increases. In the Netherlands, agricultural profits disappeared from the 1670s to 1720, as rural taxes increased sixfold to finance the Republic's wars of national survival against France, which caused a sharp fall in urban investment in agriculture. In southern France, taxation peaked in the middle decades of the seventeenth century as landlords in this region, who were not usually exempt from taxes, shifted their burdens on to tenant farmers. In Languedoc, there was a collapse in wine and above all in cereal production, which in some areas fell by 50% from the 1670s to ca.1720 [Figure 1]; the crisis bankrupted many Languedoc farmers, precipitating a spiral of decline in agricultural productivity, which resulted from the "poverty of the farmers not of the land."

Taxation provides the best explanation for the timing and duration of agrarian crises in the seventeenth century. Negative evidence for this proposition is provided by England, where we see an absence of serious agrarian crises, the most consistent rates of agricultural improvement, and levels of rural taxation which, except in the Civil War years of the 1640s, were extremely light by continental standards.

2.iii Peasant Farming and Agrarian Social Change

The identification of the problems of peasant farming as the root cause of seventeenth-century agrarian crises may seem to support Brenner's view that the tenacity of peasant ownership of land acted as the main brake on economic development. However, this approach is undermined by the evidence for a massive transfer of land in western Europe in the seventeenth century from peasant proprietors to other, more privileged social groups. This raises two key questions. Why was the European peasantry partly dispossessed of its land in the seventeenth century? Why did this remodelling of agrarian society not lead to general improvements in agricultural productivity?

It is true that many western European governments in the sixteenth century confirmed peasants' hereditary rights to their tenures at fixed rents and that the erosion of the real value of these rents delivered to peasants what were effectively freehold rights over land. However, the confirmation of peasant rights proved to be a mixed blessing. Rapid population growth before 1600 led to the subdivision of peasant farms through inheritance, creating a fragile peasant economy vulnerable to the effects of crises. The mechanism by which peasants were dispossessed in such crises is well-established. Harvest failures wiped out peasant surpluses and left them with little or no cash income. Yet while peasants' disposable incomes fell, their expenditure increased, as they were forced to buy food at inflated prices and to pay taxes levied at fixed rates in cash. Peasants made up the gap by spending their cash reserves, selling their animals, and, above all, by borrowing on the security of their land. In this way peasants over-extended themselves, and if one bad year was followed by another, then they defaulted on their obligations and ended up forfeiting their land to their creditors.

Although Philip Hoffman has described the view that economic and demographic cycles explain the loss of peasant land in France as "vacuous", clear national and local evidence shows that the rhythm of the expropriation of the peasantry echoed that of subsistence crises. Indeed, as Hoffman himself shows, losses of peasant land in France were concentrated in the years 1580-1720, when subsistence crises were at their peak; whereas peasant proprietorship was stable in the years 1500-1580 and from 1720-1780, when subsistence crises were many fewer in number and less severe in their effects. For example, the urban elites of Amiens acquired much peasant land around the city in the years of crisis (1630-1663, 1694-1711), while in years of abundance (1660s-1690s), the land market was moribund. In the Beauvaisis, north of Paris, five successive poor harvests in the years 1647-51 led to a profound remodelling of rural society: "crushed by debt the small peasants had to give up a large part of their land to their creditors." Likewise, in Castile, peasants lost a formidable amount of land to the Church and bourgeois landlords from the 1590s to 1720, transfers which were almost entirely condensed into years of crisis.

So, while western governments confirmed peasant tenures, they lacked the means to regulate the private land and credit markets, and hence could do little to prevent peasant indebtedness and its consequences. However, the state had more scope with communally rather than privately-owned land. In France, villages had a collective responsibility for paying taxes; when taxes rose from 1630-60, many villages became indebted and sold off their common lands. From the 1660s, Louis XIV's government put village finances in the hands of the intendants, who prevented further sales of common land, although in practice little could be done to reverse earlier sales. This stabilized the ownership of communal property, which in the late eighteenth century made up about 10% of all land in northern France. But the state's manipulation of community lands for fiscal purposes could have adverse as well as positive effects for agriculture. In Spain, virtually all peasant communities had access to vast common lands, the baldias, lands reserved to the Crown under settlements made during the Reconquista, but invariably leased to peasants at nominal rents. However, from ca.1550, the crown, under acute financial pressures, sold these lands, usually to the municipalities in whose hinterlands they were located, which financed the purchases by loans from urban capitalists. In the economic crisis from the 1590s, when civic revenues fell away, the communities invariably defaulted on debt repayments and were forced to cede nearly all these lands to their creditors.

It was in western Germany, as Brenner argued, that the state had the greatest success in protecting the peasantry. This seems an unlikely outcome, given the Thirty Years War's unparalleled destructive impact on agrarian society. However, in West Germany the basic elements of the pre-war agrarian system were reconstructed after the war, creating the most resilient peasant society in Europe, one which controlled 90% of land. So, recent studies of west German rural communities desolated by war have shown that the proportion of middling and larger peasants remained fairly stable from 1600 to 1700, while the numbers of near-landless peasants fell, the opposite of what happened elsewhere in western Europe. In all these communities the vast proportion of land transfers occurred not through the land market but by inheritance and intra-family agreements.

Stability in German landed society, as Shelagh Ogilvie has shown, reflected the steps taken by both the larger bureaucratic and the many smaller patrimonial states to protect the peasantry as a tax base. In the post-war scramble between peasants and lords to establish ownership rights to land abandoned during the Thirty Years War, state governments confirmed hereditary peasant tenures at fixed customary rents. They also wrote off wartime arrears of tax and waived fiscal demands during the period of reconstruction. States in western German also intervened in land and credit markets in ways which were unthinkable elsewhere; for example, forbidding peasants to sell land to or borrow money from residents of nearby towns. The victory of the states over landlords reflected the weakening of the territorial nobilities in the war, when they had failed to protect rural communities against intruding armies, and when the overwhelming necessity for states to raise money meant that they disregarded the nobility's customary rights to assent or object to increased taxation. The German peasantry, of course, paid a high price for its survival, namely, the burden of some of the heaviest rates of state taxation in Europe.

The dispossession of the peasantry was not the work of the traditional landed nobility but of successful members of the urban commercial and professional classes, who bought land to enhance their social prestige and to underwrite their aspirations to noble status. Land came to form the heart of "old" bourgeois fortunes; for example, it provided more than half of the wealth and annual incomes of the grands bourgeois of Beauvais and Amiens by the later seventeenth century. Indeed, urban elites became so divorced from their commercial origins that they frequently constituted themselves as self-perpetuating oligarchies, which excluded new members from the still-active commercial classes. This practice of social closure on the part of urban elites was most common in the small states of northern Italy and Germany, but it also spread throughout Spain, France and even in the Netherlands' larger cities.

2.iv Agricultural Improvement

The crises in agricultural production and major shifts in the distribution of land in the seventeenth century thus reflected the destabilizing of peasant agriculture by exogenous forces, that is by influences external to the peasant economy, principally mortality crises and taxation increases. However, even stable peasant societies had little capacity to improve productivity. Thus, the most durable peasant economy, west Germany, had the most stagnant techniques and the lowest productivity levels found in any west European agriculture. The limitations of peasant agriculture reflected the intense concern with growing cereals. Peasant land usually followed perpetual rotations, in which cereal crops were produced for two years, followed by a fallow year to

restore the soil's fertility; although in many Mediterranean regions the land was fallowed every other year. Under these systems, one third to one half of the land was uncultivated each year, while the cultivated land yielded only four or five units of harvested grain for each unit sown. Agricultural improvement required the elimination of the fallow and the raising of yields, but such innovation required more animals: manure-machines for the arable. However, rearing more animals was difficult to achieve given the lack of pasture and the inflexible allocation of land to growing corn. The low productivity of the classic agricultural system could be improved by two basic means. First, the adoption of new rotations, incorporating fodder crops which nitrogenised the soil and supported larger animal herds. Second, by convertible husbandry, in which land was converted flexibly from arable to pasture and back again.

Both systems eradicated fallows and raised cereal yields but in the first instance they were geared to rearing more animals. They were therefore introduced when market prices favoured livestock products over cereals. This happened in two circumstances. First, when agriculture was dominated by urban markets, as in sixteenth-century northern Italy and the Low Countries, which generated an immense human, equine and manufacturing demand for animal products, fodder crops and raw materials such as wool. From the 1580s to the 1670s, however, first the Flemish, then the Italian and finally the Dutch urban economies entered periods of deep recession, at which points agricultural development geared to urban demand ceased.

The second circumstance which encouraged agricultural improvement was the European-wide shift in relative prices after ca. 1650, as cereal prices collapsed and livestock prices rose. This price shift had little impact upon peasant farmers who commercialised only a small part of their output and hence were unresponsive to market stimuli; for example, in the Tierra de Campos during the prosperous years 1550-1580, the mass of peasants sold almost no cereals, while even the largest peasant farmers sold only 15-20% of their output. In theory, the dispossession of the peasantry gave landlords a golden opportunity to amalgamate small plots into large farms, creating a production system more geared to market forces. In practice this opportunity was rarely taken up. In Spain, ecclesiastical institutions were amongst the greatest gainers of land, but they leased out land in small plots, fearing that the collapse of urban markets had removed the economic rationale for large farms and that a high degree of land concentration would drive away labour from the depopulated countryside. In northern Italy and in France, south of the Loire, the main tenurial development of the seventeenth century was a massive extension of share-cropping, whereby landlords received rents as a fixed percentage of their tenants' crops. This reflected the poverty of the farmers, who looked to the landlords to supply them not just with land but with equipment, stock, even seed-corn. Many sharecroppers were in effect glorified subsistence farmers or labourers; in Tuscany, for example, increasingly indebted sharecroppers worked off their debts by labouring on the landlords' farms, giving them more the appearance of serfs or debt peons than of free peasant farmers.

In only two regions did the loss of peasant land lead to creation of a large-farm sector which dominated market-agriculture, central and southern England and northern France. In these regions, the general growth of markets for livestock products was reinforced by increased demand from the massive urban growth of London and Paris. English agriculture raised its productivity by investing in improved methods and by fashioning major inter-regional changes in land usage. New rotations boosted cereal output in regions like East Anglia and the southern downlands, as they improved arable-land quality in these light-soiled areas, formerly dominated by

sheep rearing. On the heavy clay soils of the Midlands, cereal farmers adopted convertible husbandry in response to higher livestock prices and to the superior productivity of the new cornlands. As a result, agricultural output grew faster than population and after 1700 England replaced eastern Europe as the major exporter of cereals to international markets. Much recent work on France has argued that French agriculture also made major strides in productivity and that the traditional view of French agriculture as incapable of improvement is a myth. But even Hoffman's comprehensive study concludes that although French agriculture expanded in the sixteenth and seventeenth centuries, the best estimate is that its output failed to keep pace with population growth and was subject to frequent underproduction crises.

What explains these divergences in agricultural output, which were particularly marked from ca. 1650 and which account for a good part of the differing overall economic progress of England and France in the seventeenth century? Brenner argues that large farms were the main vehicles of agricultural innovation and that there were, relatively, far fewer such farms in France than in England. This view disregards the lengthy process by which bourgeois and clerical landowners in northern France patiently acquired peasant plots and fashioned them into large consolidated farms which came to dominate agriculture in many regions. For example, in the Hurepoix, south of Paris, in the 1550s, 33% of land was owned by peasants, the overwhelming majority of whom possessed tiny holdings under 2.5 acres in size. The remaining land was owned by elite landowners: but their holdings were units of ownership not of production; i.e., they too were dispersed over numerous small plots rather than amalgamated into large farms. By ca. 1670, the peasants' share of the land had fallen to about 20%. The gainers were Parisian office-holders, who both fore-closed indebted peasant land and created large, consolidated farms of 125 acres or more, which now covered about 40% of the cultivated surface.

However, these large farms were less innovative than their English counterparts. In the Paris basin, the most advanced region, attempts to introduce fodder crops were limited and most of the modest gains made in the period 1600-1640 were reversed in the mid-century crises. This had two linked consequences. First, northern French farms supported far fewer animals than English ones. Second, while in the late seventeenth century large farmers achieved cereal yields as high as those found in England, the lack of animals meant they only did so by fertilizing the arable with off-farm manure obtained from Paris and by keeping one third of their land in fallow. Large French farms were "corn factories", which supported few animals and which withdrew one third of land from production every year.

But why did these farms not innovate? Brenner's view is that innovation was unnecessary because large farms in France could draw cheap labour from the "sea of peasant farms" which surrounded them. His view that the process of expropriation was carried less far in France than in England is surely correct. Despite the French peasantry's loss of land, there was a difference between the villages of northern France, where the manouvriers (labourers) who owned a few acres formed the majority of households and those in southern England, where only a quarter of the village labour force possessed an acre or two and a few animals. But why then was there a larger labour surplus in France than in England, given that the transformation of the English peasantry into a landless proletariat was so much more thorough-going? Brenner suggests that surplus English labour was absorbed into rural industry, but this invokes England's rapid industrial development as a cause of agrarian advance, when generally his thesis construes it as an effect of agricultural improvement. Moreover, the

economic rationale of large farms in France, given their lack of innovation, was the efficiency with which they used labour, labour productivity being much higher on large than on small farms. It seems unlikely then that the crucial difference between English and French agriculture lay in the relative availability of peasant labour.

Two things mattered more. First, the comparative freedom of English agriculture from taxation and mortality crises underpinned the prosperity of the tenant farmers and richer peasants, the farmers who actually implemented the improved methods of agriculture. Second, the differing economic behaviour of the English and French landlords in the agricultural depression after 1660, when England made its irreversible breakthrough in agricultural productivity, while France failed to build on the modest innovations of the early seventeenth century. The reaction of the English landlords to the depression was to abate rents and to write off arrears, to assume some responsibility for taxes and to increase investment in agriculture. In the public sphere, English landlords compelled a reluctant government to put a floor under agricultural prices by, for example, granting substantial bounties on corn exports. French landlords had no comparable influence on state policy, while as private landowners they strove to keep rents up until the end of the century. French commercial farmers were trapped between low prices and high rents, but the reaction of landlords was to bankrupt the farmers, even their largest tenants, rather than get them out of their predicament. How can we account for these differences?

A key element was that French landlords had to cope with a succession of agrarian reconstructions, which in the end destroyed any hope of co-operative relations with their tenants. The first reconstruction followed the devastation of the French Religious Wars of the 1580s and 1590s, when landlords remained faithful to their commercial tenants, the laboueurs, and did everything they could to restore agriculture. The second followed the mid-century crises, when landlords bankrupted those laboueurs who ceased to make profits and concentrated their lands in giant tenancies leased to fermiers. Finally, in the depression from the 1660s, landlords evicted numerous fermiers and seized their assets. From the 1640s, then, French landlords, pressed hard by successive crises, ruined the only rural classes capable of improving agriculture. English landlords dealt with only one shortlived crisis, that of the 1640s, when the Civil War and heavy taxation disrupted commercial farming; the agricultural economy, however, recovered by 1660, and the mid-century crisis left no long-term imprint on English agrarian society.

The co-operative nature of the relations between English landlords and their tenants in the agrarian depression also reflected a nexus of interests which bound landlords to the rural areas and their tenants. English landownership was dominated by the gentry, whose families had, or believed they had, a centuries-long connection with rural society. Gentry landlords were resident in the countryside, had close social and political as well as economic links to their tenant farmers, and also took a lively interest in farming practices, judging by the voluminous literature on farming published for a gentry readership. In France, by contrast, the clerical and bourgeois landlords who dominated landownership were resident in the towns, had few social links to the countryside and were indifferent to rural political opinion; the meagre French agronomic literature before 1700 also suggests that landlords were uninterested in their tenants' economic problems. Brenner sees these differences in landlord strategies as part of a structural contrast between an English capitalist and a French peasant or pre-capitalist economy. However, in the Netherlands, where agriculture was clearly organised on a capitalist basis, landlords in the agrarian depression followed the French not the English pattern. When

agriculture ceased to be profitable after 1660, Dutch landlords, again an urban bourgeois not a rural gentry class, fled the countryside, sold their land at rock-bottom prices and switched their capital to urban property and government bonds. This strategy worsened the depression in agriculture, but the behaviour of Dutch landlords was perfectly rational given that they viewed land purely in economic, one could call it capitalist terms, rather than, as in England, as the broad foundation of elite social and political power. The divergences in agrarian performances and strategies in north-west Europe before 1700 reflected broad differences in economic and socio-political structures rather than a stark contrast between capitalist and peasant economies.

2.v Eastern-Central Europe

In the sixteenth century, the agrarian economies and societies of eastern Europe diverged from those in the West. Western landlords increased their incomes by raising the rents received from their tenants; eastern landlords could not follow this path since the region's low density of population meant that land generated low rental values. Eastern landlords, notably in Poland and eastern Germany, therefore became direct producers for the home and foreign market, working their demesnes with serf labour; i.e., higher rents were extracted from the peasantry in the form of forced labour services rather than in cash or in kind. Until the late sixteenth century, however, the burdens of serfdom were not so excessive as to undermine the peasant economy; thus, while serfs did not supply the export market, the much bigger domestic market was chiefly provisioned by a core of large and reasonably prosperous peasant farms.

In the seventeenth century, serf agriculture in eastern Europe was transformed by two factors. First, the Thirty Years War and later conflicts caused widespread depopulation and agrarian crises in the vast east-Elbian region and, second, warfare and declining demand in the west caused a sharp contraction in eastern exports of grainstuffs and livestock. Eastern landlords therefore confronted the twin problems of reconstructing agriculture in conditions of massive shortages of manpower and of maintaining their incomes in the face of falling demand for their staple products. The economic logic of the landlords position forced them to increase the demesnes' share of shrinking markets either by intensifying serfdom, where it existed, or by imposing serfdom from scratch where it did not.

Labour services were thus intensified in the first half of the seventeenth century in Poland and in the Baltic provinces, such as Livonia and Pomerania, which were annexed by Sweden in the Polish-Swedish Wars of 1600-1630. Labour services were also imposed on a significant scale for the first time in Hungary from ca.1600 and in Bohemia, Moravia and, to a lesser extent, in Austria in the aftermath of the Thirty Years War. The precondition for this escalation of serfdom was either that states endorsed increased landlord powers over peasants or that they were too weak to oppose them. In Poland, the state's fiscal powers were limited from 1569 and the penurious monarchy depended on the magnates to finance and organise the defensive wars of the period 1600-1721, a political dependency which permitted the landlord-propelled extension of labour services. In Austro-Hungary, the defeat of the Bohemian Protestant nobility's insurgency against the Emperor, the immediate cause of the Thirty Years War, led to a transfer of their land to indigenous and immigrant Catholic nobles whose imposition of a thorough-going serfdom on the peasantry, who had supported the rebellion, was tacitly underwritten by the Imperial government. In Hungary, the Habsburgs depended on the aristocracy and their private armies in

ceaseless frontier wars against the Turks and could hardly do otherwise, despite noble rebellions, than yield them increasing powers over their serfs. In Brandenburg, however, Hagen has recently shown that the intensification of serfdom was not the inevitable result of the crisis of east-European agriculture. In the Thirty Years War, the seigniorial system collapsed and serfs refused to perform labour services. After the War, the emerging absolutist state gave the peasants more protection than they received in other eastern states and landlords found that in reconstructing their demesne economy they were required to negotiate with scarce peasants rather than simply coerce them. In 1700, Brandenburg peasants paid lower labour rents than they had a hundred years earlier. However, as in western Germany, the state skimmed-off surpluses which were denied to the landlords and in 1700 peasants paid more in taxes than they did in rents.

The productivity of the eastern system of agriculture declined in the seventeenth century. Yields were lower on the demesne than on the peasants' land because coerced work was performed reluctantly and badly and because peasants ensured that their animals' haulage power and manure was used to benefit their own lands more than the landlords' demesnes. The increasing use of forced peasant labour and resources on demesnes rather than on their own farms thus led to a progressive deterioration in the productivity of eastern agriculture. This can be illustrated from Poland's experience, where agricultural output stagnated from 1570-1650, collapsed in the wars of the 1650s, and then recovered to only 70% of former levels by the end of the century. Labour services imposed on Polish serfs were doubled from 1570-1650 and were ratcheted further upwards following the Cossack and Swedish wars of 1648-1660. The excessive demand of the demesnes for labour prevented the reconstruction of the peasant system after the mid-century wars: only two-thirds of peasant plots resumed full production and the number of substantial peasants, the serf system's chief productive force, fell even more drastically. Demesne farms were reconstructed and indeed extended, but there was a 20-25% decline in their productivity as the labour upon them was increasingly performed by gangs of manual labourers who lacked the animals and equipment needed to work the lords' land adequately. Landlords did not replace more than a fraction of this lost capital as they remained resolutely opposed to productive investment.

3. INDUSTRY AND TRADE

Although agriculture was the dominant activity in the European economy ca.1600, Europe also had the manufacturing capacity to process agricultural commodities and to supply basic producer goods and a wide range of consumer products. Manufacturing was carried on in variety of settings. The core of the manufacturing system was made up of artisans in towns and villages who produced textiles and many other goods and services for local markets. In most rural areas peasant households processed food and drink and made coarse textiles for their own consumption. In a few regions, these households were employed by urban merchant-organisers to make goods, usually textiles, for sale in non-local markets, a form of production called the putting-out system or proto-industry. The largest concentrations of manufacturing, however, were found in the craft and workshop industries of large towns and cities, which produced high-quality textiles and other goods for well-to-do consumers in national and international markets.

3.i Industry and Trade, 1600-1650

The years 1600-1620 were the Indian summer of the commercial and industrial system established in the sixteenth century, when many industries and trades reached peak levels of activity. But the boom ended in the trade crisis of 1619-22, a watershed in the development of the European economy, when many indices of trade and of industrial production took a downward turn and remained depressed until 1650 or beyond [Figure 2.] This international economic crisis had its greatest impact in France, Germany, and in central and Mediterranean Europe. In England and the Low Countries, commercial and industrial expansion was much less interrupted, leading therefore to a decisive shift of the core areas of trade and manufacturing to north-western Europe. The crisis was precipitated by the Thirty Years War, which caused massive currency devaluations and market disruptions in Germany and central Europe, destabilizing foreign trade and industry in a region containing about one-third of Europe's population. More generally, consumer demand in Europe for manufactures was depressed from 1630 to 1660 by three mutually-reinforcing economic trends established above: the fall in population caused by mortality crises; the crises in agricultural production and incomes; and the huge increases in taxation required to finance the Thirty Years and Franco-Spanish wars (1618-1660). The slump in European trade was reinforced by a contraction in the world economy. Silver imports from Spanish America fell from the 1630s to the 1650s, reducing Spanish-American demand for European goods. Europe's commerce with Asia stagnated from 1620-1650, a period when trade was disrupted by the English and Dutch attack on Portugal's Asian-trading monopoly.

The core of the early seventeenth-century crisis in trade and industry was the spectacular and irreversible decline in urban manufacturing. In Spain, urban industrial output stagnated to 1620 and then collapsed; by 1650, population and production in all the major industrial towns, including Cordoba, Toledo and Segovia, had fallen by 50-70%. Madrid was the only town which grew, but Spain's new capital was a centre of consumption not of industrial production. In Italy, urban population losses were smaller than in Spain, but urban industrial decline was as dramatic and the cities of Venice, Milan, Florence, Genoa and Como lost from 60-80% of their silk and woollen production from 1620-1660. In south Germany, industrial production in cities like Nordlingen, Augsburg and Nuremberg, which specialised in woollens and cottons, was devastated in the Thirty Years War and south Germany did not recover more than a fraction of its preeminence in European manufacturing after the war. In France, an industrial crisis hit the northern textile towns from the 1630s and the Brittany and Languedoc woollen industries from the 1650s, although the loss of production was less severe than elsewhere, while, against the trend of urban industrial decay, Lyons established an important silk industry in the first half of the seventeenth century.

The rout of urban manufacturing in Spain, Italy, Germany and France was linked to the slumps in European and transoceanic markets; but the urban industrial crisis was greater than was warranted by the decline in trade. The problem was not solely or even mainly one of shrinking markets, but of intensified international competition. Industry diversified in England and expanded in the Low Countries from 1600 to 1650 and it was the superior competitiveness of these economies which undermined the older centres of urban manufacturing. So, both the Spanish and later the French textile industries were overpowered by imports of light, cheap woollen goods from England and the Low Countries which supplanted indigenous products in the huge Franco-Spanish

domestic markets and in the export trade to Spanish America.

The "proto-industrialisation" model developed by historians since the 1970s has provided the most comprehensive explanation of the changing balance of international competitiveness amongst Europe's industrial regions in the seventeenth century. This argues that Europe's urban industries collapsed in the seventeenth century because industrial production was relocated to the countryside, where peasants combined manufacturing with agriculture, integrating the tradition of rural handicrafts into market production. Rural industry had two key advantages. First, wages, which made up the larger part of manufacturing costs, were lower in the countryside than in the towns. Second, rural industry was free from urban guild regulations which increased costs and prevented urban industry from responding to changes in consumer tastes. Urban capitalists organised proto-industry, "putting out" raw materials and semi-finished goods to rural workers and marketing the finished products in national and international markets. How successfully does this model explain the reorganisation of European industry in the seventeenth century?

The model is correct in seeing that the key to industrial competitiveness was product innovation and the lowering of wage costs. Given the general lack of cost-reducing technical innovations, diversification and lower costs could only be achieved by driving down wages and by reducing standards of quality. The classic "innovation" of the seventeenth century was the replacement of expensive and durable woollens, the "old draperies", by the "new draperies", which used the same technology but adapted to the production of flimsy, gaudily-finished textiles, made from cheap, coarse wool, often mixed with fibres such as cotton. This was part of a fundamental shift in European consumer tastes from expensive, durable consumer goods, to semi-durable and cheaper substitutes. The problem of the declining urban industries was that city-guildsmen did not alter the basic design of their products, even when faced with overwhelming evidence of changes in market tastes. Recent research suggests, however, that craft workers, for example in Italy, did in fact wish to innovate but were held back by the opposition of merchants and city-governments who feared that change would undermine a city's greatest asset, its reputation for quality production. In either case, urban manufacturing was inherently inflexible in an international economy which demanded a continuous revolution in product types.

However, major innovations in industrial products and methods were achieved in north-west Europe, although until 1650 this reorganisation took place much more in an urban than a rural setting. This emergence of the north-west as Europe's major industrial region cannot therefore be squared with the proto-industrial model's emphasis on the growth of rural production. In the Netherlands, Europe's industrial leader, woollen production was concentrated in Leiden, by 1650 the most important textile centre in Europe and the second Dutch city after Amsterdam. This outcome hardly seemed likely in the sixteenth century when Leiden's "old drapery" woollen industry was unable to compete with the English textiles which flooded the Netherlands' market: by 1580, the traditional industry was virtually extinct. From 1580, however, Leiden received thousands of Protestant refugees from Flanders who had pioneered the manufacturing of "New Draperies" in the southern Low Countries. In Leiden, these textiles were produced not by guild craftsmen, as in the old, defunct industry, but by Flemish and later indigenous merchant-capitalists, who "put-out" work to dependent labourers on wage rates, in non-guild manufactories which frequently changed their product-types. Similarly, the recovery of Flanders' industrial economy in the early seventeenth century was based on flexible urban, not rural, production, where linen

merchants put-out work to guild-trained craftsmen working for wages in large, unregulated city workshops. In England, rural as opposed to urban industry dominated textile production by the end of the sixteenth century, long before this happened elsewhere. But even the English textile industries combined rural and urban elements. In the East Anglian "new drapery" industry, the major English exporter to south European markets, spinning was done in the countryside; but weaving and finishing, which made up by far the largest proportion of total costs, were concentrated in Colchester and Norwich and other towns which, like Leiden, were failing, over-regulated textile centres, revitalised by the introduction of new products by Flemish refugee-migrants, activities in which strict guild controls never took hold.

3.ii Industry and Trade, 1650-1700

After 1650, there was, in nearly every European region, an increase in the importance of rural industry at the expense of urban production, an industrial reorganisation which fits much better with the proto-industrial model than developments before 1650. First, Dutch urban industry, which had swept all before it from 1580-1650, experienced absolute decline. At Leiden, textile production by 1700 had fallen by a third to a half from the peak years of the mid-century. Haarlem, in 1650, had 3-4,000 linen weavers; by 1700 linen weaving had almost disappeared from the town. The decline of Dutch urban industry was, to a modest degree, compensated for by the relocation of production to rural areas in the eastern Netherlands, and across the border into Westphalia and Brabant. In Flanders, the stagnation of the urban linen industry, and the sustained expansion of the rural, has been dated precisely from the middle of the seventeenth century. English woollen exports trebled from ca.1650-1700, increased output which flowed from the rural industries of the West Country, and above all Devon, Lancashire and Yorkshire, while the more urbanised East Anglian industry turned to the domestic market. From ca.1650, urban merchants in Italy, France and Germany also reacted to the earlier collapse of urban industry by establishing rural industrial networks. In France, new drapery production spread across the Picardy and Champagne countryside, while Brittany and Normandy became major rural producers of linens and later cottons.

There was also, from ca. 1680, a modest revival of woollen production in certain northern textile towns, such as Amiens, while Lyons replaced northern Italy as Europe's premier producer of the finest silk fabrics, an industry organised by marchands-fabricants who "put-out" work to an army of dependent urban silk-weavers. In Italy, it was once assumed that the collapse of urban industry led to the country becoming wholly deindustrialized. In fact, north Italy generated numerous major rural industrial sectors in the period, including iron, paper manufacture, linens and woollens. Most important was silk production in Piedmont, Lombardy and the Venetian State, where rural producers replaced the towns as the manufacturers of plain silk fabrics and the chief source of supply of raw and spun silk to international markets, especially Lyons. A number of Italian towns, including Venice, Florence and Lucca, also revived their luxury industries, notably of fabrics woven from silk and gold thread. Finally, from the end of the Thirty Years war, rural production, mainly of iron and above all linens, expanded in central and eastern Europe: in Germany -- in the Rhineland, Westphalia, Saxony and the south-west - - and in Switzerland, Silesia, Bohemia and Moravia.

The proto-industrial model argues that an industry's degree of competitiveness was determined by its capacity to adapt production to market demands and also by its ability to drive down wage levels. In general,

wages in Europe fell from the mid-sixteenth to the mid-seventeenth century, but they declined much more in the countryside than in the towns. Low rural wages were caused by population growth combined with the peasantry's loss of land, which created a near-landless, "cottager" population, an ideal labour force for rural industry. The sharper fall in rural wages opened up a large gap between rural and urban manufacturing costs. Wages in Italy's urban industries, for example, were pushed up from the 1590s by labour scarcities caused by plague epidemics. In England, on the other hand, Italy's chief competitor in the Mediterranean and Turkish markets for woollens, wages fell steadily to 1650, by which time rural wages were much lower than those in Italian cities. One might expect that the collapse of Italian urban industry would have forced a reduction in manufacturing wages, but wage levels were set by the demand for labour in general rather than by the fate of particular industries. Employment and wages were kept up in Italian cities not by guilds but by the fact that declining revenues from industry and trade were offset by an increasing flow of tax and rents from the countryside; thus, labour was shifted from export-orientated to service and luxury industries, patronized by the urban, rent and tax-receiving elites. Urban industries in Italy and elsewhere failed to cope before 1650 with competition from English rural industry but they even crumbled before Dutch urban industry. The Netherlands was a high-wage economy where real wages rose steadily in the late sixteenth and seventeenth centuries. However, before 1650 the increase in wages was matched by an increase in investment and labour productivity. At Leiden, for example, the Protestant refugees from the south brought in ample capital and more advanced manufacturing techniques and established a large enough scale of production to create economies through the division, specialisation and deskilling of labour. In time, this led to the employment of cheap female and even orphan labour.

From ca. 1650, the stagnation or fall in population began, very slowly, to push up wage rates in every European country. Rising wages contrasted with declining textile prices, which fell remorselessly in every textile industry for which we have data. Manufacturers were ground between falling prices and rising costs, a scissors movement which proved fatal to those urban industries which had flourished before 1650, and which gave the vital impetus to the growth of rural manufacturing. In the Netherlands, wages rose by a third to a half from 1650-1700, outpacing gains made in other regions. However, higher wages were no longer offset by innovation and rising productivity, measured at least by statistics of new industrial patents, the number of which peaked in 1620-50 and then fell off sharply. Rising real labour costs, coupled with escalating taxes, undermined the hitherto dynamic Dutch urban economy. At Leiden, textile output fell by more than a third from 1650 to 1700, but by two-thirds in the production of new drapery textiles, in which labour made up the highest proportion of total costs. At Haarlem, the labour-intensive activity of linen-weaving died away, while the capital-intensive, linen-bleaching industry survived. Rural industry expanded in the Netherlands, but agricultural and craft workers in most regions were well-paid specialists and not much attracted to rural industry; it was only in the agriculturally-backward eastern provinces that one found pools of underemployed "cottagers", the staple labour force for rural industry. Wages and taxes also rose fast in the southern Low Countries after 1650, inducing a shift of linen weaving from the towns to the countryside, where labour was much more plentiful than in the northern Netherlands, reflecting the extreme fragmentation of farm size.

Elsewhere in Europe wages rose less quickly after 1650 than in the Low Countries, with the slowest rates

of growth occurring in the countryside. In Germany, the repopulation of the rural areas after the Thirty Years War, and the huge drop in food prices, dampened down rural manufacturing wages which hardly rose above wartime levels. In northern France, there was a widening gap between urban and rural wage rates and by the 1690s weavers in the expanding rural sector near Amiens were paid about a third of the rates received by guild workers in the city. In England, relatively buoyant rural wages after 1650 were offset by the decisive shift of textile production to Devon and to northern England, exploiting the fact that average rural wages in these remote regions were lower than in the south and east.

Low wages were probably the major cause of the expansion of proto-industry, but the advocates of proto-industrial theory, as we have seen, have placed as much emphasis on rural industry's freedom from urban and guild restrictions. Critics of proto-industrial theory, notably Ogilvie, have argued, however, that the idea that rural industry escaped the net of corporate controls is a myth. The revisionists argue that in every region, with the exceptions of England and the Low Countries, rural industrial expansion was checked, sometimes smothered, by non-market institutions. So, urban merchants who organised rural production were often members of guilds, as were the rural industrial workers whom they employed. These corporate organisations hampered the free entry of capital and labour into rural industry. Similarly, towns defended their own industries, and raised revenue, by imposing restrictions and taxes on the sale of rural industry's raw materials and finished products.

It can certainly be agreed that rural industry in eastern Europe and most of Germany was hampered by controls imposed by governments, landlords, and guilds. In the larger German territories this reflected the post-1648 growth of state power while in the smaller states, including the imperial cities, it was relatively easy for small groups of manufacturers to organise cartels to lobby the authorities for protection. Consequently, textile cities like Cologne and Aachen stagnated in the late seventeenth century as guilds outdid each other "in devising schemes meant to suppress anything that suggested change." In east Germany and central Europe, the shift of industry from towns to the countryside delivered it into the hands of feudal lords who levied hefty taxes on serf-weavers and on yarn and raw material sales and who often compelled rural workers to join guilds.

However, in parts of Germany, and generally in western and Mediterranean Europe, corporate controls had far less effect on rural industrial development. In Germany itself, industrial development was rapid where state and guild regulations were largely absent, notably in the rural Rhineland, Germany's most successful industrial region. Even where guilds existed in the Rhineland, their edicts were laxly enforced. For example, in the Wupper Valley, merchant organisers of the linen and ribbon industries belonged to a guild organisation, the Garnnahrung, one replete with regulations: however, Kisch argues that infringements of the regulations were "the rule rather than the exception" and that they did little to restrict the region's industrial boom after the Thirty Years War. In France, guilds multiplied in the seventeenth century, as governments from Richelieu to Colbert and beyond attempted to extend corporate controls over industry. Yet these guilds, and their regulative codes, were aimed at urban not rural industry; the state left the latter in an unregulated limbo, against which municipal authorities made futile protests. For example, from the late seventeenth century the cotton industry spread very rapidly in the countryside near Rouen; the city's magistrates and manufacturers "protested and denounced this rural competition in vain." French towns had more success in regulating urban markets for proto-industrial goods, although this policy did more harm to urban than rural interests. At Lille, for example, it was not until 1696

that the town permitted "the importing and finishing of a few types of cloth woven in the countryside". In Italy, it was mainly in central regions, notably Bologna and Tuscany, where the power of city governments and of landlords was used to cramp the development of rural industry. In most northern regions, the state and the city authorities did more to encourage than to suppress rural manufacturing. In Milan and Genoa, for example, protests from urban silk guilds against unregulated rural industries were ignored by city rulers. In Milan, as elsewhere, the ruling patriciate's connections with urban commerce and industry had been severed, and it now benefitted from strong rural manufacturing which, from ca.1650, was generally given a higher priority by the city's rulers than urban industry. In Catalonia, the collapse of Barcelona's woollen industry in ca. 1650 led to its vigorous reappearance in small towns and villages where manufacturing was less stringently regulated. In central Spain, urban guilds remained strong, but their capacity to fend off rural industry was not tested, as merchants interested in organising rural proto-industry hardly emerged after the industrial crisis of the early seventeenth century.

The impact of local institutions on rural industrial development varied enormously, but for most regions the view expressed recently that such institutions seriously hampered the growth of proto-industry is debatable. Rural industry grew fast in Europe in the seventeenth century, both in relation to urban industry and to economic activity as a whole, suggesting that we should emphasise its dynamic qualities rather than those institutional forces which in some regions impeded the development of rural manufacturing. Besides, an emphasis on local institutions leads to the neglect of central-state policies of an economic nationalist or mercantilist character, whose impact on commercial and industrial development was far reaching.

3.iii The State and Trade and Industry in the Seventeenth Century

The seventeenth-century crisis in the international economy bolstered the contemporary belief that world markets were fixed in size and prompted states to defend their market share by protecting industry and trade against foreign competitors, of whom the most feared were the Dutch. Protectionist ideas were fully evolved in the sixteenth century but governments did not systematically act upon them until ca. 1650. In the industrial sphere, the most widely-used tactic was to reduce imports of manufactures through tariffs: a policy designed to strengthen indigenous industry and employment by eliminating foreign competition; to create a favourable balance of trade and a net inflow of bullion; and to increase state revenues by maximising the number of taxable market transactions. France took the lead in tariff policy, reacting to the mid-century collapse of its urban industries by raising import duties on English and Dutch textiles, most decisively under Colbert in the 1660s. Having protected the huge French market, the government, which prioritised industry over other economic sectors, made strenuous efforts to revive the old textile centres and to establish new luxury industries by importing foreign artisans and techniques and by the granting of subsidies, tax concessions, and market monopolies.

Protectionism was applied to foreign trade and shipping as well as to industry. England and France both founded empires in the Caribbean and North American in the early seventeenth century and from ca.1650 these became major sources of sugar and other tropical staples and major customers, not so much for manufactured goods, as for mercantile services and for shipping. English, although not French, trade with Asia also grew very

fast from 1650: this, again, was an import-driven trade, where exports of silver were exchanged for spices and above all Indian cotton manufactures. The transoceanic trades and shipping industries were arguably the most dynamic sectors in the English and French economies from 1660-1690; in France, for example, the Caribbean trade stimulated a strong commercial and industrial response in the Atlantic ports and in northern and western regions of rural manufacturing. However, both England and France faced stiff competition in their colonial and carrying trades from the Dutch. England, in fact, was much harder-pressed by Dutch competition in trade and shipping than in industry. Hence the centre-piece of English mercantilism was not the tariff protection of home industries, which was hardly applied in the seventeenth century, but the Navigation Acts of 1650-1663, designed to exclude Dutch shipping and capital from England's transoceanic and shipping trades. France, after 1670, adopted similar policies to protect its colonial interests from Dutch competition.

Most historians, however, doubt that mercantilist policies brought real benefits for trade and industry. Colbert, for example, is said to have lavished attention on France's urban and centralised industries, creating a corporatist and state-dependent industrial culture, at a time when industry's future lay with dispersed and unregulated rural manufacturing. This scepticism has been moderated in recent years. Protectionism distorted the pattern of European production and trade but it did so mainly to the benefit of those countries which followed mercantilist policies. Without protection and state assistance, the ailing French textile industries would have shifted much more slowly to producing the English and Dutch-style textiles for which there was an overwhelming consumer preference. Without the English and French navigation systems, the Dutch, whose mercantile capital and proficiency dwarfed their competitors, would have engrossed a much higher proportion of world trade than they did, thus curbing the development of England and France's buoyant Atlantic economies.

Those countries which failed to protect their trade and industry from foreign competition undoubtedly experienced the slowest rates of commercial development. Spain's imports of silver from its American colonies increased substantially from 1660, part of the wider growth of the Atlantic economy in this period, which, in turn, financed a growing volume of manufactured exports to America. However, virtually all this silver was reexported from Spain to northern Europe, which also provided the vast bulk of Spain's manufactured exports to America. Consequently, while Spanish-American demand acted as a major stimulus to European manufacturing after 1650, this benefitted not Spain but the rural textile industries of northern France, Flanders and the Rhineland. Spain had plenty of laws to prevent this happening, for example those prohibiting the export of bullion, the problem was that it did not enforce them. Indeed, Spain did almost nothing to protect its native industry, trade and shipping. Historians have been dubious about the benefits of mercantilism, but they have also been unanimous in attributing much of Spain's industrial and commercial underdevelopment to the absence of such policies.

Conclusion

Recent research on the seventeenth-century European economy has sought to explain the three central features which distinguished it from the economically expansive sixteenth and eighteenth centuries: the stagnation of population; the slump in agricultural production, associated with frequent subsistence crises; the

decline of urban manufacturing and the rise of rural industry.

Demographic research has dismissed the role of famines as a major factor in the seventeenth-century stagnation of Europe's population, emphasising instead that it was epidemics which had exogenous or non-economic causes and preventive checks on marriage and fertility which restrained population growth in the period. The model works well for the Netherlands and England, where subsistence crises were unimportant, and where marriage ages and rates of non-marriage shifted dramatically upwards from 1650. The recent attempt, however, to extend the model to France, Spain, Italy and elsewhere is less convincing. First, famines triggered all the major mortality crises which beset these societies, albeit that the links between famine and mortality took an indirect rather than a direct form. Second, the idea that the weak preventive checks which operated in these countries in the seventeenth century were sufficient to stop population growth is undermined by comparisons with the eighteenth century, when such checks were intensified greatly and yet proved quite incapable of holding back the massive population growth which swept across western Europe from ca.1720

Agrarian crises in western Europe, this chapter has argued, cannot be conceptualised as Malthusian crises caused by internal developments within a closed economic system, in which population pressure led inexorably to the collapse of agricultural production. Agriculture was undermined by a slump in the output and productivity of peasant farmers, but this decline was caused by three factors exogenous to agriculture; mortality crises, which dislocated rural labour markets; the post-crisis transfers of land from peasants to other social classes; and, above all, by the rise of crushing fiscal exactions. If the crises did not have Malthusian causes then neither did they give rise to classic Malthusian adjustments in the post-crisis period: i.e., rising cereal yields, as production was concentrated on better land; a shift of resources into non-cereal output; or an increase in per capita landholdings and incomes; outcomes prevented by the same exogenous forces which had precipitated the crises in the first place. In eastern Europe, population never pressed hard on resources and here agricultural crises clearly had socio-political rather than Malthusian causes.

Finally, the collapse of urban industry in the Mediterranean, much of France and central Europe after 1620, and its contraction in the Low Countries after 1650, meant that overall the seventeenth century saw a substantial decline in urban manufacturing. In the long-run, urban production was engulfed by rural competition in the production of low or medium-quality manufactured goods, in which the main production cost was cheap, semi-skilled labour. Urban industry retained a clear advantage in capital-intensive processes, as in textile dyeing and finishing; and it was also dominant in the production of luxury goods, such as fine silks, which embodied the costliest raw materials worked up by skilled labour, and where, moreover, the market could bear the high costs of urban quality-regulation. However, the demand for rural industrial goods, such as cheap woollens, proved to be much more elastic than that for urban, luxury goods and such demand also set the pace for the expansion of urban industries like dyeing and finishing, which were tied to a rural industrial base. The proto-industrial model has attracted more criticism than any other theory put forward in early modern history, but its major theme has not been discredited: namely, that, in the long-run, low-cost and unregulated rural, rather than urban, manufacturing set the pattern of industrial growth in the seventeenth century.

TABLE 1- POPULATION OF EUROPE BY TERRITORY AND REGION 1600-1700.
(in millions)

	1600	1650	1700
NORTH AND WEST			
Scandinavia	2.0	2.6	2.8
England & Wales	4.4	5.6	5.4
Scotland	1.0	1.0	1.0
Ireland	1.4	1.8	2.8
Netherlands	1.5	1.9	1.9
Belgium	1.6	2.0	2.0
ENT			
Germany	16.2	10.0	14.1
France	21.0	21.0	21.4
Switzerland	1.0	1.0	1.2
MEDITERRANEAN			
Northern Italy	5.4	4.3	5.7
Central Italy	2.9	2.7	2.8
Southern Italy	4.8	4.3	4.8
Spain	8.1	7.1	7.5
Portugal	1.4	1.5	2.0
EASTERN			
Austria-Bohemia	4.3	4.1	4.6
Poland	3.4	3.0	2.8
REGION			
North and West	11.9	14.9	15.9
Central	38.2	32.0	36.7
Mediterranean	22.6	19.9	22.8
Eastern	7.7	7.1	7.4
TOTAL	80.4	73.9	82.8

The figures given are approximate ones, especially those for Scandinavia, Germany, Portugal, and Eastern Europe.

Source: Jan De Vries, European Urbanization, 1500-1800 (Cambridge, Mass., 1984), p. 36. Additional data for Scandinavia, Germany, France, and Portugal from, Jean-Pierre Bardet and Jacques Dupaquier, Histoire des Populations de L'Europe (Paris, 1997).

FIGURE 1A

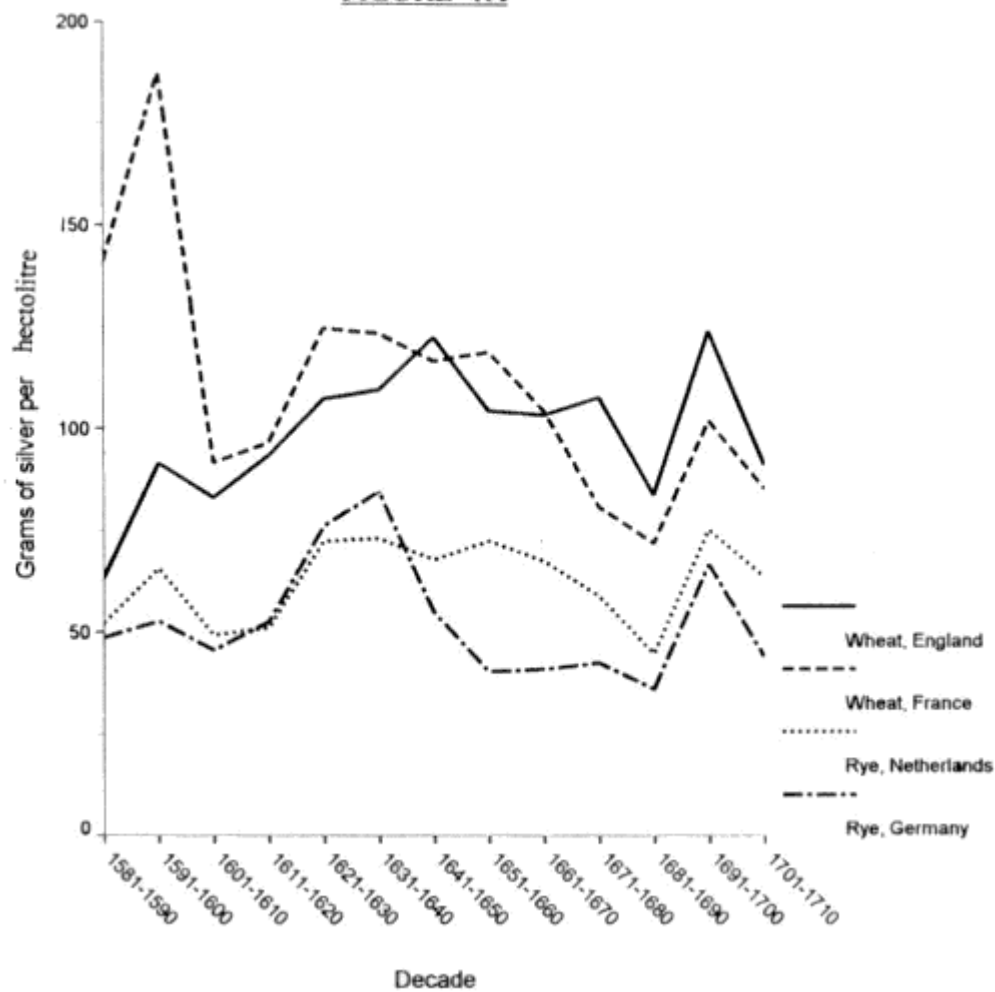
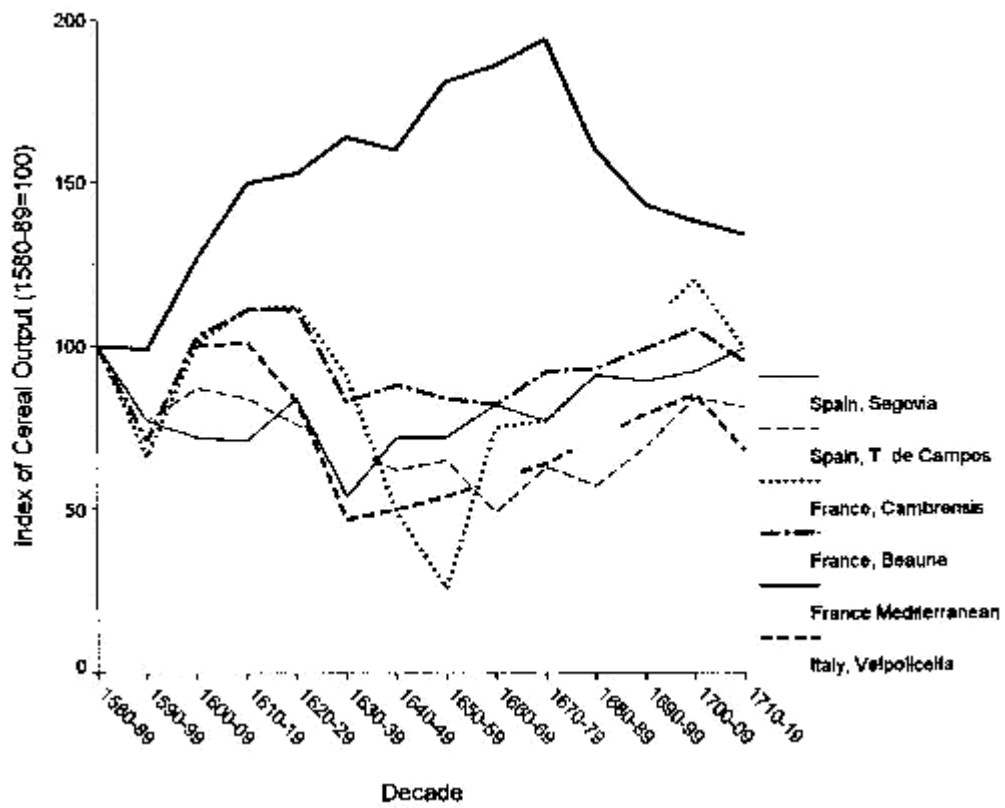


FIGURE 1B



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