Proto-Industrialisation: a Step towards Industrialisation?

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A new word has entered the history of the pre-industrial period: " Proto-Industry ". In more traditional terminology this refers to rural handicraft industry, the putting-out-system and decentralised manufacture. But was this " proto-industry " a step towards modern industry, as the prefix " *proto* " seems to suggest?

I. The general long-term economic and social process

In the High Middle Ages there was a fundamental division of production between town and countryside. The town was the location for the production of handicraft articles; the countryside was the location for the production of agricultural products. The exchange of both groups of products took place in well defined places with special market rights. Both types of locations of production were connected with specially privileged commercial routes. The geographical centres of economic growth were the towns.

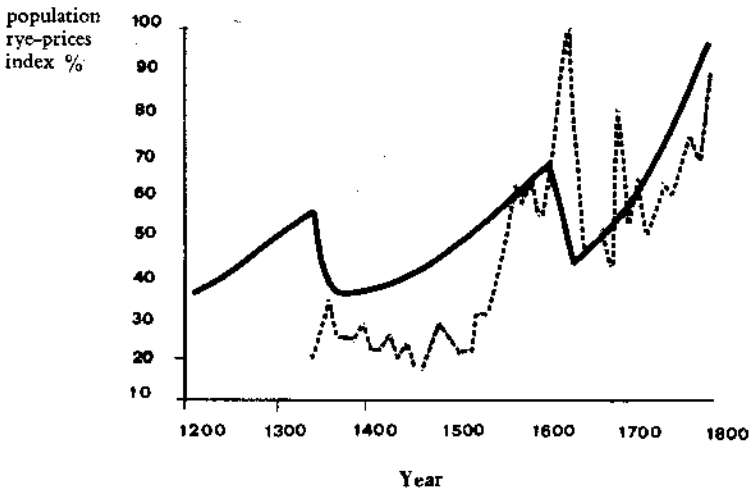
At the end of the XVIIIth century this division of production was undermined in some regions to such an extent that it virtually ceased to exist any longer. The structure of the location of production changed completely. The division of production between town and countryside was broken down by the long-term process of the territorial dispersal of craft production. This process I would call the territorialization or ruralization of craft industry. The production of handicraft articles spread outside the townwalls into the countryside as a whole. More and more handicraft articles were produced in the hamlets, small villages and rural market places of the countryside. This process provoked strong but fruitless opposition from the town guilds, but

by fostering their closed-shop-policy the guilds unintentionally promoted this process of ruralization.

The process of the territorial dispersal of craft industries took place in three periods of unequal length and of unequal intensity:

— in the first half of the XIVth century before the time of the plagues
— during the XVIth century before the outbreak of the Thirty-Years-War, and
— during the XVIIIth century, especially in the second half of the century. This is the period we shall deal with here (see Fig. 1).

Fig. 1 - Long-run changes in population and rye-prices (as an indicator for agrarian prosperity) in pre-industrial Germany [1]



+) population; index 1800 = 100%
++) rye-prices; index 1800 = 100%

The three periods of marked ruralization of craft production preceded the decades of the three peaks of the pre-industrial population curve.

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[1] Hubert Freiburg: Agrarkonjunktur und Agrarstruktur in vorindustrieller Zeit. Die Aussagekraft der säkularen Wellen der Preise und Löhne im Hinblick auf die Entwicklung der bäuerlichen Einkommen. In: Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Vol. 64, 1977, p. 290.

These three periods were the three phases of longterm prosperity in agriculture in central Europe. All three phases were connected with a remarkable expansion of groups of rural smalholders. And it is exactly this group which lies at the centre of my argument.

The determinants of the long-term process were

- the growth of population and the trend of the economic activity (long-term prosperity and depression)
- the economic and social system of land ownership, landed estates and the guilds; in short, the feudal system
- the economic policy of the landlords and rulers, and the reaction of the people; both formed a fascinating system of interactions
- the application of traditional technical and organisational knowledge: tools and instruments, the putting-out system, centralized and decentralized manufacture; then transportation and communication as part of the infrastructure.

There were of course certain variations. Corresponding to the differences in the regional and temporal patterns of the determinants, the process of the ruralization of craft industry did not take place in all regions of Germany in the same way, at the same time, or in the same scale.

Both the transformation of the society, the onset, nature and place, — or the retardation — of the industrialisation of a region were influenced decisively by the pattern of the ruralization of craft industry, which was specific in each case to the country in question.

II. The socio-economic structure in the countryside before the industrial revolution and its influence upon the process of industrialisation in the XIXth century

1. *The questions*

There are two questions:

- What was the socio-economic structure in the countryside before the industrial revolution? — And:
- In what way did the existing structure at the end of the feudal period influence the process of industrialization in the XIXth century?

First I shall give a general answer to these two questions, then a more particular one, with reference to regional differences based upon case studied for south Germany.

2. *The general answer*

To put things in a somewhat simplified way, one can argue that at the beginning of the industrial revolution socio-economic structures in Germany were determined by agrarian structures. There were two main structural types:

- the system of villeinage west of the River Elbe (Grundherrschaft) and
- the system of large manorial landholdings east of the River Elbe (Gutsherrschaft, Gutswirtschaft).

When speaking of structures I have in mind

- the structure of the national product
- the structure of the location of production
- the structure of the producing families, which reflect the distribution of arable land
- the structure of the family income, which is composed of income from different sources: from agriculture, from producing handicraft articles, from rendering services, and from wage labour.

During the process of the ruralization of craft industry all four structures changed.

Depending on the main regional differences in the four indicators mentioned, the process of territorial dispersal of craft industry did not take place, or only to a lesser extent, in the eastern regions with large manorial land-holdings (Gutsherrschaften). Here the division of production between town and countryside was still much more visible in the early XIXth century, than in the regions west of the River Elbe with their Grundherrschaften, their rural smallholdings and their rural industry. At the end of the XIXth century the regions east of the River Elbe were considerably less industrialised than the regions west of the Elbe.

These findings lead to the following *preliminary conclusion*. The higher the degree and the diversification of the ruralization of craft industry in the pre-industrial stage, the more a partly industrialised labour force was available for the production of handicraft articles at the onset of the industrialization. This helped to speed up the process of industrialisation. That is: the flow of labour from the agricultural sector to the industrial sector did not consist just of unskilled labour, as it is often assumed, but also of a specifically trained labour force, pre-trained in the production of non-agricultural products and pre-disciplined through the putting-out system and the decentralized and centralized manufactures. The regions west of the Elbe were structurally better prepared for industrialisation than the regions east of the Elbe.

This general hypothesis requires regional *specification*, and two case studies

for Bavaria and Wurttemberg indicate a more complex situation. Within the system of western *Grundherrschaft*, the degree of industrialisation differed considerably. At the end of the XVIIIth century the structure of both these south German countries was characterized by a high degree of proto-industrialisation. But strangely enough both countries became late-comers in the west German industrialisation. In a third case — the Odenwald in Hesse — the region's proto-industrial structure stayed basically unchanged until present.

In order to give a more complex answer to the questions posed above, we have to examine the pre-industrial structure in somewhat more detail.

3. *The modified answer for south Germany*

If we consider the groups involved in the process of the ruralization of craft industry we can distinguish two primary groups:

- rural smallholders who produce handicraft goods, and
- master craftsmen and independent journeymen in the countryside. Let us examine both groups separately.

3.1. What was the socio-economic structure in the countryside like before the industrial revolution?

The smallholders and the stratification of the rural families

The starting point of the investigation is the agrarian sector and the stratification of the rural families into peasants, smallholders and landless (but not propertyless) families. This triple grouping is drawn from contemporary statistics.

Peasants live on peasant holdings: they earn an agrarian income which is large enough to cover the family's cost of living including necessary investment goods during the entire year. Smallholders are rural families which own some arable land which gives them some agrarian income. But the income drawn from their land is not large enough to cover the family's group-specific cost of living, including the necessary investment goods during the whole year. Therefore the smallholder's family needed some extra income by producing handicraft articles, rendering services, and/or by wage earning. Thus smallholders have a mixed income drawn from agriculture, and/or handicraft work, and/or services. Families with no land of their own possessed a house and perhaps a garden, but no arable land at all; they were landless but not propertyless; their income was (predominantly) wage income.

The numbers for 1752/60 are not yet complete. But we can follow the trend: The percentage of the smallholders grew considerably. The percentage of the landless families owning a house declined, as well as the number of the peasant families.

TABLE 1

STRUCTURE OF RURAL SETTLEMENTS
(ACCORDING TO TAX-ROLLS) IN BAVARIA

	in 1691 [1]		in 1752/60 [2]	
	Total	in %	Total	in %
1. Peasants' settlement 3)	41,636	48.5	37,723	45.1
2. Smallholders' settlement 4)	27,521	32.1	38,933	46.5
3. Landless settlements 5)	16,690	19.4	7,014	8.4
4. Total	85,847	100	83,670	100

[1] Upper and Lower Bavaria.
[2] The numbers represent approx. 70 to 80% (?) of all rural settlements; Upper and Lower Bavaria, Upper Palatinate and some newly acquired smaller districts. Research (Hist. Atlas von Bayern) is still going on
[3] 1/1 to 1/4-farms (measured in Hoffuss), called peasant Settlements.
[4] 1/6 to 1/16-farms, called smallholders Settlements.
[5] 1/32-farms, called landless Settlements.

[2] The data for 1691 are based on MAX VON FREYBERG, Pragmatische Geschichte der bayerischen Gesetzgebung und Staatsverwaltungseit den Zeiten Maximilians I., 4 Vols., 1836: 1838, Vol. 2 p. 228 f, HANS SCHMELELE, Der Staatshaushalt des Herzogtums Bayern im 18. Jahrhundert, 1900, p. 288 f. For remarks with regard to the tax-rolls, which led to the stratification of the rural settlements in: ECKART SCHREMMER, Agrarverfassung und Wirtschaftsstruktur. Die südostdeutsche Hofmark, eine Wirtschaftsherrschaft?, in: Zeitschrift für Agrargeschichte und Agrarsoziologie, Vol. 20, 1972, p. 47 f, 51 ff, and by the same author, Die Wirtschaft Bayerns, 1970, p. 345 ff, 349 ff. — The statistical data for the years (approx.) 1752/60 were extracted from the following volumes of the Historischer Atlas von Bayern, Teil Altbayern:

No. of Vol.	Author	County	Year of publication
1	S. HIERETH	Moosburg	1950
2	G. DIEPOLDER	Aichach	1950
3	D. ALBRECHT	Starnberg	1951
4	D. ALBRECHT	Weilheim	1952
5	M. PIENDL	Kötzting	1953
6	D. ALBRECHT	Benediktbeuern, Ettal	1953
8	M. PIENDL	Cham	1955
10	M. PIENDL	Sulzbach	1957
11-12	P. FRIED	Dachau, Kranzberg	1958
14	V. VON VOLCKAMER	Pfaffenhofen, Wolnzach	1963
15	T. BURKHARD	Wasserburg, Kling	1965
16	B. HEINLOTH	Neumarkt	1967
17	F. ANDRELANG	Aibling, Hohenwaldeck	1967

The smallholders represented a growing group of families with a necessarily mixed income. This group was the dynamic carrier of the process of the ruralization of handicraft production; but later on it was this very group, which tended to block modern industrialisation. Thus the carrier of the process of rural industry became — or could become — the group which preserved the pre-industrial structure afterwards in the age of industrialisation.

How large then was
- the group of the rural population which necessarily had an additional income from producing handicraft articles (or from doing small trade), and
- the group of rural population occupied as agrarian labourers with wage income?

The answers can only be given as estimates based upon limited statistics.

Following the criteria for the statistics given in Table 1 the families in landless settlements lived on wage-earning. In addition to this rural labour-force, the demand for agrarian labour could be met from:
- persons obliged to render feudal services for the landlords

18	R. Penzkofer	Viechtal, Linden	1968
19	R. Blickle	Griesbach	1970
21	H. Sturm	Tirschenreuth	1970
22-23	P. Fried, S. Hiereth	Landsberg, Schongau	1971
24	G. Leingärtner	Amberg I	1971
27	K. Rose	Deggendorf	1971
28	R. Lubos	Eggenfelden	1971
29	F. Jungmann-Stadler	Vilshofen, Osterhofen	1972
30	O. Helwig	Landau a.d. Isar	1972
31	I. Louis	Pfarrkirchen, Reichenberg, Julbach, Ering-Frauenstein	1973
32	W. Freundorfer	Straubing	1974
33	H. Stahleder	Freising, Ismaning, Burgrain	1974
34	M. Burkhardt	Regen, Zwiesel, Weissenstein	1975
36	H. Stahleder	Mühldorf, Neumarkt a.d. Rott, Kraiburg, Mörmosen	1976
37	G. Schwarz	Vilsbiburg	1976
38	R. van Dülmen	Rosenheim, Auerburg, Hohenaschau	1978
39	D. Bernd	Vohenstrauss, Tännesberg-Treswitz, Pleystein, Leuchtenberg, Waldthurn	1977
41	D. Schmid	Regensburg, Stadtamhof	1976
42	St. Hamann	Schrobenhausen	1976
46	H. Freilinger	Ingolstadt, Gerolfing, Kösching, Stammham-Etting, Vohburg, Mainburg, Neustadt a.d. Donau	1977

I wout like to thank very much Miss Annette Bartsch and Mr. Jürger Pelzer for the difficult and time-consuming work of compiling the statistical data from these volumes.

— seasonal migration workers of unknown quantity, and above all upon
— the large group of servants living in the households of the peasants and families they were working for. In 1770 there were approx. 168.000 servants (*Ehalte*, farmhands, domestic servants) in the country, out of a population of approx. 1.052.000 persons.[3]

These 4 groups together formed the typical labour-force for the agrarian sector at that time.

Bearing this in mind as well as the criteria of the statistics we can deduce as a *preliminary conclusion* that the smallholders in Table 1 were the typical group engaged in proto-industrial activities.

But one should avoid over-stating the quantitative data given in that table. The group of the smallholders' — 46.5% in 1752/60 — is not identical with the number of rural families producing handicraft articles and engaged in small trade. Not *all*, but the *bulk* of the rural industrial activities, were done within this group of mixed-income-earners. Some peasants were involved in producing handicraft goods too, and some smallholders gained extra income as wage earners (e.g. agrarian labourers) as did those from landless families. Taking this into account, one might try to regroup the rural stratification in Table 1.

If one adds on one hand the smallest peasant settlements (= 1/4 farms) to the group of the smallholders, and if one also adds the smallest smallholdings (= 1/16 sites) to the group of the wage earners on the landless settlements — then one obtains for 1752/60 a revised group of smallholdings and small farms representing 34.9% of all rural settlements (in absolute numbers: 29,209 settlements).[4]

Now the preliminary answer to the question posed above is at a *second calculation*: Between approx. 34.9% and 46.5% of the population, living in rural settlements were involved in rural industry.

The percentage of 34.9% is probably too low for the following reason: The regrouping of the rural settlement attempted above leads to an increase in the landless settlements (including the smallest smallholdings) rising to 36.5% (in absolute numbers: 30.533 sites).[5] This revised group of wage earners

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[3] Upper and Lower Bavaria, Upper Palatinate; LORENZ VON WESTENRIEDER, Jahrbuch der Menschengeschichte in Bayern, 1783, vol. 1, part 1, p. 40–48, part 2, p. 34–38; *Churpfalzbaierisches Regierungs- und Intelligenzblatt*, 1800, No. 31.

[4] The emphasis is on the percentage, not on the absolute numbers, since not all settlements have yet been extrapolated from the original sources in the archives; see above p. 658.

[5] This figure matches another series of statistics, which indicate 40, 900 'day-workers' (Tagelöhner; Upper and Lower Bavaria, Upper Palatinate 1770) who lived either in their own town- or country-houses, or lodged in the houses of their employers, or stayed in inns. They worked in all kinds of occupation, predominantly in agriculture, forestry and mining; see LORENZ VON WESTENRIEDER, footnote 3.

together with servants, represents a labour potential which is probably too high with regard to the landlords' and peasants' demand for agrarian labour.

Therefore it seems to be reasonable to take the mean value and estimate in a *third calculation* that on approximately 41% of all rural settlements proto-industrial activities were carried on. These families were part-time farmers and part-time handicraftsmen and part-time traders in combination. This group is surprisingly large.

Using either form of calculation the statistical results are unexpected and pose more questions than they answer. How could these people make their living? How was this decentralized rural production — carried out as a part-time occupation — managed, and how was the marketing organised? A possible answer is to argue that it men carried out alongside the putting-out-system, the merchant-entrepreneur (Verleger), and centralised and decentralised manufacture. Yet, this infrastructural network of management was — judging by our present knowledge — much too weak and undeveloped to sustain this tremendous task for the large quantity of population living on smallholdings and landless settlements.

The mode of production and marketing leads to a further set of questions related to the former. Who purchased the products of this rural industrial work, where was the outlet for the products, where was the market, where did the demand come from? The easiest answer is to refer to the home market, predominantly in the towns, and the "foreign market". While these answers might be partly true, the underlying assumption is that rural industry operated on market lines with prices, wages, buying and selling, supply and demand, income-utilization — in short the type of monetary market-economy which exists today. But these modern markets were only partly established for rural industry. But what we do discover is the parallel existence of supplementary non-monetary invisible local markets for proto-industrial goods, services and labour, the quasi-market, based upon barter exchange. There existed something approaching a mixed labour- service- and product-rotation within a community. A part-time bricklayer and farmer (combined in a single individual) helped in the building of the house of a part-time farmer and carpenter — and vice-versa. A part-time weaver and farmer gave his cloth in barter exchange for the services and products of another part-time farmer and tailor, or part-time farrier or part-time shoe-maker — and vice-versa. These were just some of the supplementary occupations of the smallholders.

Considered from this angle, the startlingly high number of families engaged in rural industry, their supplementary incomes turn out to be largely the result of "helping neighbours", effected through local quasi-markets by barter exchange — and neither the merchant-entrepreneur nor "foreign demand" is necessary any longer to explain the income-deficit of the small-holders in this kind of pre-industrial society. This intracommunity barter exchange was part of the socio-economic behaviour of these families. It was typical of

low-income groups, with a relatively low standard of living, and produced a relatively static economy with a remarkable stability. Obviously too a relatively high degree of local self-sufficiency was achieved in this way. And since Bavaria as a whole was a net exporter of agrarian products [6] there was no food pressure to change this situation.

The craftsmen and their regional distribution of location

Now let us consider the master craftsmen and the independent journeymen and their regional distribution of location.

TABLE 2

REGIONAL ALLOCATION OF POPULATION, MASTER-CRAFTSMEN AND INDEPENDENT JOURNEYMEN WITH THEIR OWN SHOPS IN 1794, (UPPER AND LOWER BAVARIA) [7]

Regional location of production	Population		Masters and Journeymen	
	total	in %	total	in %
1. Towns	107,000	12	17,000	25
2. Countryside	819,000	88	49,190	75
a) market places	59,000	6	9,500	14
b) villages, hamlets	760,000	82	40,400	61
3. Total	926,000	100	66,900	100

The statistics indicate that 75% of all masters and journeymen worked and lived in the countryside. This shows clearly that the old medieval division of production between town and countryside no longer existed.

[6] ECKART SCHREMMER, Bemerkungen zur Zahlungsbilanz Baierns in der zweiten Hälfte des 18. Jahrhunderts (Manufakturperiode) in: WILHELM ABEL et al. (eds.), Wirtschaft, Geschichte und Wirtschaftsgeschichte; Festschrift zum 65. Geburstag von Friedrich Lütge, 1966, pp. 242-248.

[7] ECKART SCHREMMER, Standortausweitung der Warenproduktion im langfristigen Wirtschaftswachstum; zur Stadt-Land-Arbeitsteilung im Gewerbe des 18. Jahrhunderts, in: Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Vol. 59, 1972, p. 24

TABLE 3

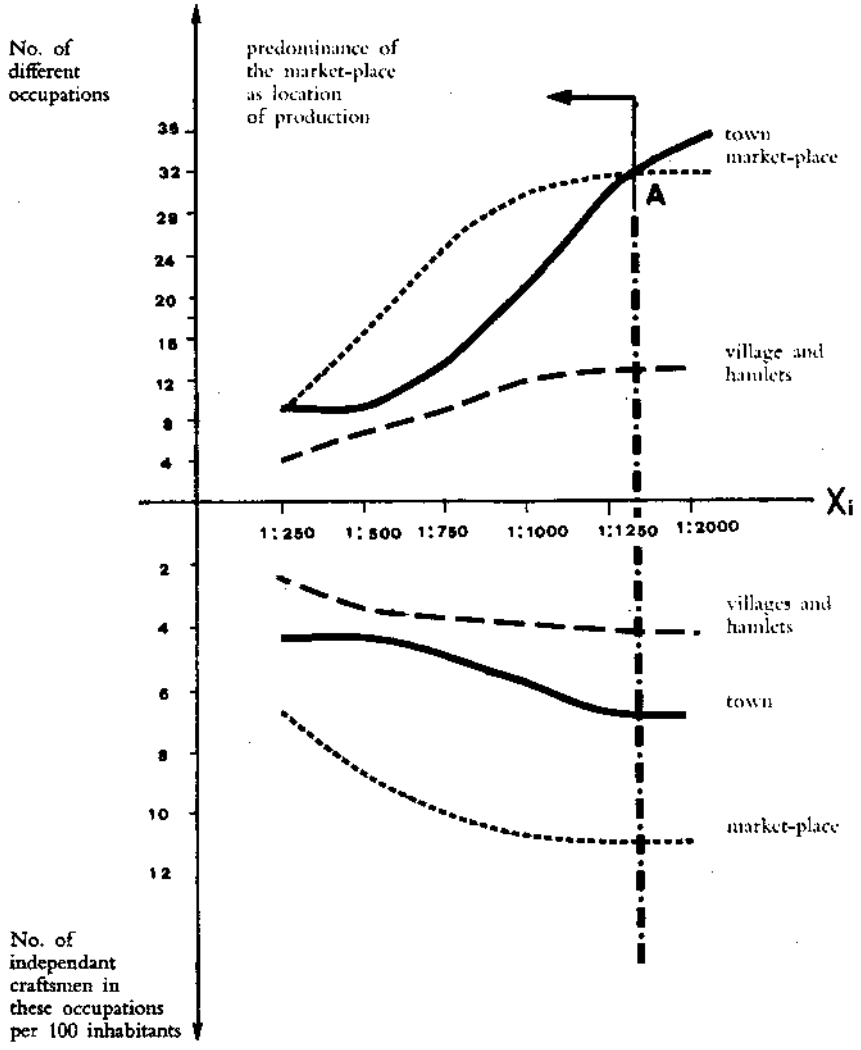
THE 25 MOST FREQUENT TYPES OF OCCUPATION AND DENSITY OF THESE OCCUPATIONS IN 1771 [8] IN THE COUNTRYSIDE AND IN THE TOWNS

In the countryside villages hamlets		market-places		In the towns	
Profession	one independant craftsman per ... inhabitants (density of profession)	Profession	one independant craftsman per ... inhabitants (density of profession)	Profession	one independant craftsman per ... inhabitants (density of profession)
1. linen-weaver	113	1. carpenter	108	1. carpenter	164
2. shoe-maker	179	2. shoe-maker	117	2. bricklayer	180
3. tailor	200	3. baker	124	3. tailor	206
4. carpenter	203	4. beer-brewer	128	4. beer-brewer	206
5. farrier	255	5. linen-weaver	123	5. shoe-maker	210
6. miller	268	6. trader	135	6. baker	223
7. bricklayer	460	7. tailor	135	7. trader	239
8. barrel-maker	720	8. bricklayer	154	8. linen-weaver	242
9. cartmaker	725	9. butcher	169	9. butcher	246
10. barber	895	10. farrier	267	10. barrel-maker	510
11. trader	925	11. barrel-maker	276	11. farrier	605
12. baker	980	12. joiner	314	12. joiner	620
13. butcher	1010	13. harness-maker (saddler)	370	13. tanner	695
14. potter	2100	14. miller	390	14. painter (white washer)	775
15. joiner	2403	15. cartmaker	405	15. miller	790
16. beer-brewer	2450	16. locksmith	475	16. barber	830
17. harness-maker (saddler)	3300	17. barber	522	17. locksmith	830
18. glass-worker	10200	18. potter	522	18. potter	830
19. locksmith	10500	19. dyer	530	19. wool-weaver	880
20. knitter of stockings (weaver)	11900	20. rope-twister	550	20. watch-maker	890
21. tanner	11935	21. tanner	560	21. rope-twister	950
22. cutler	13200	22. cloth-maker	590	22. harness-maker (saddler)	1001
23. wool-weaver	13700	23. glass-worker	625	23. cartwright	1026
24. dyer	14300	24. hat-maker	720	24. tawer	1140
25. painter (white washer)	16100	25. tawer	730	25. glass-worker	1170

[8] According to the census of Dachsberg in 1771; see CARL V. TYSZKA, Handwerk und Handwerker in Bayern im 18. Jahrhundert, 1907.

The graphical representation of the ruralization of craft-industry in 1771 is shown in fig. 2.

Fig. 2 - Penetration of the three regional locations of production (towns, market-places and small villages with hamlets) by independent craftsmen



X_i represents statistically "at least one independent craftsman in each profession per i inhabitants", where i stands for 250, 500, 750, 1000 and 1500 inhabitants.

Both Table 2 and Fig. 2 show that there was no geographical concentration of craftsmen in the towns, and that there was no specialization of pre-industrial production. Thus the craftsmen in the countryside were the second group of persons — besides the smallholders — who led the ruralization of craft industry.

3.2. In which way did this pre-industrial structure influence the process of industrialisation itself?

A priori we might assume that Bavaria and Wurttemberg were as a result of their rural industrial structure well prepared for a quick and sustained transformation into industrialisation. But surprisingly enough both regions experienced a strikingly slower process of industrialisation compared with other regions in the west. In Bavaria the process was even slower than in Wurttemberg. Why? Was the size and the combination of the factor flows of labour, capital and progress not adequate for the rate of industrialisation we might have expected? Or was this kind of socio-economic structure at the beginning of the XIXth century the reason for the resistance of the traditional structure against structural changes in the decades to come? I believe, that there are good reasons for arguing along these lines, without overlooking the fact that both regions lacked large resources of the two basic items for the first capital-intensive industrial revolution: coal and iron.

Industrialisation means in its simplest and original form the application of more capital intensive techniques of production in the industrial sector. Thus, slow industrialisation means the slow introduction and diffusion of capital intensive techniques (machines). In this context "capital-intensive techniques" has at least two interrelated features: *a*) the availability of capital; and *b*) the investment of the capital in factories. The appearance of "factories" implies a special kind of organization of production, combined with a special kind of disciplined, often landless, labour force. Industrialisation subsequently means a change in the structure of the production-units as well as change in the structure of the population, the structure of family incomes, and income distribution. Thus slow industrialisation means slow changes in the socio-economic structure. This may sound somewhat tautological, but it might be helpful if we reverse the question of why the speed of industrialisation was so slow, and ask instead why was the transformation of the socio-economic structure in a given region so slow? This means that the more narrow and primarily economic approach towards industrialisation (stressing factor flows, factor price relations, the capital-shortage-thesis, banking system, Schumpeterian entrepreneurship, lack of economic drive of the population, and so on) is widened to include social and political factors as well. The historically evolved social and economic structure of the region can then be fully taken into consideration. Thus this approach is more complex and has a more profound historical dimension.

The modified answer for Bavaria and (probably) Wurttemberg is then as follows. It was precisely the socio-economic structure at the end of the late feudal period (characterised by a high degree of territorialization of craft industry, the number of smallholdings, and invisible local quasi-markets with barter-exchange) which proved to be an obstacle towards the industrialization in the XIXth century. There is much evidence to support the thesis that the traditional social and economic structure, which had developed slowly over generations, was so balanced that its inherent immobility became a strong bulwark against the adoption of the new forms of large scale, capital-intensive and centralized production. The process of the ruralization of craft industry had made the region self-sufficient — at least with regard to the basic domestic demand. There was no political, social or economic pressure strong enough to change this traditional structure towards new structures suited to the requirements of industrialisation. Neither in Bavaria nor in Wurttemberg did the population reach the food ceiling posited in Malthusian theory; and when temporarily it did come close to it during periods of agrarian crises, pressures were relieved by emigrations. Furthermore, certain factors even strengthened the existing structure. The existing structure was reinforced by the adoption of relative inexpensive new small-scale techniques suitable to the conditions of decentralized production (e.g. in spinning and weaving). This was a structure-stabilizing type of technology, at least for some decades. And above all the dominant factor of biological-chemical progress in agriculture (fertiliser) could be adopted by the smallholders. Their productivity increased as well and helped to stabilize the traditional structure in this respect too. Large-scale farming was not a precondition for higher land-productivity. All this together formed a very strong barrier against the adoption and the diffusion of capital-intensive large-scale technology, against new forms of production, which might endanger and destroy the existing socio-economic structure. In other words: the traditional structure, with its rich variety of rural handicraft industry, the quasi-markets, the diffusion of new techniques and elements of progress which were suited to this traditional structure, together with the absence of strong pressure towards change, brought about backwardness with respect to large-scale capital-intensive industrialisation. Smallholders and decentralized handicraft production survived and were even able to achieve certain increases in productivity.

So the type of pre-industrial and late feudal socio-economic structure, which initially might have seemed to favour industrialisation in fact turned out to be a hindrance and barrier towards early and rapid industrialisation in the post-feudal period — so long as there was no imminent danger of a severe and permanent deterioration or of pressure upon the existing system. The traditional historical socio-economic structure had developed some remarkable self-defence-mechanisms, and it even produced forms of development which strengthened the structure without destroying it.

For an economist, whose thinking is determined by production-functions and modern monetary markets, it is somewhat bizarre to find the following combination:

1. Economic backwardness in terms of a low level of industrialisation with large-scale capital-intensive factories
2. Surpluses in both input-factors: labour and capital
3. Existence of knowledge about more advanced progress (that is a potential of know-how in technology, factory-organisation, and business-administration) without full use of this knowledge being made
4. Markets with monetary and barter exchange coexisting side by side.

But this combination existed. And here a case study for Wurttemberg gives more detailed information.[9]

Within the German region, the Kingdom of Wurttemberg was economically backward in the terms just mentioned. It was an industrial late-comer in the XIXth century. The big spurt began most probably in the 1880s — or perhaps not until the first decade of the XXth century.

Even though the Kingdom enjoyed an enormous surplus of labour and capital, this could not be absorbed — or used — in the country during the period of pre- and early industrialization. Between 1815 and 1910 Wurttemberg lost 680,000 persons by emigration; this was approximately 50% of the entire population in 1817. And these 680,000 persons belonged predominantly to the labour-force, and were not children or elderly persons. In the same period, 1823 to 1909, the region produced an estimated net capital export of 1093 million marks. This was approximately 48% of the capital stock (without land) in 1863, or, according to another calculation, nearly 11% of the capital stock in 1909. The capital-shortage-thesis for explaining industrial backwardness is of limited use in this example.

If it holds true that industrialisation was by and large the European response to overpopulation, hunger, and the ambition to achieve, then it is not unreasonable to argue that where these three pressures were absent, a proto-

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[9] HANS LORETH: Das Wachstum der württembergischen Wirtschaft von 1818-1918 In: Jahrbücher für Statistik und Landeskunde von Baden-Württemberg, hg. vom Statistischen Landesamt Baden-Württemberg, 19, Jg, Heft 1, 1974. Dissertation Universität Heidelberg, 1972. — The stratification of the rural population in the 18th century Wurttemberg is still open to further research. Some information for the 19th century (1857) is given in WOLGANG VON HIPPEL, Bevölkerungsentwicklung und Wirtschaftsstruktur im Königreich Württemberg 1815/65, in: ULRICH ENGELHARD, VOLKER SELLIN and HORST STUKE (eds), Soziale Bewegung und politische Verfassung, p. 353 ff. It seems that in the mid 1859s the percentage of the smallholders in Württemberg was even higher than the percentage of the smallholders in Bavaria in the mid 1750s.

industrialised region might stay at the level of traditional rural industry. The industrial revolution just passed by. This was the more likely when the way of life and the consciousness of both individuals and the population as a whole was more influenced by the traditional concepts of "sufficiency" than by the thrusting attitudes of an "achieving society".

Such an explanation of postponed or delayed industrialisation stresses mainly the economic factors of the retardation. One should also add the social framework, and the strength of the social, cultural and religious attitudes of the population as well. Both sets of the explanatory variables seem to lead in the same direction.[10]

One determinant of the ruralization of craft industry had been the feudal system. It was abolished by a set of Emancipatory Edicts after 1807 and especially after 1848.[11] What happened in Wurttemberg and Bavaria? Three things: *a*) the compensation of the landlords in money, with a system of payment in instalments, *b*) the coincidence of the instalment payment with a period of long-term agrarian prosperity after 1850, and *c*) the very extended period of time for the financial regulation of peasant emancipation, which lasted until the great inflation of 1923 (as in the case of Bavaria), contributed to the fact that the mere abolition of the feudal order did not alter either quickly or radically the traditional rural structure of the country. The former feudal farmers and smallholders became emancipated citizens, but the socio-economic structure of the countryside stayed by and large the same. The rural structure did not change sufficiently to enable the cause-and-effect mechanism between the socio-economic structure and industrialisation to start immediately. Despite regional and local changes, the traditional structure of Wurttemberg and Bavaria was able to assimilate the effects of peasant emancipation, and both regions remained "backward" with, or because of, their specific structures. But beyond this, it seems most probable that the relative industrial backwardness of these regions compared with the industrialised regions of the Ruhr, Silesia or Saxony, was even greater at the end of the XIXth century than at the beginning of the century. Yet at the same time both regions were relatively wealthy and developed in terms of agricultural and handicraft production. Industrial backwardness, economic backwardness, social backwardness and poverty are not always synonyms.

A recently concluded case-study for a third region in South Germany —

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[10] W. Robert Lee: Population Growth, Economic Development and Social Change in Bavaria, 1750-1850, New York, 1977, and Werner K. Blessing, Umwelt und Mentalität im ländlichen Bayern. Eine Skizze zum Alltagwandel im 19. Jahrhundert, in: Archiv für Sozialgeschichte, Vol. 19, 1979, p. 1-42.

[11] Friedrich Lütge: Geschichte der deutschen Agrarverfassung, 2. Aufl 1967; Sebastian Hiereth, Die bayerische Gerichts- und Verwaltungsorganisation vom 13. bis 19. Jahrhundert, 1950.

the district of the Odenwald in Hesse [12] shows an even more striking example of the situation just described. In this part of Hesse, the proto-industrial structure characterised by the ruralization of craft production and small trades has remained basically unchanged until the present, even with (or now because of ?) a modern infrastructure and monetary markets.

I should like to add a short footnote here and consider briefly those regions with large manorial estates (*Gutsherrschaft, Gutswirtschaft*) in the Eastern parts of Germany. The pre-industrial structure in Prussia east of the River Elbe, which was characterised by large-scale farming and a low degree of ruralization in craft industries, and the socio-economic structure in Bavaria and Wurttemberg described above, might well seem to represent the two extremes of the wide range of different regional structures in the former German Reich. Nevertheless, both types of structures proved to be very resistant structural changes necessitated in industrialization. The structure accepted or permitted only those factor flows and factor combinations which did not endanger the existing structure. Surplus factors — both labour and capital — were repulsed and driven out (labour migration, capital export). At the end of the XIXth century and at the beginning of the XXth century, external and internal pressure (competition, income strains) towards industrialisation was strong enough to change uniformly the structures in Wurttemberg and Bavaria. In East Prussia these pressures existed as well but were counterbalanced there by political forces which had an interest in stabilising the traditional structure and which became artificially maintained by a steady flow of monetary subsidies into the regions controlled by the Junkers. In this case both the political and economic determinants of economic development merge.

III. Summary

Pre-industrial rural industry in the XVIIIth century was the outcome of the long-term process of the ruralization of craft production based on two groups of the pre-industrial population in the countryside: the craftsmen and the smallholders. Rural industry was a very distinct feature of pre-industrial European regions. It supported much of the long-term population increase, and generated a long-term growth in the production of handicraft goods by traditional techniques.

[12] Hartmut Sangmeister: Die wirtschaftliche Entwicklung eines Randgebietes im Zeitalter der Industrialisierung (dargestellt am Beipiel des südhessischen Odenwaldes 1871-1913). Ein Beitrag zur Theorie und Praxis industrialisierungsgeschichtlicher Regionalforschung; Dissertation Heidelberg 1976; some comments by Eckart Schremmer, Der südhessische Odenwald; ein Beispiel für ein wirtschaftliches Randgebiet während der Industrialisierung 1871-1913, in: Zeitschrift für Agrargeschichte und Agrarsoziologie, 27, 1979.

At the beginning I hesitated to use the new term *proto-industry* or *proto-industrialisation*,[13] only because the prefix *proto*-might over-emphasize the assumption that proto-industry leads to industry, and that proto-industrialisation was the first phase of industrialisation. Such a relationship is too close. Certainly, it holds good in a very general sense, since there is always a stage that comes " before ". Within this general schema, the concept of proto-industry may properly be placed in a series of theories and models dealing with stages of growth and development. But this universality is somewhat too encyclopaedic to be of value in regional studies. There is much evidence, indeed, that rural industry did not necessarily lead to modern industry.

On the contrary: rural industry developed certain build-in stabilizers of its own. Case studies indicate and show how proto-industrial activities in a region could hamper, retard, or block modern industrialisation development in that region. Some proto-industrial regions stayed proto-industrialized or underwent perhaps even a process of re-ruralization afterwards.[14] The future development of a region with rural industry was in fact open-ended.

Nor should the term " proto-industry " make us lose sight of the specific distinctions between rural smallholders with additional supplementary incomes, the handicraftsmen in the countryside, the putting-out-system, the decentralized and the centralized manufactures, and the monetary and barter exchange markets.

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[13] FRANKLIN F. MENDELS introduced his concept of proto-industrialisation in an article with the challenging title: ' Proto-Industrialisation: The First Phase of the Industrialisation Process ', in: *The Journal of Economic History*, Vol. XXXII, 1972; in this context see also HERMAN FREUDENBERGER and FRITZ REDLICH, The Industrial Development of Europe: Reality, Symbols, Images, in: *Kyklos*, Vol. XVII, 1964.

[14] PANKRAZ FRIED, Reagrarisierung in Südbayern seit dem 19. Jahrhundert, in: HERMANN KELLENBENZ (ed.), Agrarisches Nebengewerbe und Formen der Reagrarisierung im Spätmittelalter und 19./20. Jahrhundert, 1975, p. 177 ff.