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**19 and 26 January 2011**

## **ECONOMICS 303Y1**

### **The Economic History of Modern Europe to 1914**

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#### **Lecture Topic No. 18:**

#### **IV. THE SPREAD OF MODERN INDUSTRIALIZATION IN THE 19TH CENTURY: THE 'SLOW INDUSTRIALIZATION' OF FRANCE, 1789 - 1914**

##### **D. Agriculture in 19th Century France: Peasant Emancipation from Below**

## **D. Agriculture in 19th Century France: Peasant Emancipation from Below**

### **1. The Historical Significance of the Agrarian Changes produced by the French Revolution (1789-1795)**

a) **The Revolutionary Land Reforms ('Peasant Emancipation') enacted by the Revolutionary legislative assemblies, from 1789 to 1795:**

i) **are of crucial importance:**

- not just for the economic history of 19<sup>th</sup> century France
- but also for continental European economic history in general, for the 19<sup>th</sup> century: or the period from the Napoleonic Wars (1815) to World War I (1914)

ii) **For France itself, many economic historians firmly believe that the economic and social consequences of those land reforms are fundamental factors in explaining both:**

- (1) the relatively low rates of both French demographic and economic growth, over the course of the 19<sup>th</sup> century (to 1914); and
- (2) the so-called 'slow industrialization' of 19<sup>th</sup> -century France, i.e. to 1914;

iii) **both of these factors are obviously linked together.**

iv) **These Revolutionary Land Reforms also illustrate a dramatic growth in the role of the state:** in demonstrating how the Revolution itself vastly augmented the role of the state, for good or ill, in the new and truly national French economy that emerged from the 1790s

b) **For continental European economic history the French Revolutionary Land Reforms are also a paradigm or model:**

i) **in helping to explain the nature and forms of agrarian changes in other parts of continental Europe,** after the French Revolution: in particular in Germany, Poland, and Russia.

ii) **Please understand that the French Revolutionary armies and then especially the Napoleonic armies, from 1792 to 1816,** in invading most of Europe,

- (1) exported the Revolution to the lands that they conquered or occupied.
- (2) thereby imposing various elements of peasant emancipation and land reform.

iii) **Thus, in subsequently examining the economic development of both Germany and Russia,** during the 19<sup>th</sup> century (1815-1914), we will compare and contrast their agrarian changes with those imposed in France by the Revolutionary assemblies:

- (1) To see to what extent their governments enacted land reforms based on the French model: in particular in order — or so these governments hoped — to provide peasant emancipation from above so that peasant revolution could be prevented, from below.

- (2) To see also to what extent their legislated land reforms differed from the French model.
- (3) To see as well, how much post-Revolutionary French agriculture differed from the so-called English ‘Agricultural Revolution’ – and the 19<sup>th</sup> century developments examined last day.
- (4) And finally, for Germany and Russia, to compare and contrast the results:
- to see whether they resembled or differed from the patterns of post-emancipation agrarian changes in France.
  - and also to see how and why they differed from the earlier English model.
- iv) **And that explains our methodology:** why we necessarily begin our examination of economic development in continental Europe with the French Revolution, and the French economy.

## 2. The Structure of French Agriculture on the Eve of the 1789 Revolution

a) **Principal Geographic Divisions of France:** south and north of the Loire River, whose regional agricultural differences are those of topography, climate, and historical institutions:

### i) **France, south of the Loire:**

(1) **during the Middle Ages (from Carolingian times:** i.e., from the 8<sup>th</sup> century), this region had been subjected to:

- only very imperfectly formed feudalism and thus
- only partially developed forms of manorialism (known in France as: seigniorialism),
- with relatively little serfdom, at least compared to northern France and Germany.

(2) **it thus basically continued with a farming structure that dated back to the Roman empire:**

- generally, a two-field system of arable agriculture,
- dictated by the dry, hot Mediterranean climate: with adequate rainfall for cultivation only in the winter months.
- and thus, arable crops that were chiefly winter wheat (harvested in the Spring)
- alternating every other year with fallow.
- it had very little communal farming: very few open or common fields
- instead farms were chiefly in the form of individual scattered hamlets.

(3) **Nevertheless, productivity in the south was generally much lower than in the north:**

- with more primitive techniques,
- topography and climate: with poorer soils, hotter climate, and much less rainfall

(4) **inadequate livestock supplies:**

- because southern agriculture generally had inadequate supplies of pasture lands and fodder crops

to feed much livestock

- and thus with far less livestock available : i.e., fewer animals supply power, fertilizer (manure), food and industrial products, productivity was much lower than in the north
- note that Mediterranean Europe was NEVER able to practise the type of mixed livestock-arable farming that developed in the north from Carolingian times, with the close symbiotic relationships that we earlier examined in English agriculture.
- indeed, livestock raising – for sheep, cattle, goats, etc – was almost always completely separate from arable agriculture.
- Southern French livestock raising was land intensive, generally with migratory flocks or herds, grazing on very sparse grasses, over long distances: much like cattle-ranching in the American Great Plains during the 19<sup>th</sup> century (as seen in so many Hollywood ‘Westerns’).

(5) **The plough in southern, Mediterranean Europe:** very different from the northern plough

- a small, light ‘scratch ploughs’ (*aratrum*), which did not require that much livestock:
- animal power for ploughs: was supplied by just one ox, or even a strong man:
- rather than a team of eight oxen, the standard complement used in pulling the very heavy wheeled northern plough, with mouldboard and coulter (knife): the *carucca*

(6) **The chief exceptions to this standard model in southern French agriculture were only:**

- in well irrigated areas; and also:
- areas devoted to the cultivation of wine (vineyards) and olive oil,
- both of which were fairly widely practised in southern France.

(7) **Métayage or sharecropping:** derived from the later-medieval Italian *mezzadria* (from the 14<sup>th</sup> century)

- in the south of France – south of the Loire, much farming was conducted by *métayage* or sharecropping, especially in:
- vineyards (wine), olive groves, and livestock raising: all separate from arable farming.
- because all these forms of agriculture required large capital investments, generally too large for any small peasant to raise.
- the landlord thus provided a landless peasant with land and capital,
- both fixed and working capital in the form of: animals (if necessary), the seed, tools, short-term credit
- in return for half (50%) of the harvest: as both rent and interest.
- the peasant in return obtained land (with a capital stock) to provide both regular employment income and a home in which to raise a family.

- the landlord benefited by avoiding the monitoring costs that would have been required had he simply hired wage labourers to work his land for him (i.e., monitoring required to prevent daily-wage labourers from shirking or stealing).

**(8) In northern France, sharecropping, however, was not so common:**

- i.e., in the regions north of the Loire river, as the geographic boundary line between southern and northern France.
- the principal reason is the *communal* nature of northern French farming, within the residual structure of former French feudalism, and manorialism, to be discussed next.
- communal farming does not lend itself in any way to share-cropping (*métayage*) because the latter is essentially a private contract between a landowner (usually non-feudal) and an individual free, and thus non-communal and non-feudal, peasant agriculture.

ii) **France, north of the Loire river:** the heartland indeed of medieval feudalism and manorialism: (1) this region therefore had an agricultural system that was basically organized by the medieval open-field or common-field systems of cultivation that we have already seen in early-modern England:

(2) i.e., **an agricultural system, with great open, unfenced communally worked fields:**

- with two, three or more, following a three-course crop rotation:
- winter and summer crops and fallow.

(3) **communal ploughing:** in using the heavy wheeled *carucca* plough:

- with ox teams of usually eight animals or two horses (more rarely)
- communal use, in that few peasants could individually afford this expensive piece of capital equipment and an entire plough team, so that each family usually provided one ox.
- see the previous discussion of English Open-Field agriculture.

(4) **communal peasant tenancy strips:** intermixed and scattered amongst these fields.

(5) **communal regulation and communal grazing** of livestock on the fields.

(6) **Note again:** as in England, there was a very close connection between:

- manorialism (or what the French called seigniorialism or feudalism)
- and the communal open field system: strongest in most manorialised areas.

(7) **Normandy and parts of Brittany provided the chief exceptions:**

- these two regions had also been imperfectly manorialised and never experienced real communal farming;
- certainly, by early-modern times, most of the farmland in Normandy had already become enclosed and worked as individual owned or managed farms.

**b) Agricultural composition in northern, open-field French farming:**

**i) much more highly oriented to grain farming:**

(1) especially wheat farming, more so than in the Low Countries or England had been

(2) this partly reflected historic cultural patterns and diet: even in the 19th century, French consumption of wheaten bread was 50% or more higher than in Britain and Germany.

(3) also reflected historic patterns of low agricultural productivity with an open-field system so that,

- with population growth, the arable continually expanded at the expense of pasture,
- thereby restricting the growth of livestock herds, and the supply of animal power and of manure.
- Note that to produce the same amount of calories in the form of meat and other livestock foods, pastoral farming requires about 5 - 10 times as much land as for grain cultivation.

(4) Consequent problem: inadequate supplies of livestock in northern French agriculture – even if more plentiful, relatively speaking, than in southern France/

**ii) Convertible husbandry was, consequently, an insignificant feature of French agriculture:** (1) because of this high dependence on cereal cultivation with relatively small livestock component.

(2) but also because of the continued communal nature of French agriculture, without enclosures.

**iii) Vicious circle of low productivity resulted:**

(1) expansion of arable at expense of pasture, and crop cultivation in grains rather than fodder meant insufficient livestock for both power (draught animals) and manure;

(2) and that in return reduced the productivity of grain farming.

**iv) French agriculture in national perspective:**

(1) in the north (north of Loire), the prevalence of open-field farming, with an overemphasis on grains, especially wheat

(2) in the south (south of the Loire), a prevalence of métayage, well into the 19th century, with little enclosure and convertible husbandry, meant that:

- selective breeding of livestock was very limited or virtually impossible.
- expansion of fodder crops to increase size of herds was similarly very difficult to achieve.

(3) That also meant relatively poorer nutrition and higher mortality rates in early-modern France, both north and south.

(4) Thus Andrew Appleby found a striking contrast between English and French agriculture in terms of nutrition, fertility, and population growth:<sup>1</sup>

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<sup>1</sup> Andrew Appleby, 'Grain Prices and Subsistence Crises in England and France, 1590-1740', *Journal of Economic History*, 39 (1979), 865-88.

- that famines had virtually disappeared from early-modern England with the spread of convertible husbandry and multi-course crop rotations -- providing a much more diverse supply of foodstuffs,
- while agricultural dearth or famines continued to plague France up to the French Revolution.

c) **Classes of French peasantry in the 18th century:**

i) **Peasants within the Feudal-Manorial system:** a majority in north; and chiefly only in the north.

(1) These were peasant tenants nominally bound to a feudal seigneur or manorial lord (estate lord),

- but most had virtually complete property rights to their holdings,
- including the right of absolute inheritance, the rights to buy, sell, and trade lands.

(2) Because these were peasants who had descended from those within the medieval French feudal system of landed estates,

- with a communal system of farming, which were formed almost entirely in northern France – in the heartland of medieval feudalism, from the Loire to Rhine rivers –
- such peasants were therefore almost entirely confined to, or to be found only in, northern France.

(2) *Censives*: most peasants, if not all, held their land for *cens*, or annual quit-rents,

- without being obliged to render labour services
- or *corvées*, or to pay *banalités*, for compulsory use of lord's mill, or bakery, etc: i.e., very few left who had to do so.

(3) Paradoxically most of these tenancies were originally servile -- worked by serfs (*villeins*);

(4) but by the 16th century, true serfdom had withered away (almost completely) in France,

(5) and virtually all servile labour services and obligations had been commuted into cash rents (*cens*).

(6) although they seem to resemble English copyholders (from the 16th century), the French peasants differed in that:

- they had gained from the French royal courts far greater protection of their property and inheritance rights,
- so that they had become de facto owners of their holdings, almost secure as independent peasant proprietors under freehold tenure.

(6) They were thus far better able to resist enclosures than their English counterparts;

(7) for that reason there was little Enclosure in early-modern **northern** France -- not until the 19th century.

(8) This was the largest class of French peasants, divided in two groups (with a third category appended):

- **Laboureurs:**

- not labourers, but on the contrary, peasants who owned ploughs and team of oxen (or horses), with enough land to hire labour.

- Upper strata of this class equivalent to English yeomen farmers.
- **Manoeuvriers:** peasants who lacked plough teams, and usually enough land to support themselves, and thus had to work part-time as labourers in agriculture or rural industry. Lowest strata: equivalent to cottagers.
- **mainmortables:** peasants whose lands reverted to the landlord when there was no direct legitimate issue -- i.e., , no heirs.

ii) **Leasehold peasant tenants:** both feudal and non-feudal:

(1) Non-feudal contracts: for these peasants held their lands by contractual leases

- for a specific rent for a specific number of years,
- with clear recognition of the landlord's property rights of full ownership.

(2) Most of these leasehold lands had been carved from the seigniorial lord's domain holdings;

(3) thus most who rented them were estate tenants belonging to the first category:

- i.e., originally servile;
- but some free peasants also leased these lands (see: allodial peasants, below).

(4) The processes by which feudal-seigniorial landlords chose to lease out portions of their domain (demesne) lands, from the later Middle Ages, are discussed below.

iii) **Métayers or Sharecroppers:**

(1) as noted, métayage or sharecropping was found chiefly in southern France,

(2) it was borrowed, as noted earlier, from neighbouring late-medieval Italy, where it was known as *mezzadria*.

(3) In both southern France and Italy, it was found, as just noted, especially in capital intensive agriculture involving (in particular):

- vineyards: for various wines
- olive groves: for olive oil (instead of butter – with scarcity of livestock)
- and livestock raising: especially cattle and sheep

(4) As noted, the landlord provided the land, the capital, tools, seeds or plants, etc.; in return for half the harvest, as his rent and return on invested capital.

(5) This system in principle was neither unfair nor onerous; and clearly offered small peasants important advantages, as noted earlier, which can be briefly summarized:

- the landlord provided these landless peasants with land and capital
- provided them also with protection and security
- share-cropping, with rent based on half the harvest, protected them from harvest fluctuations and

price fluctuations, which they would face in paying cash rents.

(6) legally these sharecropping peasant were perfectly free persons.

(7) But free or not, these poor, small peasants were subject to exploitation, and many fell into a form of debt slavery from which they could not escape.

(8) Enclosure of share-cropping lands was also very rare, in early-modern southern France:

- since these sharecroppers had absolutely no property rights or any defence against landlords, landlords were legally and socially free to expropriate and enclose their plots
- but evidently French landlords, whether seigniorial or bourgeois in social origins, found no real incentives to enclose these lands.
- principally because the landlords were often urban-based merchants who invested in scattered individual properties when such investment opportunities arose
- thus the scattered nature of such landlord holdings virtually prevented consolidation and enclosures
- so long as *métayage* holdings produced suitable returns to landlords, landlords had little incentive to change the structures of landownership

(9) some exceptions, leading to enclosures, can be sound in Provence, during the 18<sup>th</sup> century

(10) Many of these *métayers* or sharecroppers were amongst the worst-off of the entire French peasantry by the time of the French Revolution:

- because the landlord supplied both land and capital, including working capital
- many share-croppers fell into debt: often so onerous that they could not pay them off
- and thus suffered severe exploitation, virtually as debt-slaves.

(11) but because their tenure was not feudal, but fully contractual, their status was initially unaffected by the French Revolution.

(12) Subsequently, in the 1848 Revolution (bringing about the brief Second Republic, 1848-52),

- their discontent flared into open revolt,
- so that the new Republican government abolished *métayage* (share-cropping).

iv) **Independent Peasant Proprietors (allodial peasants):**

(1) non-feudal peasants who owned their lands outright, with no obligations to any landlords.

(2) They were very few in number, and can be ignored here.

d) **Historic Trends of pre-Revolutionary French Land Distribution:** 16th to 18th centuries

i) **During the later Middle Ages, the forces of depopulation and agrarian depression, as in England, had**

led to the complete erosion of serfdom, as noted earlier (in lectures on English agriculture),<sup>2</sup>

ii) thus allowing former serfs or villeins to gain almost complete property rights by the 16th century;

iii) furthermore, much more so than in England, those forces had also led to the contraction of manorial domain holdings, and in many areas their complete elimination:

(1) i.e., most such lands were leased out to the peasants,

(2) and under conditions of virtual peasant freedom, with the dissolution or removal of servile bonds

(3) Indeed, one primary reason for medieval serfdom had been to guarantee a labour supply to work the feudal lord's domain lands.

(4) And thus the leasing out and hence the contraction of the manorial domain also eliminated part of the rationale for serfdom.

iv) **This process of leasing out the seigneurial (manorial) domain lands into peasant tenancies can be understood, by the following German terms** (which will again be used when we come to German agriculture in the 19<sup>th</sup> century:

(1) **Gutsherrschaft**: a feudal-manorial economy in which a high proportion of the feudal lord's income is derived from the commercial exploitation on of the central domain lands:

- Such an economy is dependent on favourable market conditions, market prices, and production costs for the production of such commodities as grain, livestock products (e.g., wool, meat), and timber.
- also financially dependent on the incomes from the exaction of 'lordship': fees from manorial courts, from manorial capital installations, etc.
- Such manorial economies have also traditionally relied on the exploitation of servile labour services — servile labour services exacted as rent from peasant tenants, i.e., from serfs

(2) **Grundherrschaft**: a feudal-manorial economy in which the bulk of the feudal landlord's incomes are derived from land-rents: i.e., from peasant tenants, in the form of cash rents.

- that normally meant, therefore, the conversion of former domain (demesne) lands into leasehold peasant tenancies: by written contacts stipulating conditions of tenure and money rents
- that also normally meant the conversion of servile labour services and other servile obligations and dues into annual money rents (quitrents).
- normally such a conversion from *Gutsherrschaft* to *Grundherrschaft* depended upon a change to adverse prices and market conditions, and to adverse changes in production costs, for the products that the manorial domain lands produced and sold

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<sup>2</sup> See also my online lectures for ECO 301Y: nos. 6, 7, 8 (Oct - Nov), and especially no. 21 (Feb).

- Under such circumstances, feudal landlords were generally better off in receiving a steady stream of fixed cash rents (especially in times of falling prices).

v) **But if, by the 16<sup>th</sup> century, most of the feudal -manorial lands, the former domain lands, had fallen into the hands of the peasantry**, French land-owners, including the seigneurial class (still members of the aristocracy), nevertheless managed to make a significant comeback from the later 16th to 18th centuries, to the eve of the French Revolution:

(1) From the later 16th century, much of France experienced an ‘embourgeoisment’ of land-ownership:

- as many merchants, lawyers, government officials, etc., bought up seigneuries and other once-feudal or privately-owned lands;
- and many of them also purchased titles of minor nobility,
- or were rewarded with such titles by the monarchy (*noblesse de robe* vs. *noblesse d'épée*).

(2) **This became especially true with the prolonged, persistent inflation of the Price Revolution era (ca. 1520 - ca. 1650):** which thus undermined the purchasing power of cash rents that had been fixed and determined in terms of nominal moneys-of-account.

- the consequences of that inflation, combined with a rise in the relative prices and values of agricultural products, provided a new incentive for bourgeois-minded landlords to shift back from *Grundherrschaft* to *Gutsherrschaft*: i.e., to exploit the commercial possibilities of estate agriculture.
- at the same time, that inflation further and now seriously undermined the wealth and financial stability of the traditional feudal aristocracy,
- thus enabling profit-oriented, bourgeois-minded landowners (e.g., those of the *noblesse de robe*) to buy up their lands, often relatively cheaply.

vi) **Thereafter, from the era of the early-modern Price Revolution:** many of the greater landowners, both noble and bourgeois, succeeded in reconstituting their domains and estates by various means:

(1) by purchase, and coercion,

(2) and also by *mainmorte*: i.e., the transfer of tenancy lands to the lord from those peasants without direct male issue.

(3) other means used: e.g.,

- by allowing some peasant tenants to postpone annual rent payment, and then build up arrears in rentals that they could not pay,
- hence forcing evictions of these non-rent paying tenants.

(4) If that process was brought to a halt by the French Revolution, the Revolution did not fundamentally change the structure of land-use in terms of large and small farming units.

vii) **On the eve of the French Revolution, the extent of direct estate ownership and management in France, though less extensive than in England or East Germany (Prussia), was still far greater than is usually supposed:**

(1) it ranged from a low of 12% of the arable in Dauphiné in S.E. France to 35% in Burgundy (east-central France)

(2) and to 40% in the Orléannais district south of Paris.

viii) **Thus France had, on the eve of the 1789 Revolution, had a mix of large estates and small peasant holdings**, a situation that to repeat was not fundamentally altered by the French Revolution.

vii) **As the great French economic historian Marc Bloch (1886 - 1944) stated:**<sup>3</sup>

If we can imagine that [French] Revolution broke out around the year 1480, which is of course absurd, we should find that land relieved of seigneurial charges would have been reallocated almost without exception to a host of small occupiers. But the three centuries between 1480 and 1789 saw the rehabilitation of the large estate. It was not, as in England and Eastern Germany, all-embracing. Large tracts of land, in total larger perhaps than those covered by the great estates, were still left under peasant proprietorship. But the victory was a sizeable one, though its completeness varied noticeably with the region. The Revolution was to leave the large estate relatively unimpaired. The picture presented by the rural France of our own day [1931] -- which is not, as is sometimes said, a land of petty proprietors, but rather a land where large and small properties coexist in proportions which vary considerably from province to province -- is to be explained by its evolution between the fifteenth and eighteenth centuries.

### 3. **The French Revolution and Land Reforms, August 1789 - February 1794**

a) **The Grievances and Role of the Peasantry in the French Revolution:**

i) **Serfdom, as I have stressed, was a non-issue in the Revolution:** in most parts of France, serfdom had largely disappeared by the later 15<sup>th</sup> and 16<sup>th</sup> centuries

(1) most French peasants were legally, socially, and economically much better off than in most parts of continental Europe, especially eastern and southern Europe.

(2) and thus except for peasants in the Low Countries and some parts of Rhineland Germany.

ii) **Nevertheless much of the French peasantry did have serious economic grievances, suffering from**

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<sup>3</sup> Marc Bloch, *French Rural History: An Essay on Its Basic Characteristics* (Paris, 1931; English trans., 1966, p. 149). I have slightly altered the translation to make it more idiomatic English.

**a heavy combination of financial burdens:**

- (1) often heavy land rents,
- (2) various other seigneurial dues or other feudal exactions, such as
  - *banalités*: fees for the compulsory use of the lord's capital installations -- water-mills, ovens, etc.),
  - *corvées* (compulsory labour in building roads, fences, ditches, etc.),
  - seigniorial (manorial) court fees, etc.
- (3) the combination of royal and provincial taxes,
- (4) ecclesiastical tithes or taxes paid to the Church

iii) **The extent of these fiscal burdens varied by region and by class of peasantry: they tended to be the heaviest in regions of commercialized agriculture**, where landlords could exploit the peasant's access to markets (and thus extract some economic rent).

iv) **Those grievances, perceived to be the result of feudal exploitation**, of feudal powers,

- (1) were enough to make the bulk of the peasantry very active participants in the French Revolution.
- (2) But once the Revolution satisfied these grievances, by abolishing all feudal and ecclesiastical exactions (and most royal taxes), the French peasantry ceased to be revolutionary .
- (3) and instead became a very conservative force in French society.

**b) The National Assembly of August 1789: Land Reforms:**

i) **The Assembly abolished forever all remaining vestiges of feudalism, manorialism, and serfdom in France:**

ii) **but only those exactions and obligations** that were perceived to be truly feudal in origin.

iii) **Any payments, such as pure land rents, that were viewed instead as those justified by property rights** remained fully protected by law:

- (1) because you must remember that the French Revolution was fundamentally a bourgeois revolution;
- (2) and the bourgeoisie demanded full protection of private property rights.

**c) The Peasant Reaction:**

i) **This distinction between feudal dues and property rents was not one that most peasants (who were mostly illiterate) cared to make:**

ii) **In 1792-93**, peasant fury against nobles and large landowners mounted.

iii) **After the aristocracy that year attempted a counter-revolution**, known as *La Vendée*,

- (1) when that revolt was brutally crushed, the National Assembly, between July 1793 and February 1794, responded to this peasant fury by abolishing all payments on manorial lands,
- (2) without any compensation to the nobility,

d) **Inheritance Law of 1795:**

i) **final legislation of land reform:** required equal subdivision of the land through inheritance.

ii) **We shall return to this issue:** in discussing peasant farming after the Revolution.

e) **Results of Revolutionary Land Reforms:** largely limited to France north of the Loire.

i) **all peasant holding seigneurial (feudal) lands on hereditary tenure:** now became independent peasant proprietors, landowners (again, largely only in northern France).

ii) **But the leasehold and métayage lands (the latter, chiefly in the south) were left untouched as rent-paying lands:**

(1) because these were, to repeat, contractual lands outside the feudal system,

(2) and thus governed by private property rights.

iii) **Métayage was abolished only in the next revolution**, the 1848 Revolution, as noted above.

iv) **note again the dangers of ‘homogenization’: in analysing the consequences for France**

(1) most historians have written as though these changes applied generally and equally throughout France – treating France as one homogenous geographic unit

(2) and so they have failed to note that most of the changes applied only to those regions north of the Loire river: to those regions that had been far more fully subjected to feudal seigniorialism, with predominantly communal forms of agriculture

(3) note once again that *métayage*, an entirely different agricultural system, involving free, non-communal peasants, applied almost entirely to southern France: France south of the Loire river.

f) **Land Distributions to the French Peasantry:** At the same time, a great deal of land had been confiscated and handed out or sold to the peasantry:

i) **With the Revolution itself in 1789**, the National Assembly confiscated all church lands and then sold them.

ii) **After the ‘La Vendée’ Counter-Revolution of 1792-93,**

(1) lands of both executed and emigré nobles were also confiscated and then auctioned off publicly:

(2) much of them to wealthier bourgeoisie, who rented out many such lands to peasants (on contractual leases).

iii) **But with Napoleon's defeat and the restoration of the monarchy, in 1815 (under Louis XVIII)**, the returning nobles regained about a third of their lands.

g) **End Results of land distribution:**

i) **Middle peasantry gained most from land redistributions:** in the North, their share rose from 30% to 52% of total arable lands.

ii) **The aristocracy:** who held on to or managed to regain some of their lands after 1815:

- (1) many operated their lands as large estates;
- (2) some parcelled out their lands in the form of leasehold tenancies.
- (3) The result was again: a mix of large and small holdings.

#### 4. The Economic and Social Consequences of the Revolutionary Land Reforms

a) **The Traditional View:** most historians have criticized the revolutionary land reforms of 1789 to 1795, for both perpetuating and worsening a system of small-scale, conservative, and very inefficient peasant farming.

b) **Their views, the still traditional views -- which may be at least partly correct -- may be summarized as follows :** What were the supposed consequences of land reform and small-scale peasant farming?

**(1) SEVERE IMPEDIMENTS TO ENCLOSURES, WITH SCALE ECONOMIES**

**(2) AGRICULTURAL INEFFICIENCY: low productivity per man and per hectare**

**(3) INADEQUATE DOMESTIC SUPPLIES OF INDUSTRIAL RAW MATERIALS:** thus raising raw materials costs for domestic French industry.

**(4) INADEQUATE SAVINGS AND CAPITAL INVESTMENT in agriculture:** as a reflection of low productivity and of the structure of peasant agriculture

**(5) LABOUR IMMOBILITY: insufficient labour released for urban industry,**

- because of the nature of small-scale peasant farming, which depended on family labour, working millions of small plots;
- and certainly the countryside provided less urban industrial labour than was the case in either Britain or Germany.

**(6) DEMOGRAPHIC STAGNATION: slow population growth;**

- thus an insufficient growth in domestic market demand to provide a necessary spur to development and industrialization, as was the case also in Britain and Germany.
- The demographic question is so very important that it will constitute a separate topic.

**(7) SLOW AND INCOMPLETE URBANIZATION AND INDUSTRIALIZATION:**

- because population growth was slow
- because so much rural labour still was tied to the soil.
- because savings, investment, and capital transfers from the agrarian sector were so small
- On the eve of World War I there were far fewer large cities in France, compared again to Britain and Germany.

**(8) SLOW GROWTH IN DOMESTIC DEMAND FOR INDUSTRIAL GOODS, because of**

- low income and savings levels in agrarian society, reflecting low productivity.
- slow population growth.
- slow and inadequate urbanization.

**c) The Productivity Question:**

i) **The traditional economic historians point out that**, overall,

(1) the productivity of French farming was much lower in the 19th century than that found in either Britain or Germany (let alone the US);

(2) and they contend that the agrarian problem of low productivity was a serious impediment to French industrialization well into the 20th century.

ii) **The following table**, which you have seen before (for British agriculture), seems to confirm the view that progress in French agriculture was relatively far less impressive than in either Britain or Germany, let alone the USA, during the 19th and early 20th centuries.

iii) **On the other hand**, the figures certainly do reveal some considerable progress in productivity over the 19th century, a progress that would have been deemed very impressive in any preceding era -- thus forcing us to take some of these criticism of French agriculture with a grain of salt.

iv) **Furthermore, keep in mind that these statistics are national means**, and thus they ignore the very large regional variations to be found in French agriculture (as are demonstrated by Morineau's map):

**INDICES OF EUROPEAN AND AMERICAN AGRICULTURAL PRODUCTIVITY FROM 1810 TO 1910**

**Annual net output per agricultural worker (male)  
measured in million of calories**

COUNTRY	1810	1840	1860	1880	1900	1910
<b>Britain</b>	14.0	17.5	20.0	23.5	22.5	23.5
<b>France</b>	7.0	11.5	14.5	14.0	15.5	17.0
<b>Germany</b>		7.5	10.5	14.5	22.0	25.0
<b>Russia</b>		7.0	7.5	7.0	9.0	11.0
<b>USA</b>		21.5	22.5	29.0	31.0	42.0

**Source:** Paul Bairoch, 'Niveaux de développement économique de 1810 à 1910', *Annales: Économies, sociétés, civilisations*, 20 (1965), 1096, Table 1.

d) **Land Reforms and Enclosures:**

i) **The key criticism or argument is that the revolutionary land reforms prevented enclosures**, and the creation of large farms with proper or adequate scale economies, as in Britain and Germany.

ii) **We must also remember that, before the French Revolution**, the pace of French enclosures had been very slow,

- except in a few isolated regions (Normandy and Brittany in the north-west and Provence in the south-east):
- certainly far slower and far less extensive than it had been in England, from the 15<sup>th</sup> century

iii) **The historical nature of European enclosures:**

(1) Remember, from our previous discussion of English enclosures, last Fall – from the 15<sup>th</sup> to early 19<sup>th</sup> century – that enclosure basically meant the conversion of peasant communal tenancy lands into compact non-communal lands operated as an individual farms, singly operated and managed, under conditions of private property:

- the amalgamation of scattered peasant tenancy strips, scattered in and among the great Open Fields (normally in three section, into singly *engrossed* farms
- or the conversion of village common lands – lands usually communally by the entire village – into single farming units
- the conversion of communal, and formerly feudal lands, into units of private-property ownership nevertheless meant that the owners, if they did operate them as owner-occupier farms, leased them out to tenants: with written leasehold contracts

(2) Therefore, since enclosures essentially mean the conversion of formerly feudal communal lands into private-property farms, we can expect to find enclosures only in areas once subjected to feudal and seigniorial controls.

(3) And thus, once more, for France: that meant essentially northern France, north of the Loire

iv) **France north of the Loire: the principal reason the absence of enclosures and for the protection and continuation of communal peasant farming in northern France: is to be found in the actions of the French royal courts (Parlement de Paris), from the 14<sup>th</sup> century**

(1) as noted earlier, the protection that French royal courts had been granting the peasantry from the later Middle Ages was the key factor:

(2) for, over the past centuries, the French monarchy had sought to use the power of royal courts to undermine

the judicial powers of the landed aristocracy by supporting the property rights of their servile peasantry.

(3) Therefore, by the 15<sup>th</sup> century, the French peasantry living in seigniorial regimes, despite having had servile ancestries (*villeins*), or holding lands once deemed to be servile, nevertheless had gained very secure property rights, far more secure than the counterparts in England.

(4) In England, by the 15<sup>th</sup> century, we find a strong contrast

- serfdom had virtually disappeared
- but peasants in gaining their freedoms lost their former security of tenure
- copyhold tenures without term were rare: and most were copyholders for one, two, or three lives, which came to mean a maximum of 21 years (life = 7 years)
- From the 15<sup>th</sup> century, as we saw, enclosures became much easier to undertake because landlords, in many areas (if not all), found it relatively easy to dispossess their tenants
- to repeat: enclosure was fundamentally based on the ability of landlords to remove their peasant tenants

(5) The French Revolution of course further solidified the property rights and security of tenure for most French peasants who lived north of the Loire River.

v) **France south of the Loire: reasons why there had been so little enclosures**

(1) The answer principally lies in the institution of *métayage*: that southern landlords had developed a strongly imbued historical custom of depending on *métayage* as the agricultural system providing the stablest form of annual income – and thus a form of historically endowed path-dependency.

(2) Southern landlords, landowners, many of whom were merchants and financiers resident in the towns, had no real incentive to change this system, so long as it yielded adequate returns.

(3) Furthermore, as so many urban merchants, financiers, petty industrialists, etc.

- purchased more and more small rural farm holdings, for share-cropping
- such properties, as small farms, would have been scattered and thus interspersed with similar small farms, or plots of land, owned by others, usually also urban investors.

(4) Thus, it would have been virtually impossible to amalgamate widespread, scattered, and diverse individual unit-holdings, under *métayage* rentals.

(5) They would also have lacked any economic incentive to buy out and amalgamate scattered plots,

- since such amalgamation offered no provisions for technological innovations
- as we have seen in northern Enclosures: converting communal fields into convertible husbandry
- nor would there have been any significant economies of scale, especially since share-cropping involved litter monitoring or any forms of estate management

- hence there were little if any prospects of augmented economic rents to be achieved by such amalgamations and enclosures of share-cropping lands.

(6) Furthermore, and finally, we come to the major issue:

- that enclosures with sufficient scale economies (for farming units) can really be achieved successfully only from the breakup of vast amalgamated peasant holdings,
- and thus chiefly in the form of Open Fields, and then their consolidation into viable, centrally managed units.
- And as stressed before, such agrarian structures with communal farming were found almost entirely only in northern France – though of course across all of northern Europe, to the Urals mountains in Russia.

(7) Remember that *métayage* escaped the scrutiny of the French Revolution (of 1789) and remained intact until its abolition with the Revolution of 1848.

vi) **The Attitude of the Revolutionary Assemblies towards communal farming and enclosures:**

(1) dominated by the bourgeoisie with a different concept of property rights, they had actively opposed communal farming, as an evident aspect of feudalism

(2) And thus they actively promoted enclosures to displace communal farming: abolishing compulsory open fields and village commons (*vaîne pâture*).

(3) **But neither the government nor anybody else could force the now liberated French peasantry** to give up their property rights and surrender their lands to some enclosing landlords.

vii) **Thus most northern French peasants continued to obey the traditional customs of open field and communal farming:** which George Grantham has shown continued to be practised in some parts of France (north-east) up to 1930s.

viii) **Lack of Convertible Husbandry was the major adverse economic consequence:**

(1) If you accept my previous arguments that enclosures were absolutely necessary for convertible husbandry: enclosures with single management, and the power of the owner/manager to reallocate lands between arable and pastoral (livestock uses)

(2) convertible husbandry also required considerable scale economies, missing in French agriculture (with a few exceptions) before and after the Revolution

ix) **Why most French peasants north of the Loire preferred communal open-field farming:**

(1) economic security provided by village risk-sharing,

(2) ability of open-field communal farming to accommodate disguised unemployment.

x) **Only the railroad, expanding from the 1850s, encouraged more enclosures:** by reducing farming costs

and widening the market.

xi) **Even so, French enclosures were generally quite different from the later English (or Prussian) models:**

- (1) instead of large-scale land amalgamations, as in England and East Germany,
- (2) French peasant enclosures were usually in form of simple land exchanges and strip reallocations by the peasants themselves (often without any fencing or hedging).

xii) **In the late 19th century, the vast majority of French farms, over 85% (3 million out of 3.5 million) were small-scale:** under 50 acres (under 20 hectares, at 2.47 acres to a hectare). And further reasons for that small-scale peasant farming can be seen in the next topic.

## 5. French Inheritance Law (1795), Demography and Peasant Farming to 1914:

a) **Inheritance Laws:**

i) **We begin with the final aspect of the French Revolutionary Land Reforms, already mentioned:** the Inheritance Law of 1795, which was reinforced by the Napoleonic Code of 1804.

ii) **This law stipulated that all farm lands were to be equally subdivided amongst all male heirs,**

- (1) in a system known as *partible* inheritance,
- (2) as opposed to *primogeniture*, or *impartible* inheritance, by which eldest son inherited all of his father's land, as one integral unit.

iii) **Some historians have correctly noted that this was not really a striking innovation,**

- (1) because in pre-Revolutionary France much land had already been subject to partible inheritance.
- (2) But this law now made it obligatory and universal.
- (3) In England, in early-modern peasant agriculture, about half of the 39 counties practised partible inheritance and the other half impartible inheritance or primogeniture.

b) **The negative economic consequences:** as argued by the French demographer LePlay and the American economic historian, Rondo Cameron.

i) **the continuous subdivision of peasant farmlands into smaller and smaller units:** resulting in very small scale, inefficient plots that were incapable of using machinery, sophisticated crop rotations, or more sophisticated techniques.<sup>4</sup>

ii) **slow population growth in the 19th century:** slow population growth constricting the labour supply and domestic demand.

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<sup>4</sup> But this was not true of Low Countries: Flanders and Holland in the early-modern era.

c) **Why was demographic stagnation or slow growth a consequence in 19<sup>th</sup>-century France?**

i) **because there had to be a limit to continuous subdivision by inheritance**, what the French called *morcellement* (parcelling):

(1) and to prevent excessive *morcellement*, French peasants were encouraged to restrict family size, to limit birth rates.

(2) by a combination of late marriages and birth control.

(3) Thus, the European marriage pattern thus continued to prevail longer in France than elsewhere.

ii) **the institution of partible inheritance, however, did not necessarily mean demographic and economic stagnation:**

(1) For 16<sup>th</sup> century England, the famous English agrarian historian, Joan Thirsk, argued that the opposite could be the consequence of partible inheritance.<sup>5</sup>

(2) she argued that rural industry developed especially in areas of partible inheritance with population growth (in early-modern England):

- i.e., again contending that equal subdivision by inheritance often led to very small and uneconomically sized holdings, threatening poverty
- but, instead of leading to later marriages and a falling birth rate, partible inheritance, with such consequences, encouraged English peasant farmers to seek out an economic alternative in the form of rural industrial by-employment
- that meant, however, the availability of rural industries, especially textiles, that were attracted to these rural locations by a variety of factors, but
- especially an abundant supply of immobile and cheap labour, with a low opportunity cost.

(2) That immobility and consequent overcrowding was, she argued, directly promoted by partible inheritance, because:

- those inheritance customs guaranteed property to all sons,
- thus tying most young men to the soil, to their family holdings.

(3) With impartible inheritance, with primogeniture, most of the younger sons would have been forced to leave the holdings, in the absence of other property agreements.

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<sup>5</sup> Joan Thirsk, 'Industries in the Countryside', in F.J. Fisher, ed., *Essays in the Economic and Social History of Tudor and Stuart England* (Cambridge, 1961), pp. 70-88. Her thesis has been challenged, however, by even her own students on the grounds that she exaggerated the differences in inheritance patterns, with too rigid a dichotomy; and that not all areas in which partible inheritance supposedly prevailed actually experienced such piecemeal subdivisions by inheritance. In other areas, supposedly practising impartible inheritance, there is some evidence of subdivision of holdings by inheritance.

(4 ) There is some evidence of similar demographic-industrial patterns in 18<sup>th</sup>-century Saxony and Switzerland.<sup>6</sup>

iii) **No such or very few such economic alternatives were to be found in 19<sup>th</sup> century France: as rural textile crafts decayed and disappeared with modern industrialization**

(1) first from English competition -- English textile imports;

(2) and then French urban industrialization;

(3) and so the supplementary employment that these rural textile crafts had once offered French peasants also disappeared.

iv) **Late marriages** would indeed have resulted naturally if peasant sons decided to postpone establishing a family until they had inherited land. [Refer to the European Marriage Pattern].

v) **1870, a French government survey produced these reports** (cited by Roger Price):<sup>7</sup>

- ‘Formerly among the rural population a large number of children was considered to be a source of prosperity. Today the opposite opinion is dominant...’
- ‘ Now in the villages, every father who has more than one or two children is regarded as an imbecile and an incompetent who wants to reduce his children to begging for bread.’

d) **The demographic and economic statistics seem to bear out these contentions, as tables on the screen suggest:**

**The Populations of Selected European Countries in Millions,**

**in decennial intervals, 1800-1910**

Year	Great Britain	Belgium	France	Germany	Russia
1800	10.7	3.1	27.3	n.a.	35.5
1810	12.0	n.a.	n.a.	n.a.	n.a.

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<sup>6</sup> Rudolf Braun, ‘The Impact of Cottage Industry on an Agricultural Population’, in David Landes, ed., (New York, 1966), pp. 53-64. A translation of excerpts of *Industrialisierung und Volksleben: die Veränderungen der Lebensformen in einem landlichen Industriegebiet vor 1800* (Zurich and Stuttgart, 1960). A classic study on 18th century Switzerland, close in theme to the following essay by Thirsk.

<sup>7</sup> Roger Price, ‘The Onset of Labour Shortage in Nineteenth-Century French Agriculture’, *Economic History Review*, 2nd ser. 28 (1975), 260-79; Roger Price, *An Economic History of Modern France, 1730-1914* (London: MacMillan, 1981). This is a revised and extended version of Roger Price, *The Economic Modernisation of France, 1730 - 1880* (London: Croom Helm, 1975).

Year	Great Britain	Belgium	France	Germany	Russia
1820	14.1	n.a.	30.5	25.0	48.6
1830	16.3	4.1	32.6	28.2	56.1
1840	18.5	4.1	34.2	31.4	62.4
1850	20.8	4.3	35.8	34.0	68.5
1860	23.2	4.5	37.4	36.2	74.1
1870	26.0	4.8	36.1 <sup>a</sup>	40.8 <sup>b</sup>	84.5
1880	29.7	5.3	37.7	45.2	97.7
1890	33.0	6.1	38.3	49.4	117.8
1900	37.0	6.6	39.0	56.4	132.9
1910	40.9	7.4	39.6	64.9	160.7

<sup>a</sup> Excluding Alsace-Lorraine.

<sup>b</sup> Including Alsace-Lorraine.

**Sources:** B.R. Mitchell and P. Deane, *Abstract of British Historical Statistics* (Cambridge, 1962), pp. 8-10.

i) **In the 19th century, France's population grew by only 50%:** while Germany's grew by over 100% -- i.e., doubled, and Britain's grew by more than 250% (more than tripled – almost quadrupled by 1910).

ii) **Note next the comparative birth rate figures, from the table and graph, for France, Britain, and Germany:**

(1) France had very low birth rates:

- and was the first European country to experience a decline in birth rates, from the late 18th century:
- thus from 37.0 per 1000 in 1789 to 28 by the 1840s, to just 19.7/1000 by 1900.

(2) Germany, in contrast, had a far higher birth rate in 1900: 24.8/1000;

(3) and Britain's was still higher, at 29.8/1000.

### **Birth Rates in France, Germany, and Britain in 1900**

COUNTRY	Birth Rates per 1000 in 1900
FRANCE	19.7
GERMANY	24.8
GREAT BRITAIN	29.8

(3) It is important to note the evidence that this decline in French birth rates began before, if shortly before, the French Revolution, though becoming more precipitous thereafter:

(4) some proof for this contention, and evidence about growing control over marital fertility from this era, can be found in publications of David Weir.<sup>8</sup>

(5) That does suggest some positive relationship with Revolutionary land reforms and the Inheritance Law, i.e., obligatory partible inheritance.

(6) The French demographer Jacques Dupâcquier also supports these views:<sup>9</sup>

iii) **Compare the demographic statistics for France and England (with the Netherlands):** for the period 1681 to 1821, i.e., leading up to our present period:

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<sup>8</sup> See David R. Weir, 'Life Under Pressure: France and England, 1670-1870', *Journal of Economic History*, 42 (March 1984), 27-48.

<sup>9</sup> Jacques Dupâcquier, 'French Population in the 17th and 18th Centuries', in *Essays in French Economic History*, ed. Rondo Cameron (1970), pp. 150-69: 'We conclude that the fecundity of the majority of [French] women was limited in the 18th century (and probably also in the 17th) by a number of social imperatives and by mental and demographic patterns that escaped almost entirely the control and conscience of contemporaries. Voluntary birth control was practised at places, but it cannot be called general, at least in the countryside. A rough sketch of the geography can be made: there was a high pressure zone in the East, Southeast, and West, and a low pressure zone in the Paris basin and Aquitaine... Whether French 17th- and 18th-century demography is seen from the angle of growth, mortality, or fecundity, one evident truth continually shows itself: regional diversity.... Even in the 18th century, problems were not on a national scale, except for demographic pressure. The special characteristics of French population did not appear before the 19th century. From this point of view, also, national unity owes much to the Revolution...'

<b>Year</b>	<b>England &amp; Wales: millions</b>	<b>England only millions</b>	<b>France millions</b>	<b>England as % of France</b>
<b>1681</b>	5.28	4.93	22.4	22%
<b>1821</b>	12.31	11.49	30.2	38%

**Growth Rates of English, French, and Dutch Populations from 1681 to 1821: per cent per annum and total change**

<b>Country ⇒</b>	<b>ENGLAND</b>	<b>FRANCE</b>	<b>NETHERLANDS</b>
% per annum	0.95	0.28	0.06
% overall	133.00	39.00	8.00

iv) **Finally, from the graph on the screen, comparing birth and death rates in France and England, note the following:**

- (1) The French birth rate, which was very high by the 1740s (over 40/1000), then fell from the 1750s (except for the 1780s) and fell very rapidly from about 1800.
- (2) The English birth rate, which was much lower than the French in the mid 18th century, was steadily rising from the 1740s to the 1820s (when it peaks at a remarkable 40.8/1000), moderately declining thereafter.
- (3) The English birthrate surpassed the French rate in the 1780s,
- (4) and despite the subsequent decline always thereafter remained considerably higher than the French birth rates (up to World War I).
- (5) Turning to the death rates, we find more irregularity, but a general downward trend for both countries from the mid 18th century.

- The French death rates, while showing a much steeper decline overall than the English, nevertheless always remained higher than the English death rates

- but the differences are very small by the 1850s (even if the death rate remains higher to 1914)

(6) The graph on the screen, while in general supporting the previously noted views on the steep decline in French birth rates, does indicate that the fall commenced from the 1760s, i.e., before the French Revolution.

(7) Finally, Note again from Table 3 on the screen that the French population growth rate from 1681 to 1821 was less than a third of the English (29% as much).

e) **The Causes and Consequences of Industrial Labour Scarcity in 19th-century France:** demographic and institutional factors combined:

i) **Low birth rates and slow population growth were obviously a fundamental cause of relative labour scarcity throughout the economy,** but especially for urban industry, for the following reasons pertaining to French agriculture.

ii) **French agriculture, the peasantry, and the Inheritance Law:**

(1) Thus if the Inheritance Law guaranteed each and every peasant son a share of the family farm,

- very few would leave the family farm to hire themselves out as wage-labourers on some other farms

- especially if their labour was badly needed on their own family farm.

(2) They would also, obviously, be much less likely to leave the land entirely to seek employment in urban industries.

- Some did so, of course, if faced with dire rural poverty;

- but relatively far fewer French peasants did move to the cities than in, say, 19th-century Great Britain or Germany.

iii) **Consider the two tables on agricultural employment statistics on the screen:**

(1) The first table, to place this problem in historical perspective, shows how very slowly over the previous two centuries France had been reducing its agricultural sector in comparison to such changes in England;

(2) and it begins in 1500, when both countries had had roughly the same proportion engaged in agriculture.

(3) The second table shows essentially the continuation of this historic trend: showing how France still retained such a far higher proportion of its population in agriculture around, compared to Britain and Germany, and showing thus far less urbanization.

(4) Thus, to recapitulate: as late as 1900, 43% of the French population remained in agriculture, compared to just 32% in Germany, and only 7% in Great Britain.

### **Proportions of Total Populations Engaged in**

**Agriculture: in England and France, 1500 - 1800**

Year	ENGLAND	FRANCE
1500	76%	73%
1600	70%	69%
1700	55%	63%
1750	46%	61%
1800	40%	59%
1900	7%	43%

**Sources:**

E. Anthony Wrigley, 'Urban Growth and Agricultural Change: England and the Continent in the Early Modern Period', *Journal of Interdisciplinary History*, 15:4 (Spring 1985), 683-728. Special issue with the title *Population and Economy: From the Traditional to the Modern World*.

Robert Allen, 'The Growth of Labour Productivity in Early-Modern English Agriculture', *Explorations in Economic History*, 215:2 (April 1988), 117-46.

(4) The consequences are thus reflected in such a lower level of urbanization in France, as compared to Germany and Britain, in 1900.

(5) Lower rate of industrial urbanization was itself probably a factor in slower rates of population growth (since both nuptiality and fertility tended to be higher in urban industrial areas).

**Number of European Cities over 100,000 in 1900**

<b>Country</b>	<b>Population in millions</b>	<b>Number of Cities over 100,000</b>
<b>FRANCE</b>	<b>39.0</b>	15
<b>GERMANY</b>	<b>56.4</b>	48
<b>BRITAIN</b>	<b>37.0</b>	50

f) **Industrialization and Labour Scarcity in French Agriculture:** Nevertheless the French industrial labour supply did grow, if slowly, and at expense of French agriculture, directly or indirectly:

i) **Growth of French textile manufacturing as urban factory industries:**

(1) in ultimately destroying traditional rural textile making, and in drawing labour away from the rural areas, urban industrialization denied agriculture that part-time rural industrial labour had previously supplied, especially at harvest time.

(2) i.e., in so far as textile-making had previously remained rural, it had helped to retain labour in agricultural areas.

ii) **Most French farms, however, were not able to respond to this labour scarcity in the way that British, German, and American farms had recently done: i.e., by mechanization.**

(1) Obviously the majority of French farms (but not all) were too small and too capital-poor (lacking access to capital) to afford to utilize machinery.

(2) Thus for a total of 3.5 million farms in late 19th century, France had only 234,000 steam-powered mechanical threshers and only 39,000 reapers;

(3) and those were obviously just on the few very large-scale farms.

g) **French Farm Land Distribution in 1881 (official government survey):**

i) **small scale:** As might be expected, on the one hand, the overwhelming majority of French farms were then indeed very small:

(1) 3.0 million out of 3.5 million or 88% were under 50 acres (20 hectares),

(2) and only 4% were over 100 acres (40 hectares).

ii) **But those few farms over 100 acres accounted for almost half of the arable land in cultivation: 46%.**

(1) And farms over 50 acres (just 12.5% of total number) accounted for 63% of the total areas.

(2) Since these are units of ownership, however, it is possible that some of these large estates were divided up into smaller rental leaseholds (i.e., that units of operation may have been smaller than indicated).

**French Agriculture in the 19th century**  
**Distribution of Farm Lands by the 1881 Survey**

Category	Number of Farms by Area	Percentage of Total Farms	Area in Hectares (2.47 acres)	Percentage of Total Area
Under 5 hectares	1,866,000	53.3%	5,600,000	11.5%
5 - 20 hectares	1,200,000	34.2%	12,300,000	25.3%
20-40 hectares	296,000	8.5%	8,400,000	17.3%
Over 40 hectares (100 acres)	142,000	4.1%	22,300,000	45.9%
<b>TOTAL</b>	<b>3,504,000</b>	<b>100.0%</b>	<b>48,600,000</b>	<b>100.0%</b>
<b>Over 20 hectares</b>	438,000	12.5%	30,700,000	63.2%

iii) **A direct comparison between French and German land distribution:**

(1) part B of the table (in the Appendix to this lecture) is not as unfavourable to France as is usually made out, i.e. if we can rely on the official German statistics for 1907.

(2) Certainly Germany did have many very large farms, much larger-scale farms.

(3) But those large-scale farms were chiefly found in eastern and central Germany:

- where farms over 50 acres (20 hectares) accounted for 70% of land area;
- and large estates over 250 acres (100 hectares), accounted for 41% of land area.

iv) **Thus, while French agriculture was in general much smaller scale than that found in Britain and eastern Germany,** it was no smaller in scale than farming in the Rhineland, south-western Germany, Low Countries, Denmark, Italy, etc.

## 6. The Progress of French Agriculture, 1775 to 1914

a) **The Main Trends:** According to statistical survey of French historian J.C. Toutain, the main trends of French agriculture, according to output, are:

i) **1775 - 1820:** very slow growth and stagnation, reflecting the French Revolution, the Revolutionary and Napoleonic Wars to 1815.

ii) **1820 - 1860:** very rapid recovery and growth of the agricultural sector.

iii) **1860 - 1890s:** general stagnation.

(1) In this period, French agriculture suffered the general malaise of the economy, especially with

- the very adverse consequences of the Franco-Prussian war in 1870-71;
- and the onslaught of cheap foreign grains, as noted before.

(2) But France responded to the latter threat, i.e. of cheap foreign grain imports:

- by restoring and sharply raising its agricultural tariffs,
- which certainly prevented a radical reduction of the French agricultural sector.

(3) That protection, by the way, also helps to explain why a higher proportion of the French population stayed in agriculture.

iv) **1890s to 1914:** Recovery and renewed growth of French agriculture.

**b) Agricultural Techniques: Was there an ‘agricultural revolution’ following the Napoleonic Wars (i.e., after 1815)?**

i) **J.C. Toutain had certainly indicated, from his statistics,** that French agriculture enjoyed very rapid growth after the Napoleonic Wars.<sup>10</sup>

ii) **arguments of William Newell,** in *The Journal of Economic History* (1973):<sup>11</sup>

(1) He argued that there was indeed such an agricultural revolution, at least from 1815 to the 1840s:

- in terms of a sharp reduction of the fallow
- and the adoption of multiple course crop rotation schemes and convertible husbandry.

(2) He also contends that the amount of land lying fallow fell by almost a third to the 1840s;

(3) and his figures for increased grain outputs are impressive.

(4) But they are largely based, it must be noted, on Toutain's statistics.

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<sup>10</sup> Jean-Claude Toutain, *Le produit de l'agriculture française de 1700 à 1958*, Cahier de l'ISEA no. 115 (Paris, 1961).

<sup>11</sup> William H. Newell, ‘The Agricultural Revolution in Nineteenth-Century France’, *Journal of Economic History*, 33 (1973), 697-731; Michel Morineau, ‘The Agricultural Revolution in the Nineteenth Century: A Comment’, and W.H. Newell, ‘Reply’, *Journal of Economic History*, 36 (1976), 436-38.

iii) **Most economic historians (Michel Morineau, George Grantham, Roger Price) now dispute Newell's contentions (and thus the data of J.C. Toutain):**

(1) chiefly on the grounds that Toutain's figures are too weak a basis, because those figures are quite unreliable before the 1830s;

(2) and further, that grain yields for selected regions in the 1830s appear to be no higher than in pre-Revolutionary France, in documented areas for the 1750s.

iv) **In any event, a large increase in grain outputs, from 1815 to the 1840s, could be expected:**

(1) with the abolition of feudal exactions and royal taxes (liberated peasants more productive),

(2) with the end of revolutionary and wartime dislocations:

(3) for the restoration of peace was bound to result in sharp increases in output.

c) **French Agrarian Changes from the 1840s:** Most historians believe that a genuine agricultural revolution, if any, occurred in France only after 1840s, as Grantham has argued (1978-80), involving chiefly the following:<sup>12</sup>

i) **the impact of railway development:** in promoting commercialized agriculture, for the first time in many regions.

ii) **impact of some urban industrialization:** from the 1850s at least.

iii) **from the adoption of the newer techniques pioneered by the British (and Germans):**

(1) the cultivation of leguminous or nitrogen-fixing crops and

(2) from the adoption of chemical fertilizers:

(2) together, according to some historians, these raised crop yields by up to 50%.

iv) **very little mechanization was involved,** as noted earlier, except on very large estates.

d) **What were the results:** in absolute and relative or comparative terms?

i) **In absolute terms of expanding output, French agriculture seems to have made some impressive gains over the 19th century.** Consider:

(1) total grain production almost doubled (92% by 1870s),

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<sup>12</sup> George Grantham, 'The Diffusion of the New Husbandry in Northern France, 1815-1840', *Journal of Economic History*, 38 (1978), 311-37. See also: George Grantham, 'Scale and Organization in French Farming, 1840 - 1880', in W.N. Parker and E.L. Jones, ed., *European Peasants and Their Markets: Essays in Agrarian Economic History*, (Princeton, 1975), pp. 293-326; George Grantham, 'The Growth of Labour Productivity in the Production of Wheat in the *Cinq Grosses Fermes* of France, 1750 - 1929', in Bruce M. S. Campbell and Mark Overton, eds., *Land, Labour and Livestock: Historical Studies in European Agricultural Productivity* (Manchester and New York: Manchester University Press, 1991), pp. 340 - 63; George W. Grantham, 'Divisions of Labour: Agricultural Productivity and Occupational Specialization in Pre-Industrial France', *Economic History Review*, 2nd ser., 46:3 (August 1993), 478-502.

(2) as did livestock production (100%).

(3) even more impressive was growth in cultivation of root crops:

- especially potatoes (217% increase)
- and sugar-beets (381%)
- both were important industrial raw materials: for alcohol and sugar

ii) **But if we compare French agricultural gains with those of Germany and Britain the results are much less impressive**, especially from the 1840s when the figures become far more reliable (though various regional rather than national comparisons would perhaps provide a fairer test).

**Output of Principal Grain Crops of Selected European Countries, in millions of quintals, in decennial averages, 1871-90 to 1905-14**

Decade	Great Britain	FRANCE	Germany	Russia
1781-90	35.0	85.3		n.a.
1800-13	43.0	94.5		268.6
1815-24	49.5	104.0		n.a.
1825-34	n.a.	116.3		n.a.
1835-44	n.a.	131.4		310.1
1845-54	64.0	146.6	122.6	363.3
1855-64	68.0	158.5	153.7	381.2
1865-74	70.0	160.1	204.8	410.1
1875-84	n.a.	161.8	248.4	451.0
1885-94	56.9	160.1	304.6	515.4
1895-04	52.5	172.1	391.0	479.3
1905-14	51.7	171.9	457.9	543.1

1 quintal = 100 kilograms = 0.10 metric ton = 220.46 lb.

**Source:** Carlo Cipolla, ed., *Fontana Economic History of Europe* (1972), Vol. IV:2, pp. 752-53.

(1) in grain production, note, France's biggest gain is from the French Revolution to the 1840s:

- and the 1840s level may not have been that much higher than the pre-Revolutionary outputs.
  - from the 1840s to World War I, French grain production increased by only 17%,
  - while in the same period German grain production increased by 273%.
- (2) Furthermore, French grain production grew very little (only 7%) from 1860s to 1914
- as a comparison to be noted: German grain production in this period grew by 123%
  - British grain production, of course, did contract from the 1860s, but for reasons of free trade and comparative advantage already discussed.

(3) Even or equally less impressive for France are the comparative statistics on crop yields, shown on the next table, for wheat, rye, barely, oats, and potatoes grown in France, Germany, and Britain on eve of World War I:

- in terms of output per hectare, French agriculture in the 19<sup>th</sup> century was distinctly inferior to the other two countries (Great Britain and Germany) in all crops.
- The comparison with free-trade Britain is perhaps unfair;
- but the comparison with protected Germany is certainly fair, since German arable land was generally less fertile.
- Thus French wheat output was only 68% that of Germany; of potatoes, only 63%.

**Crop Yields in France, Britain, and Germany, 1906-10**  
**Kilograms of Output per Hectare of Land: Five-Year Means**

(1 hectare = 2.47 acres)

Crop		FRANCE	Britain	Germany
Wheat		135	221	201
Rye		106	182	170
Barley		130	196	196
Oats		126	189	197
Potatoes		86	138	136

**Source:** J.A. Perkins, 'The Agricultural Revolution in Germany, 1850-1914', *Journal of European Economic History*, 10 (Spring 1981), p. 115.

(4) In terms of output per unit of labour in agriculture in 1880, the French are not so inferior to the Germans, who then still had too much labour, or too much disguised unemployment in agriculture.

(5) Note how much higher is labour productivity in British agriculture (that much smaller sector that survived under free trade).

(6) At the same time, you must keep in mind the tremendous regional variations in all three countries.

(7) Nevertheless, if we emphasize those regional differences too strongly, we won't be able to see the forests for the trees.

f) **The reasons for striking superiority of British agriculture over the French in 19th century:** even before shifts induced by free-trade, are given in a 1977 study by Patrick O'Brien, Heath, and Keyder in the *Journal of Economic History* (1977).<sup>13</sup>

i) **Britain had far better ratios of capital and labour to land:**

(1) the British farmer had far more land at his disposal: about twice as much

(2) and also much more livestock and other forms of capital

(3) Comparison of units of horsepower in the form of draught (draft) animals

- in France: 36 HP units per 1000 hectares

- in Great Britain: 156 units per 1000 hectares

(4) Comparison of livestock produces as percentage of total output values in 1910

- in Great Britain: 75%

- in France: about 50%

ii) **importance of livestock, of having so much more livestock mixed with arable farming in particular, has been seen many times before:**

(1) greater supply of power for haulage (before mechanization);

(2) far more fertilizers, or fertilizing agents:

- in animal manure (before chemical fertilizers),

- and from leguminous fodder crops: i.e., nitrogen-fixing crops

(3) higher and more stable income returns from livestock raising.

iii) **But even after the post-1850 agricultural modernization the French remained at a strong disadvantage:**

(1) using far less machinery and

(2) using far fewer chemical fertilizers, in much lower quantities, than either the British or Germans.

g) **Patrick O'Brien in 1996:**

i) **The same Patrick O'Brien has more recently,** and thus almost twenty years later, returned to the same

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<sup>13</sup> Patrick K. O'Brien, D. Heath, and Caglar Keyder, 'Agricultural Efficiency in Britain and France, 1815-1914', *Journal of European Economic History*, 6 (1977), 339-91.

theme in an important article:<sup>14</sup>

ii) **In essence**, he contends that the key is to be found in path dependency:

(1) ‘structural [economic] change in France was largely ‘predetermined’ by a combination of:

- of geographical endowments and
- a system of property rights inherited from its feudal past (though, in his model, chiefly north of the Loire).

(2) Both constraints, operating within the context of pre-chemical and pre-mechanical agricultural systems, so limited the scale and scope of French endeavours to follow the path taken by Britain between the sixteenth and nineteenth centuries, so that ‘the “British way” ... became almost irrelevant to conditions in France’.

(3) **Path dependency thus means that:**

- a long, pre-existing combination of institutional, social, cultural, political, as well as economic circumstances
- will determine the path of economic development,
- so that the participants and agents of economic change are not really free to allocate resources in the way in which the theory of free-market economics would predict or dictate.

(4) He does not, however, and as noted earlier — a point that must be re-emphasized — differentiate between France south and France north of the Loire, two very different regions, with two different histories.

- his explanation, similarly based, as was mine, on the role of the royal Parlement de Paris and other royal courts in upholding the property rights of the seigniorial *villeins* (former serfs) works only in the north.
- we would thus have to construct a different paradigm of path-dependency to explain why southern landlords did not enclose *métayage* lands (when certainly legally free to do so).

(5) Why landholdings in southern France were not amenable to enclosures we have already discussed earlier:

- because of the prevalence there of *métayage* (share-cropping)
- a system by which landowners, often urban merchants, etc., owned hundreds of scattered parcels of land which they leased out to landless peasants, providing as well the necessary capital, in return for half the harvest: as both land rent and interest on the capital.

iii) **O’Brien’s conclusions on the importance of agriculture for economic development:** ‘agricultures [in western Europe] operated for several centuries as parents who could nurture or stultify the development of younger industrial sectors’.

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<sup>14</sup> Patrick O’Brien, ‘Path Dependency, or Why Britain Became an Industrialized and Urbanized Economy Long Before France’, *The Economic History Review*, 2<sup>nd</sup> ser., 49:2 (May 1996), 213-49.

iv) **O'Brien's statistical results in comparing French and British agriculture:**

(1) **Statistics on land:labour ratios:**

- note first: that, in 1500, labour productivity per hectare roughly had been roughly similar in France and England.
- but from then to 19<sup>th</sup> century, British labour productivity per hectare steadily outpaced the French, to become virtually double the French.
- hectares of cultivable land in 1910: almost twice as much land per worker in Britain as in France.
- i.e., from 1520 to 1910, British labour productivity in agriculture grew 4.7 times, while French labour productivity grew only 2.4 times.
- But French farmers obtained higher gross yields and net monetary returns per hectare, because they were able to apply more labour per hectare.
- Consider the Boserup model discussed earlier: that historically growth in yields per hectare depends on application of more and more labour -- 'intensification of labour inputs';
- and O'Brien concludes that 'historically France seems to have been far more dependent than Britain upon an intensification of labour inputs in order to raise and maintain the growth of agricultural output above the rate of population growth'.

(2) **Statistics on land:livestock ratios:** for 1910

O'Brien: 'Agricultural development [in western Europe and North America] depended upon the accumulation of ever increasing numbers of animals per unit of cultivated land', in mixed husbandry.<sup>15</sup>

- In France, with greater population growth since 1500 the land-labour ratio was less favourable to an increase in livestock herds than in England,
- where (in certainly southern and central England) more land was available for pasture and for growing fodder crops (as opposed to food production for humans).

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<sup>15</sup> O'Brien (1996): 'In pre-modern technological conditions, farm animals represented an 'engine for growth' which provided for a cumulative rise in agrarian productivity which in turn supported structural change for the economy as a whole. Animals supplied the bulk of organic fertilizer applied to arable land which simultaneously increased both grain and fodder outputs. Soils conserved and enriched with manures produced higher yields of artificial grasses and root crops which also provided them with a more nutritious diet than the traditional fare of grass, hay, and straw. Meat, dairy produce, and draught power could then be produced in a less land intensive way than through the use of cultivable hectares devoted to pastures and meadows. Animals also supplied an ever increasing share of the power required for the diffusion of improved iron ploughs and other farm implements which came on stream over the eighteenth century. This combination of man-directed and horse- (or ox-) powered implements not only reduced the energy constraint on diffusing new crops and courses, it improved tillage and thereby raised yields per hectare while releasing labour at the same time for employment in industry and services....'

- In France [from 1500] greater population growth and greater population densities led to an expansion of the grain-producing arable at the expense of pastures lands;
- i.e., forced the farming communities to devote more and more land, especially marginal lands to grain cultivation rather than to pasture or to the cultivation of fodder crops,
- while land:labour ratios also favoured more labour intensive techniques with light tools, rather than with those using animal power.
- Climate (in terms of rainfall and temperature ranges) and topography also favoured grain crops over fodder crops, both north and south:
- but especially in areas of Mediterranean dry farming, which permitted only a two-field system, with winter wheat (i.e., period of concentrated rainfalls).
- significance of French cultivation of vines, olives, fruits, etc in Mediterranean zone: these crops could not be recycled through animals to produce manure and nitrogen as could northern fodder crops.
- Thus, as noted earlier, in 1910, the share of livestock products in final agricultural outputs: 50% in France and 75% in Britain.
- In 1910, animal manure supplies: two or three times greater in Britain than in France
- As also noted earlier, for 1910: draught animals: Great Britain had 156 hp units per 1,000 hectares, vs. only 36 hp units in France.

iv) **The importance of demographic changes:**

(1) **In 18<sup>th</sup> century France, while national population grew more slowly than in Britain,**

the French workforce engaged in agriculture grew more rapidly:

- from 4.3 million in 1700 to 5.75 million in 1790,
- and then to 7.5 million by 1850 (overall growth of 74.4%),
- and to 8.5 million by 1910 (i.e., almost a doubling from 1790)

(2) But, as we have seen, French population growth rates in the 19<sup>th</sup> century were far below the British rates.

(3) In Britain, agricultural workforce rose more slowly: from 1.5 million in 1700 to 2.0 million in 1851 (overall growth of only 33.3%),

- and then declined to 1.6 million by 1910:
- thus Britain employed a progressively smaller and smaller proportion of its more rapidly expanding population and workforce in agriculture than did France.

(3) **Statistics for 1900:**

	<b>France</b>	<b>Britain</b>
- Agricultural employment as % of Total	41%	8%



vi) **Statistics on Farm Scales for 1880:**

(1) Area covered by farms of 40 hectares (100 acres) or more:

- France: 29% of cultivable area
- Britain: 75% of cultivable area

(2) Owner occupiers vs. tenants: Percentage of farmlands worked by:

- France: 67% by owner-occupiers and 33% by tenants
- Britain: 15% by owner-occupiers and 85% by tenants

h) **Some Conclusions on the development of French agriculture by 1914:**

i) **On the one hand, French agriculture was not quite so bad as has been so often pictured.**

- (1) In particular, it was not an agrarian structure solely of small-scale, conservative, peasant farming;
- (2) but one mixed: a large number of very small peasant farms, to be sure, but along with some very productive large estates.

ii) **France, of course, was a large country with enormous variations in agricultural activities and in agricultural productivity.**

- Some areas in the North-West (Normandy, lands bordering on Low Countries, especially on those lands already enclosed) the agriculture was almost as productive as would be found in England.
- Other areas, in the central and southern regions had dismally low outputs.

iii) **In comparison with the pre-modern era, and in absolute terms, the gains of the 19th century seem to be impressive** (if we ignore the problem of using the revolutionary period as the base).

iv) **But in comparison with contemporary British, German, and other countries' agricultures**, 19th century French agriculture overall seems to have been much less advanced and much less productive.

v) **In terms of France's own quite highly developed economy in the 19th century, agriculture does seem to be the weak link:** restricting productivity, restricting population growth, urbanization, demand, and capital, and retaining far too many resources in this sector.

vi) **French agricultural protection, and particularly those from 1881 to the Méline tariff of 1892, did more harm than good:**

- (1) isolating French farmers from competition,
- (2) and thereby promoting inefficiency, preventing diversion of resources to more productive sectors of the economy.

(i) **Some disasters in mid-19th-century French agriculture:** diseases

i) **Oidium:** plant disease that ruined wheat harvest in the 1840s and 1850s.

ii) **Phylloxera:** for vineyards and wine production

(1) a deadly disease that ravaged southern French vineyards from 1863 to 1877,

- causing total French wine production to fall by a half from the 1860s to the 1890s:
- from 60.5 million hectolitres to 30.7 million.

(2) The only salvation for the French, ironically, came from California: in grafting similar California vine plants.

(3) That restored French wine output to 52.8 million hectolitres: by 1910-14 (87% of former maximum).

iii) **Pébrine**: from 1849, a blight afflicting mulberry trees and thus silkworm cultivation, seriously and permanently damaging the French silk industry.

## CLASSES OF FRENCH PEASANTRY IN THE 17<sup>th</sup> & 18<sup>th</sup> CENTURIES:

(1) **Villeins: Peasants within the Feudal-Manorial system:** a strong majority in northern France; but chiefly only in the regions to the north of the Loire River

a) **These were peasant tenants nominally bound to a feudal seigneur or manorial lord:**

- but most had virtually complete property rights to their holdings,
- including the right of absolute inheritance, the rights to buy, sell, and trade lands.

b) **They had descended from those within the medieval French feudal system of landed estates:**

- with a communal system of farming, which were formed almost entirely in northern France – in the heartland of medieval feudalism, from the Loire to Rhine rivers –
- such peasants were therefore almost entirely confined to northern France.

c) **By the 16th century, true serfdom had withered away (almost completely) in France,** so that virtually all servile labour services and obligations had been commuted into cash rents (*cens*).

d) **these French peasants differed from their English counterparts (copyholders) in that:**

- they had gained from the French royal courts (*Parlement*) far greater protection of their property and inheritance rights,
- so that they had become *de facto* owners of their holdings, almost secure as independent peasant proprietors under freehold tenure.
- They were thus far better able to resist enclosures than their English counterparts;

(e) **for that reason there was little enclosure in early-modern northern France**

(2) **Leasehold peasant tenants:** both feudal and non-feudal, northern and southern France

(a) **Non-feudal contracts:** for these peasants held their lands by contractual leases

- for a specific rent for a specific number of years,
- with clear recognition of the landlord's property rights of full ownership.

(b) **most of these leasehold lands had been carved from the seigneurial lord's domain holdings;**

(c) **thus most who rented them were estate tenants belonging to the first category:**

- i.e., originally servile;
- but some free peasants also leased these lands (see: allodial peasants, below).

(3) **Métayers or Sharecroppers:** non-feudal form of tenancies, comprised of free peasants

(a) **métayage or sharecropping was found chiefly in southern France:** borrowed from neighbouring late-medieval Italy, where it was known as *mezzadria*.

(b) **found chiefly in capital intensive agriculture forms of agriculture involving (in particular):**

- vineyard: for various wines
- olive groves: for olive oil (instead of butter – with scarcity of livestock)
- and livestock raising: especially cattle and sheep

(c) The landlord provided the land, the capital, tools, seeds or plants, and protection, etc.; in return for half the harvest, as his rent and return on invested capital.

(4) **Independent Peasant Proprietors (allodial peasants):**

(a) non-feudal peasants who owned their lands outright, with no obligations to any landlords.

(b) They were very few in number, and can be ignored here.

## **THE ECONOMIC CONSEQUENCES OF REVOLUTIONARY LAND REFORMS**

Most economic historians have criticized the revolutionary land reforms (1789-1795) for both perpetuating and worsening a system of small-scale, conservative, and very inefficient peasant farming. What, then, were the supposed consequences of land reform and small-scale peasant farming that provided a significant barrier to French industrialization?

### **(1) SEVERE IMPEDIMENTS TO ENCLOSURES, WITH SCALE ECONOMIES**

### **(2) AGRICULTURAL INEFFICIENCY: low productivity per man and per hectare**

**(3) INADEQUATE DOMESTIC SUPPLIES OF INDUSTRIAL RAW MATERIALS:** thus raising raw materials costs for domestic French industry.

**(4) INADEQUATE SAVINGS AND CAPITAL INVESTMENT in agriculture:** as a reflection of low productivity and of the structure of peasant agriculture

### **(5) LABOUR IMMOBILITY: insufficient labour released for urban industry,**

- because of the nature of small-scale peasant farming, which depended on family labour, working millions of small plots;
- and certainly the countryside provided less urban industrial labour than was the case in either Britain or Germany.

### **(6) DEMOGRAPHIC STAGNATION: slow population growth;**

- thus an insufficient growth in domestic market demand to provide a necessary spur to development and industrialization, as was the case also in Britain and Germany.
- The demographic question is so very important that it will constitute a separate topic.

### **(7) SLOW AND INCOMPLETE URBANIZATION AND INDUSTRIALIZATION:**

- because population growth was slow
- because so much rural labour still was tied to the soil.
- because savings, investment, and capital transfers from the agrarian sector were so small
- On the eve of World War I there were far fewer large cities in France, compared again to Britain and Germany.

### **(8) SLOW GROWTH IN DOMESTIC DEMAND FOR INDUSTRIAL GOODS, because of**

- low income and savings levels in agrarian society, reflecting low productivity.
- slow population growth.
- slow and inadequate urbanization.

**INDICES OF EUROPEAN AND AMERICAN AGRICULTURAL PRODUCTIVITY  
FROM 1810 TO 1910**

**Annual net output per agricultural worker (male)  
measured in million of calories**

<b>COUNTRY</b>	<b>1810</b>	<b>1840</b>	<b>1860</b>	<b>1880</b>	<b>1900</b>	<b>1910</b>
<b>Britain</b>	14.0	17.5	20.0	23.5	22.5	23.5
<b>France</b>	7.0	11.5	14.5	14.0	15.5	17.0
<b>Germany</b>		7.5	10.5	14.5	22.0	25.0
<b>Russia</b>		7.0	7.5	7.0	9.0	11.0
<b>USA</b>		21.5	22.5	29.0	31.0	42.0

**Source:** Paul Bairoch, 'Niveaux de développement économique de 1810 à 1910', *Annales: Économies, sociétés, civilisations*, 20 (1965), 1096, Table 1.

**Table 1a. French Agriculture in the 19th century****Distribution of Farm Lands by the 1881 Survey**

<b>Category</b>	<b>Number of Farms by Area</b>	<b>Percentage of Total Farms</b>	<b>Area in Hectares (2.47 acres)</b>	<b>Percentage of Total Area</b>
Under 5 hectares	1,866,000	53.3%	5,600,000	11.5%
5 - 20 hectares	1,200,000	34.2%	12,300,000	25.3%
20 - 40 hectares	296,000	8.5%	8,400,000	17.3%
Over 40 hectares (100 acres)	142,000	4.1%	22,300,000	45.9%
<b>TOTAL</b>	<b>3,504,000</b>	<b>100.0%</b>	<b>48,600,000</b>	<b>100.0%</b>
<b>Over 20 hectares</b>	<b>438,000</b>	<b>12.5%</b>	<b>30,700,000</b>	<b>63.2%</b>

**note:** 1 hectare = 100 ares = 10,000 square metres = 2.471 acres

1 *are* (from Latin *area*) = 100 square metres (100 m<sup>2</sup>)

**Table 1b. German Agriculture in the Early 20th century  
1907 (but in terms of post 1919-frontiers)**

<b>Category in hectares</b>	<b>Percentages of the Total Arable Area per Category</b>		
	<b>East Elbia*</b>	<b>Rest of Germany</b>	<b>All Germany</b>
<b>Under 5 ha.</b>	8.7%	21.0%	16.2%
<b>5 - 20 ha.</b>	21.3%	41.0%	33.4%
<b>20 - 100 ha.</b>	29.5%	29.9%	29.8%
<b>Over 100 ha. (250 acres)</b>	40.5%	8.1%	20.6%
<b>Over 20 ha.</b>	<b>70.0%</b>	<b>38.0%</b>	<b>50.4%</b>

\* **East Elbia:** Posen and West Prussia, East Prussia, Pomerania, Brandenburg-Berlin, Silesia, Mecklenburg.

Table 2.

**Output of Principal Grain Crops of Selected European Countries, in millions of quintals, in decennial averages, 1871-90 to 1905-14**

Decade	Great Britain	FRANCE	Germany	Russia
1781-90	35.0	<b>85.3</b>		
1800-13	43.0	<b>94.5</b>		268.6
1815-24	49.5	<b>104.0</b>		n.a.
1825-34	n.a.	<b>116.3</b>		n.a.
1835-44	n.a.	<b>131.4</b>		310.1
1845-54	64.0	<b>146.6</b>	122.6	363.3
1855-64	68.0	<b>158.5</b>	153.7	381.2
1865-74	70.0	<b>160.1</b>	204.8	410.1
1875-84	n.a.	<b>161.8</b>	248.4	451.0
1885-94	56.9	<b>160.1</b>	304.6	515.4
1895-04	52.5	<b>172.1</b>	391.0	479.3
1905-14	51.7	<b>171.9</b>	457.9	543.1

1 quintal = 100 kilograms = 0.10 metric ton = 220.46 lb.

**Source:** Carlo Cipolla, ed., *Fontana Economic History of Europe* (1972), Vol. IV:2, pp. 752-53.

**Table 3.****Crop Yields in France, Britain, and Germany, 1906-10  
Kilograms of Output per Hectare of Land: Five-Year  
Means****(1 hectare = 2.47 acres)**

<b>Crop</b>	<b>France</b>	<b>Britain</b>	<b>Germany</b>
<b>Wheat</b>	135	221	201
<b>Rye</b>	106	182	170
<b>Barley</b>	130	196	196
<b>Oats</b>	126	189	197
<b>Potatoes</b>	86	138	136

**Source:**

J.A. Perkins, 'The Agricultural Revolution in Germany, 1850-1914', *Journal of European Economic History*, 10 (Spring 1981), p. 115.

**Table 4.****Wheat-tons per Labour-unit in Agriculture in selected countries: France, Britain, Germany, and U.S. in 1880 and 1930**

<b>Country</b>	<b>1880</b>	<b>1930</b>
<b>France</b>	7.4	13.2
<b>Great Britain</b>	16.2	20.1
<b>Germany</b>	7.9	16.0
<b>United States</b>	13.0	22.5

**Table 5.****Indices of European and American Agricultural productivity  
from 1810 to 1910****Annual net output per agricultural worker (male)  
measured in million of calories**

<b>COUNTRY</b>	<b>1810</b>	<b>1840</b>	<b>1860</b>	<b>1880</b>	<b>1900</b>	<b>1910</b>
<b>Britain</b>	14.0	17.5	20.0	23.5	22.5	23.5
<b>France</b>	7.0	11.5	14.5	14.0	15.5	17.0
<b>Germany</b>		7.5	10.5	14.5	22.0	25.0
<b>Russia</b>		7.0	7.5	7.0	9.0	11.0
<b>USA</b>		21.5	22.5	29.0	31.0	42.0

**Source:**

Paul Bairoch, 'Niveaux de développement économique de 1810 à 1910', *Annales: Économies, sociétés, civilisations*, 20 (1965), 1096, Table 1.

**Table 6.****Comparative Crops Yields in Northern Europe,  
1790 - 1880**

<b>Crop</b>	<b>France 1781-90</b>	<b>Germany c.1800</b>	<b>Germany, France, Belgium, c.1880</b>	<b>Germany, France, Belgium, c.1880</b>
	quintals/ hectare	quintals/ hectare	quintals /hectare	metric tonnes: millions
<b>Wheat</b>	11.50	10.30	13.95	9.950
<b>Rye</b>	8.00	9.00	12.35	8.864
<b>Barley</b>	11.00	8.10	14.52	3.646
<b>Oats</b>	5.00	8.50	13.50	9.589

\* 1 quintal = 100 kg.

1 hectare = 2.47 acres

**Source:**

Patrick Chorley, 'The Agricultural Revolution in Northern Europe, 1750 - 1880', *Economic History Review*, 2nd ser. 34 (Feb. 1981), 83.

**Table 7. The Populations of Selected European Countries in Millions, in decennial intervals, 1800-1910**

<b>Year</b>	<b>Great Britain</b>	<b>Belgium</b>	<b>France</b>	<b>Germany</b>	<b>Russia</b>
<b>1800</b>	10.7	3.1	27.3	n.a.	35.5
<b>1810</b>	12.0	n.a.	n.a.	n.a.	n.a.
<b>1820</b>	14.1	n.a.	30.5	25.0	48.6
<b>1830</b>	16.3	4.1	32.6	28.2	56.1
<b>1840</b>	18.5	4.1	34.2	31.4	62.4
<b>1850</b>	20.8	4.3	35.8	34.0	68.5
<b>1860</b>	23.2	4.5	37.4	36.2	74.1
<b>1870</b>	26.0	4.8	36.1 <sup>a</sup>	40.8 <sup>b</sup>	84.5
<b>1880</b>	29.7	5.3	37.7	45.2	97.7
<b>1890</b>	33.0	6.1	38.3	49.4	117.8
<b>1900</b>	37.0	6.6	39.0	56.4	132.9
<b>1910</b>	40.9	7.4	39.6	64.9	160.7

<sup>a</sup> Excluding Alsace-Lorraine.

<sup>b</sup> Including Alsace-Lorraine.

**Sources:**

B.R. Mitchell and P. Deane, *Abstract of British Historical Statistics* (Cambridge, 1962), pp. 8-10.

Carlo Cipolla, ed., *Fontana Economic History of Europe* (1972), Vol. IV:2, pp. 747-48.

**Table 8.****English and French Population, 1681 - 1821**

<b>Year</b>	<b>England &amp; Wales: millions</b>	<b>England only millions</b>	<b>France millions</b>	<b>England as % of France</b>
<b>1681</b>	5.28	4.93	22.4	22%
<b>1821</b>	12.31	11.49	30.2	38%

**Table 9. Growth Rates of English, French, and Dutch Populations from 1681 to 1821: per cent per annum and total change**

<b>Country</b>	<b>ENGLAND</b>	<b>FRANCE</b>	<b>NETHERLAND S</b>
% per annum	0.95	0.28	0.06
% overall	133	39	8

**Table 10. Birth Rates in France, Germany, and Britain in 1900**

<b>COUNTRY</b>	<b>Birth Rates per 1000 in 1900</b>
<b>FRANCE</b>	19.7
<b>GERMANY</b>	24.8
<b>GREAT BRITAIN</b>	29.8

**Table 11.****Number of European Cities over 100,000 in 1900**

<b>COUNTRY</b>	<b>POPULATION IN MILLIONS</b>	<b>NUMBER OF CITIES OVER 100,000</b>
<b>FRANCE</b>	<b>39.00</b>	15
<b>GERMANY</b>	<b>56.40</b>	48
<b>BRITAIN</b>	<b>37.00</b>	50

**Table 12. Proportions of Total Populations Engaged in Agriculture: in England and France, 1500 - 1800**

<b>Year</b>	<b>ENGLAND</b>	<b>FRANCE</b>
<b>1500</b>	76%	73%
<b>1600</b>	70%	69%
<b>1700</b>	55%	63%
<b>1750</b>	46%	61%
<b>1800</b>	40%	59%
<b>1850</b>	22%	52%
<b>1900</b>	7%	43%

**Sources:**

E. Anthony Wrigley, 'Urban Growth and Agricultural Change: England and the Continent in the Early Modern Period', *Journal of Interdisciplinary History*, 15:4 (Spring 1985), 683-728. Special issue with the title *Population and Economy: From the Traditional to the Modern World*.

Robert Allen, 'The Growth of Labour Productivity in Early-Modern English Agriculture', *Explorations in Economic History*, 215:2 (April 1988), 117-46.

George Grantham, 'The Growth of Labour Productivity in the Production of Wheat in the *Cinq Grosses Fermes* of France, 1750 - 1929', in Bruce M. S. Campbell and Mark Overton, eds., *Land, Labour and Livestock: Historical Studies in European Agricultural Productivity* (Manchester and New York: Manchester University Press, 1991), pp. 340 - 63.

**Table 13. FRANCE: Proportions of Total Population**

## Rural and Agricultural

<b>Year</b>	<b>Percentage in Rural Areas</b>	<b>Percentage employed in Agriculture</b>
1870	69%	52%
1900	59%	43%
1930	50%	36%

Table 14.

## Demographic and National Income Data for France and Britain, 1800 - 1910

Category	1830	1840	1850	1870	1890	1910
<b>Income Level in 1970 \$US</b>						
France	\$343		\$432	\$567	\$668	
Britain		\$567		\$904	\$1,130	\$883
						\$1,302
<b>Birth Rate*</b>						
France	29.9		26.8	25.9	21.8	
Britain		35.9		35.2	30.2	
						19.6
<b>Death Rate*</b>						25.1
France	25.0		21.4	28.4	22.8	
Britain		22.2		22.9	19.5	
						17.8
<b>Labour Force in Agriculture+</b>						13.5
France	n.a.		51.8	49.3	45.9	
Britain		25.0		20.0	16.3	
						41.0
<b>Agri Income as % GNP+</b>						15.1
France	38.5		33.0	33.5	28.0	
Britain		24.9		18.8	13.4	
						28.7
<b>Manufacturing Income as % of GNP</b>						10.3
France	35.9		39.3	36.0	36.8	
Britain		31.5		33.5	33.6	
						38.6
<b>Gr Dom Inv as % GNP</b>						31.8
France	n.a.		12.4	12.5	14.0	
Britain		10.5		8.5	7.3	
						13.6
						7.0

\* Birth and Death Rates: crude rates measured per thousand

+ Agriculture includes extractive industries as well

n.a. = data are not available

**Source:** Nicholas Crafts, 'Economic Growth in France and Britain, 1830 - 1910: A Review of the Evidence', *The Journal of Economic History*, 44 (March 1984), Tables 2-3, pp. 53-54.

**Table 15. Comparative Statistics on French and British Agriculture:** from the Patrick O'Brien articles.

**A. Demography and Agricultural Employment:**

<b>Year</b>	<b>FRANCE</b>	<b>FRANCE</b>	<b>FRANCE</b>	<b>BRITAIN</b>	<b>BRITAIN</b>	<b>BRITAIN</b>
	Population in millions	Agricultural Workforce	Percent of Total	Population	Agricultural Workforce	Percent of Total
<b>1700</b>	22.5	4.3	19.11	5.42	1.5	27.67
<b>1790</b>	27.0	5.75	21.3	8.29	n.a.	
<b>1850</b>	35.8	7.5	20.95	17.92	2	11.16
<b>1910</b>	39.6	8.5	21.46	36.1	1.6	4.43

**B. Agricultural Income in 1910:**

<b>Agricultural Statistics</b>	<b>FRANCE</b>	<b>GREAT BRITAIN</b>
Agricultural Employment and Related Occupations as Percent of Total Employment	41%	8%
Agricultural Income as Percent of NNI	35%	5%

**C. Farm Scales and Occupancy by Owners and Tenants in 1880:**

<b>Agricultural Statistics</b>	<b>FRANCE</b>	<b>GREAT BRITAIN</b>
Area covered by farms of 40 hectares (100 acres) or more:	29%	75%
Percent of lands worked by owner-occupiers	67%	15%
Percent of lands worked by tenants	33%	85%