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Four Decades of Study on Growth Disparities across Regions in France: Achievements and Prospects.

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Regional economic history developed on the basis of the methods that quantitative history had used to describe the long-term growth of industrialized countries. The study of the dynamics of regions was somewhat abandoned after the 1980s. But the new economic and social problems linked to the opening of borders now cause a renewed interest in analyzing the economic destiny of the infra-national territories.

It seems useful to resume the work in a field where all the data are far from being exploited and where major projects launched nearly half a century ago by economist historians such as Maurice Lévy-Leboyer have remained unfinished. The purpose of this communication is to summarize the different studies carried out in France on this subject since the end of the 1960’s and to suggest some new ways of research.

A new subject of study: regional growth

In the aftermath of the Second World War, the publication by the member countries of the United Nations of their national economic accounts gave several economist historians the idea of constructing retrospective accounts in order to grasp a phenomenon whose scope was beginning to be appreciated: long-term economic growth. The first was Simon Kuznets, who in 1951 measured the growth of the United States since 1870. Following this, several economist historians constructed annual indexes of production for different countries in Europe, going back as far as possible, sometimes up to the XVIIIth century. This work continued for all the countries of the world under the direction of Angus Maddison at the Center for Growth and Development of the University of Groningen. From then on, it was possible to compare the growth rates, to date the take-offs, or to assess the magnitude of crises, with much greater precision than was previously done.

At the beginning of the 1970s, a new idea was formulated: in countries of a certain size, the economic growth observed at the national level was in fact only the resultant of regional growths with contrasted patterns. The region, more homogeneous than the nation in its various physical and human characteristics, appeared to be the most appropriate territorial unit to study the dynamics of territories and to explain the disparities in economic growth across territories. The national framework presented the defect of the macroscopic scale, namely, the excessive heterogeneity of the characters, whereas the regional framework was closer to the mesoscopic scale, which allowed the maximum homogeneity of the character distribution within the same territory and, on the other hand, the maximum dispersion of their distribution between each territory.

Another benefit of research on regional growth and disparities between territories lay in their forward-looking value: in a world which evolved since the end of the Second World War towards generalized free trade, the study of the economic fates of regions offered to the economists the experimental model of a world without customs barriers. It showed how, within the same country, phenomena of concentration of industries in favour of some territories were accompanied by the deindustrialisation of other less competitive territories. By the end of the 1960s, when customs frontiers disappeared in the Common Market and the Kennedy Round negotiations began to trigger global customs disarmament, large countries were soon going to be themselves confronted with the

situation in which already lived the regions for a long time. However, the tools used by forecasters were developed in the days of the protected economies, and despite the warnings of Raymond Courbis, the opening of borders was not sufficiently taken into account by forecasters.\(^5\)

Of course, it was no question of making regional economic history as historians had practiced in the past, collecting scattered facts, more or less significant figures and some testimonies. It was necessary, as had been learnt at the national level, to reach a synthetic view of the evolution of economic activity by reconstructing regional aggregates and, if possible, in the form of continuous annual series. To be able to specify, in the year near, the date of a major inflection in an evolution allowed to establish links between historical facts and to detect between them unsuspected relationships. For that purpose, it was necessary to resort resolutely to the techniques of quantitative history. The implementation of such an operation at the sub-national level was faced with problems more difficult to solve than those faced by the retrospective national accounts. The first problem was the lack of regional quantitative data; some figures were obtained only at the national level, starting from customs statistics (for example, quantities of raw cotton imported, from which to reconstitute the national production of cotton yarns). The second problem was, in many countries, the instability of the boundaries of sub-national regions.

**France, a particularly favourable study area for space econometrics**

France seemed to lend itself well to this type of research: the abundance of statistics collected by its administrations and the stability of the territorial division established in 1790 made possible the calculation, for every department, of annual production indexes from the end of the first Empire to the present day.\(^6\)

As early as 1836, Adolphe d'Angeville, studying the departemental figures of population and production, had for the first time pointed out the opposition between two unequally developed parts of France on either side of a line Saint-Malo-Geneva.\(^7\) North-east of this line, was located the most literate part of France and also the wealthiest.

Aggregating the figures of several departments and resuming the division into "program regions" as defined by the decree of 30 June 1955 and slightly modified two years later as a result of the work of a young advisor to the Court Des Comptes, Serge Antoine, it was possible to create regional ensembles on a virtually mesoscopic scale. Serge Antoine relied on the study of telephone flows to give a map of the regions of mainland France which remained almost unchanged from 1958 to 2015. The choice of this framework for economic studies, corresponding to the second level of the nomenclature of the statistical territorial units of the European Statistical Office (NUTS 2) was later confirmed by the geographer Jean Labasse.\(^8\) With the exception of a few relatively heterogeneous regions, such as Rhône-Alpes, which was formed in 1960 by the fusion of the Rhône region and the Alps region, the French program regions adapted well to the requirements of such research.

**Regional production indexes for the nineteenth and twentieth centuries**

The method of calculating the regional production indexes consisted in constructing Laspeyres chain indexes, the weighting coefficients being revised approximately every fifteen years. In the early 1970s, Maurice Lévy-Leboyer had the idea to launch several young researchers (they were young at that time) on regional growth studies. Professor at the University of Caen, he coordinated the research of his students on the evolution of agricultural income in the Basse-Normandie region. The result of this work was published in 1972.\(^9\). By writing the introduction to this book, Maurice Lévy-Leboyer spoke of "deindustrialisation", a word which made his first appearance in the French language at a time when the rich countries believed themselves to be the

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exclusive holders of industrial power for an indefinite time. He became a professor at the University of Paris X-Nanterre and co-ordinated the reconstitution of annual indexes of agricultural production in various representative French territories (Alsace, Beauce, Champagne, Languedoc, Maine, Vaucluse) 10 and of regional agricultural and industrial products (Champagne, Alsace) 11. Research on regional production agricultural indexes revealed the unsuspected depth of the grain farming and proto-industry crisis throughout the northern half of the Paris Basin after 186012 and the resilience of various regions of intensive agriculture (Alsace, Vaucluse) to the crises of the 188013's.

Insofar as the services sector was, until the middle of the twentieth century, highly dependent on the development of the agricultural and industrial product (in other words, the physical product), the evolution of the physical product could be regarded as an approximation of that of the regional gross domestic product. The analysis of regional reality by quantitative methods gave results with a precision far superior to those hitherto achieved by historians or geographers investigating the evolutions of French space.

The study of the evolution of the agricultural and industrial product in Champagne and Alsace revealed the extent of the disparities in growth between two regions of early industrialization, Alsace and Champagne. Both had lacked local coal resources, both were part of precociously literate France and both had found remunerative industrial specializations. But Alsace had experienced a stronger growth, albeit interrupted by the exodus of population which had followed the annexation of 1871. The main explanation of this vigorous economic dynamism was that Alsace had suffered, at the beginning of the nineteenth century, a strong increase in its demographic pressure, in a context of critical rural overpopulation14. The existence of employer's families capable of passing on the entrepreneurial spirit on several generations also seemed as a factor of dynamism of alsacian territory15. The investigation undertaken by the Institut d'Histoire moderne et contemporaine on the employers of the Second Empire confirmed the diversity of the behavior of French industrialists among regions and the influence of these differences on the regional growth rates. To entrepreneurs families of Alsace and North, which considered industry as an aim in itself, opposed those of Normandy, which considered it as a stage in an upward social mobility16.

The comparison of the production indexes also revealed the unsuspected magnitude of the

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economic deceleration suffered by Champagne since the 1880s, caused by the attraction of the neighbouring Paris conurbation (Ile-de-France) to its workforce and its capital\textsuperscript{17}.

\textsuperscript{17} Michel Hau, « La comparaison des croissances économiques de deux régions industrielles, la Champagne et l'Alsace (1810-1939) », \textit{Histoire Économie et Société} 1989, pp. 459 - 467.
Figure 1
Comparative growths of the regions Champagne and Alsace
(agricultural and industrial product, base 1908-1912 = 100)


Labour Force Censuses

At the same time, an economist, Michel Quélennec, pursued the same objectives, using labour force censuses. Based on these figures, he assessed the economic potentials of the French regions between 1864 and 1970 at several key dates. While confirming the opposition between the north and the south of the Saint-Malo-Geneva line, he showed that the developed part of France at the time of Napoleon III was extended by the Rhone valley to the Mediterranean coast.

But, from the 1860s, the French territory had experienced a new distribution of economic power between regions characterized by:
- a concentration in four regions (Île-de-France, Rhône-Alpes, Nord-Pas-de-Calais and Provence);
- a relative regression of regions bordering the Ile-de-France (Picardie, Champagne, Centre, Haute and Basse Normandie);
- a sharp deindustrialisation of Languedoc and Basse-Normandie.

Michel Quélennec provided researchers with tools to analyze the relationships between strong and weak regions. In the domination effect that the former exerted on the latter, he distinguished:

- the effects of "progressive" domination (the processes of stimulating and of over spilling)
- the effects of "regressive" domination (the processes of destructuring).

He also proposed a way of decomposing the regional economic growth rate. Its analysis was based on a distinction between

- the "growth base", a sector whose outlets crossed regional borders,
- the "residential sector", a sector geared towards meeting local needs.

It was the development of the growth base that had a stimulating effect on the residential sector, through a multiplier of regional employment. A shorter period, between the industrial active population censuses of 1866 and 1906, confirmed, at the end of the 19th century, the relative decline of the Paris Basin crown and the concentration of industry on the Paris agglomeration, the Nord-Pas-de-Calais, the Lorraine and the Saint-Etienne region. It also showed that the regions, which, like those in the southern half of the Paris Basin, had ample reserves of agricultural population had a higher economic dynamism than those of the northern half, which had been subject to the Parisian attraction and to the rural exodus for a longer period of time. This study revealed the decisive influence exerted by the labour market and the demographic phenomena on the distribution of industries\textsuperscript{19}.

**Business demography**

In the 1980s, Philippe Jobert and Jean-Claude Chevailler proposed a new way to improve the knowledge of disparities in regional growth. They used a different method of comparing, from the series extracted from the General Account of Civil and Commercial Justice, the pace of business creations and bankruptcies\textsuperscript{20} between 1840 and 1913. The relationship between creations and bankruptcies, by department on a ten-years basis, was an indicator sensitive to changes in economic dynamism over time and space.

The obtained image was affected by several biases, due to the absence of distinction between industrial and commercial enterprises, the large number of small enterprises without real economic weight and the asymmetry between the series of creations, concerning only companies, and that of bankruptcies, concerning all enterprises. Economist historian Nicolas Stoskopf pointed out that many enterprises did not take the form of companies. Thus, the Pereires, usually presented as paragons of entrepreneurs, had long remained "employees" and had never created in Paris a company under the name "Pereire Frères". The decline in the number of companies could also reveal a process of financial concentration and modernization\textsuperscript{21}. Nevertheless, the images obtained confirmed and complemented those obtained in other approaches to regional quantitative history.

In a session of the International Economic History Congress in Madrid in August 1998 devoted to the processes of deindustrialisation, Jean-Claude Chevailler pointed out that between 1840 and 1913, the creation of companies had tended to concentrate in the "strong regions" distinguished by Michel Quélennec (notably the départements of the Seine and the Nord and, more moderately, that of the Rhône), while bankruptcies were more uniformly spread throughout the national territory, with a particular intensity at the south-west of the famous line Saint-Malo-Geneva\textsuperscript{22}. The result was a growing contrast between the north-eastern half of France, where

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\textsuperscript{21} Nicolas Stoskopf, *Le défi économique ou comment sortir de l'ordinaire ? Mémoire HDR, Université de Paris-Sorbonne*, 2002, note 176, p. 73 on line on Hal-SHS.

creations outweighed, decade after decade, bankruptcies, and the south-western half where the reverse situation prevailed.

As well as Michel Quélennec, Philippe Jobert and Jean-Claude Chevailler noted the contrast between the rapid economic development of the department of the Seine and the gradual erosion of the regions around the Paris Basin after 1860. They also found that the Mediterranean and Atlantic coasts were particularly affected by corporate bankruptcies between the 1870s and the First World War.

The departemental consumption of coal

Another way of approaching the disparities in regional growth was possible thanks to the departemental figures of coal consumption given by the statistics of mineral industry. The study of these figures\(^\text{23}\) gave another picture of the evolution of regional economic disparities. Certainly, it was biased: until late in the 19th century, coal was also used for domestic heating and watercourses continued to contribute significantly to the energy balance of industries in many French regions. Nevertheless, the image of disparities in regional growth built on the consumption of coal was, with a few minor exceptions, convergent with Michel Quellénec's analyzes: it revealed a process of geographical concentration of industry in France for the benefit of three regions, Ile-de-France, Nord-Pas-de-Calais and Lorraine. It also confirmed the relative stagnation from 1860, and then the decline in the 1880's, of all the regions around the Parisian Basin.

With regard to Michel Quélennec's analyses based on the censuses of population, this study put more the accent on the weakening, since the 1840s for Rhône-Alpes, then, since the crisis of 1847, for the Burgundy and Languedoc, and finally since the crisis of 1857, for the whole zone extending from Burgundy to Mediterranean coast. The study of the costs of transport and extraction allowed to attribute a part of this decline to the decrease of the relative advantage that established the presence of local resources of coal with regard to the regions of Paris Basin and Alsace. But the prices of the coal had remained lower than in these regions, what tended to prove that other factors had disadvantaged the French Southeast in the interregional competition\textsuperscript{24}.

\textsuperscript{24} Michel Hau, "Energiekosten...", loc. cit., p. 246.
The relaunching of the study of regional growth by anthropometric history

The history of regional growth disparities underwent a sudden renewal in France from 2003, with the works of Laurent Heyberger\(^{25}\). Inspired by the pioneering work of Emmanuel Le Roy Ladurie\(^{26}\) on the health status of French conscripts and the methods developed by the new anthropometric history\(^{27}\), they relied on the study of the average stature of conscripts\(^{28}\). These data were perfectly preserved in the military series of the French departmental archives centers. It is now recognised that the average stature is an indicator of the standard of living of the population. Corrections were nevertheless to be made to this new representation of disparities in regional growth: urban dwellers at the beginning of the industrial revolution were generally less well-nourished than rural ones, because of the cost of supplies (which only decreased significantly with the advent of the railway and, then, refrigerated wagons). However, in France, this "urban penalty" was less pronounced than in other countries\(^{29}\). The image of regional development revealed by the study of the average stature of conscripts was affected by another bias, the greater or lesser openness of the countryside to urban markets: on an equal income, the average Norman stature was diminished by exports of dairy products to Paris, while the inhabitants of Burgundy and Franche-Comté, who were more self-consuming, were higher.

At the beginning of the nineteenth century, the departemental distribution of statures showed a France divided into two halves on either side of the Saint-Malo-Geneva line: the small statures in


\(^{28}\) Laurent Heyberger, L'histoire anthropométrique, Berne, Peter Lang, 2011. 


Source: Statistique de l'industrie minière, 1838-1911.
the South-West and the largest in the North-East. It could be seen that during the following decades, the south-western part was catching up with the north-eastern part, first descending the Rhone axis and then, towards the South, from the regions of the left bank of the Loire. Generations born in the middle of the nineteenth century experienced, in the plains of the North of the Parisian Basin, a plateau in their statureal growth. There was again the crisis of the proto-industry of the Paris Basin that had already been described by Maurice Lévy-Leboyer.

Figure 4
Departemental inequalities of stature distribution between conscripts born in 1829 and 1848

Prospects
There is now a renewed interest in space econometrics. At the present time, the researches are resumed by economists. Using data from the mineral industry statistics, Claude Diebolt launched in 2016 a survey on steam engines and crossed the data obtained with those already collected on schooling. He introduced a disaggregated human capital perspective, distinguishing between basic human capital (primary school) and intermediate human capital (post-elementary instruction). The conclusion was that the steam technology led to intermediate human capital accumulation in France during the second half of the XIXth century.

30 Laurent Heyberger, Santé et développement économique en France, op. cit., p. 85-86.
The works on regional aggregates can be repeated on the remaining regions: we now have the methods to continue this type of research in the rest of France and we know the available data.

Tax data can also be used. In Germany, the oldness of the income tax had enabled Knut Borchardt to establish from the 1870s series on the evolution of per capita income in each region and to update a gradient in the living standard when traveling from East to West. On this model, income tax data can also be used for France since the 1920s and give a fairly reliable picture of the disparities in regional growth. However, no exhaustive study was carried out throughout the territory and throughout the period.

Data on wages, as well as on property and business income, can yield interesting results, because they add to the physical product that of services. The survey carried out by Nicole Delefortrie and Janine Morice shows the way. It covered the years 1864 and 1954. It revealed the abundance of the data available in the publications of the various French administrations and the possibility of carrying out similar studies for other years of the nineteenth and twentieth centuries.

Several interesting facts have been established. First, the spatial stability, until 1954, of the difference between the two unequally developed parts of France: in 1954, the north-eastern part of France accounted, as in 1864, for an average disposable income per capita higher than the south-western part. Then, the survey revealed the continuation, until the aftermath of the Second World War, of the large extent of the departemental disparities in the average income of farmers. This phenomenon was specific to agricultural income: technological progress had not yet made it possible, as far back as 1954, for the poorer regions to catch up with the rich regions. The pattern of tenure, the size of farms and, more generally, the problem of structures, had delayed the spread of technical progress. Finally, as opposed to differences in agricultural income, regional differences in wages between 1864 and 1954 considerably decreased.

This alleviation of wage disparities between French regions appears to have been the consequence of interdepartemental population movements. These migrations were particularly intense in the départements close to the Paris conurbation. The economist Louis M. Goreux showed that they were the inverse function of the square of the distance to Paris. Comparing the net migration rates between the 1866 and 1954 censuses with the disposable income per capita in 1864, the study by Nicole Delefortrie and Janine Morice shows a positive correlation between these two variables.

Before commissioning of the railways, the workers' wages of the towns were significantly correlated with the average farm incomes of their department. We published in 1987 an article in the review Histoire, Économie et Société. Based on the investigations of 1852 on agriculture and of 1853 on urban wages in small industry, it revealed the income disparities of farmers and industrial workers throughout the départements in XIXth century France. On one hand, it showed the amplitude of the contrasts between the départements: even without considering the département of Seine, where the level of wages was much higher than in province, the real wages (nominal wages deflated from prices of wheat) in small industry varied from the index 67.1 for the Côtes du Nord to the index 156.6 for the Bouches-du-Rhône, with a scale factor of 2.3. If we tried to correct the size effect of the urban area, the scale factor was 2.1 between the Côtes du Nord (index 66.7) and the Seine-et-Oise (index 143.3). Inequalities were much bigger regarding the agricultural income per

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33 Ministère des Finances, Renseignements relatifs aux impôts directs, années 1920 et suivantes.
35 N. Delefortrie, J. Morice, op. cit., p. 177-178.
36 N. Delefortrie, J. Morice, op. cit., p. 67 et 121.
37 N. Delefortrie, J. Morice, op. cit., p. 152.
38 N. Delefortrie, J. Morice, op. cit., p. 160.
40 N. Delefortrie, J. Morice, op. cit., p. 173.
42 N. Delefortrie, J. Morice, op. cit., p. 152.
45 N. Delefortrie, J. Morice, op. cit., p. 173.
47 N. Delefortrie, J. Morice, op. cit., p. 152.
50 N. Delefortrie, J. Morice, op. cit., p. 173.
52 N. Delefortrie, J. Morice, op. cit., p. 152.
54 L. M. Goreux, "Les migrations agricoles depuis un siècle et leurs relations avec certains facteurs économiques", Études et Conjoncture n° 4, 1956.
57 N. Delefortrie, J. Morice, op. cit., p. 152.
60 N. Delefortrie, J. Morice, op. cit., p. 173.
62 N. Delefortrie, J. Morice, op. cit., p. 152.
farmer: the scale factor was 5.7 between the Ariège (index 44.9) and the Marne (index 257.4). On the other hand, at the middle of XIXth century, the inequalities of the urban wages between the French départements didn't reflect those of the prices of the wheat, as was believed before; for example, in Alsace, wheat was expensive while the nominal wages were low. But the inequalities of wages of small industry were very significantly correlated with those of the standard of living of the farmers (with a Fisher coefficient of 8.8 for 84 observations). The conclusion was that the market of the labour force was geographically segmented. The level of urban wages was strongly dependent on the offer of the labour force coming from the neighbouring rural area.

Figure 5
Correlation between urban wages and rural incomes at the middle of XIXth century

The regional model of growth broke the model of internationally competitive economics as formulated by Raymond Courbis on an important point. Raymond Courbis postulated that the travels of workers from a territory to another were unimportant, so that the wage inequalities between the territories could remain. This postulate of a few mobile population could not be admitted for regions included in a same national space, especially after the construction of the railway network. Directed from the poor départements to the richer, these travels had caused a convergence of the urban wages. This was a reason why a snapshot of the French economic space taken just before the beginning of important interregional migrations was a very useful information.

A positive residual was observed in 1853 for the urban wages along the Rhône Valley and the Mediterranean coastline: iron industry and vine growing pushed up the urban wages in these regions.

wage deflated by index of number of inhabitants of the "chef-lieu". It was not possible to consider in a same regression the disparities in wheat prices and the disparities in size of the urban areas, because the two variables are redundant. Cf. Ministère de l'Agriculture, *Tableau des récoltes de céréales et pommes de terre*, Paris, 1878, p. 179-183; M. Hau, "Pauvreté rurale et dynamisme économique...", loc. cit., p. 137 and p. 138.

44 A Fisher coefficient of 8.8 for 84 observations corresponds to a probability of null hypothesis of 0.4 % (ibid., p. 136).

In 1990, the work of Michel Demonet, which used the data of the 1852 investigation on agriculture, described on the level of the arrondissement, with a high quality of resolution, the diversity of the living standards of the farmers in mid XIXth century France. Like M. Quélennec, while confirming the opposition between North-East and South-West, M. Demonet showed that developed France went on by the Rhône Valley up to the Mediterranean coastline. The zones of agricultural prosperity were the wheat producing area of the Paris Basin and the vineyards of Burgundy, Provence, Languedoc and Bordeaux region. His map of agricultural wages of 1852 looked like the one we had established for the industrial wages. This similarity between the two geographical distributions of urban and agricultural wage disparities confirmed the territorial segmentation of the labour market before the railroads revolution.

M. Demonet pointed out the discrepancy between agricultural production per farmer and agricultural production per hectare. He gave thereby yet more credibility to the thesis of a dominant influence of the demographic density on the living standard of the farmers in mid-19th century France. Despite the technical progress, the more the density was high, the more the living standard was low. The work of M. Demonet was not continued for the following agricultural investigations (1862, 1882, 1892, etc.). There are here beautiful perspectives for researchers who would be ready to apply his methods.

Other data, although very rich, proved to be less exploitable for the history of unequal economic growth between territories. The electoral lists of the censal monarchy studied by André-Jean Tudesq make it possible to locate the most imposed Frenchmen geographically, but the maps

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47 Ibid., p. 144.
that stem from these analyzes reveal above all the concentration of land ownership and say little about the economic power and the per capita product in the various départements.

Bernard Lepetit’s thesis on the urban framework of pre-industrial France showed that, apart from the spectacular retreat of the Atlantic harbour agglomerations, the geography of French cities did not much differ under Louis Philippe from what it was under Louis XV: The urbanisation rate of the regions depended very much on the population density, the grouped nature of the habitat and the presence of the administrations. However, the comparison between demographic ranking and economic ranking of the cities provided a relatively reliable indication of levels of development. It showed the advance of the northern half of the Paris Basin and the north-eastern edge of France, without making it possible to assess the living standards of the rural population.

The study of the summary tables of the patents reproduced in the third volume of the Annuaire statistique de l’économie française also gives interesting indications on the industrial and commercial potential of each department. Although it does not allow the creation of continuous annual series, it opens interesting research perspectives.

The determination, with increasing precision, of the rhythms of development of the various regions within the same national territory facilitates the study of the factors of growth disparities. Through further analysis of production movements, the detection of correlations with other economic, demographic or sociological variables becomes more efficient. A better sensitivity of the fundamental indicators of the dynamism of the regions makes it possible to determine more precisely what makes that a territory is more or less attractive, that firms are more or less competitive and that they succeed in creating more or less jobs.

Interest for this type of analysis is now gaining in intensity. Since the end of the 1980s, after a decade of deindustrialisation and rising unemployment in France, it has been noticed that, despite state aid, regional development policy has not succeeded in halting the rise of unemployment in the old industrial basins or even to save the industries resulting from the decentralizations of the 1960s. It was surprising to note that peripheral territories in Savoie, Vendée, northern Alsace or Jura, resisted the economic decline. They had in common to house, in small spaces, constellations of small and medium-sized family enterprises operating in the same specialties and maintaining cooperative relations with each other. The industrial district concept, also known as the "local productive system", was applied by researchers to other regions of Europe, most of them located in the Rhine-Alpine heart of Europe.

French economist historians decided to take a closer look at these territories, where industrial activity seemed to benefit from an exceptionally favourable micro-climate. Several symposia were organized at the junction between regional history, industrial history and history of enterprises. These works showed that the dynamism of the industrial districts was based above all...
on "social values" shared by a whole milieu of wage-earners and local entrepreneurs.

Conclusion

It may seem frustrating for a researcher to have to make a large quantification effort without being able to develop equations where the economic growth of a territory would be explained by a reliable econometric model. Many explanatory variables are difficult to measure, such as those "social values" mentioned by historians like Michel Lescure. Seeking to overcome this difficulty by leaving aside non-quantifiable variables results in treating them as constants. But economists may be able to formalize more rigorously, in mathematical form, some of the conclusions so far written in prose by economist historians, or even to quantify variables that the latter had judged to be unmeasurable.

Anyway, the quantitative regional history has already firmly established some facts which can nourish reflection in economics. It showed the importance of literacy for the pace of agricultural growth and agglomeration effect, describing how the Parisian agglomeration had, after the disappearance of the protections that constituted the high transport costs, exerted a powerful attraction on capital and labour at the expense of the other French regions, especially its neighbours around the Parisian Basin. It showed how the problems of rural overcrowding could, in certain situations, lead to an increase in economic dynamism rather than to violent conflicts. A century later, and in the same way, the economic unification of the world reinforces the polarization of industrial and tertiary activities in favour of some territories, like Silicon Valley or Hong Kong-Shenzhen.

This is why many decision-makers are beginning to take an interest in the problem of economic performance in areas without borders, as they have been for a long time in infra-national territories. Students who plan to move towards research in quantitative regional history and spatial econometrics can be assured that their work will respond fully to the questions of the present time.

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Labasse Jean, *Quelles régions pour l'Europe?*, Évreux, 1994, p. 27.


