

6th Bartlett International Summer School.

BUILDING AND THE CRISIS OF FORDISM : THE CASE OF FRANCE

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The building industry, from the point of view of the labour process, has never really been Fordised or Taylorised. However the growth of Fordism in France has been accompanied by a brisk growth in the building sector, and the crisis in the pattern of development has precipitated the crisis in building. This sector, like all the rest, must now look for new forms of organisation.

Looking in particular at the case of France, we shall call to mind briefly the logic of the Fordist regime of accumulation (section I), we shall consider how this regime applies specifically to the building sector (section II); we shall then look at the joint crisis of the Fordist regime and the building industry (section III), and finally we shall try to diagnose the ways in which the industry has adapted to the crisis.

I - The Fordist Regime of Accumulation

There are two faces to Fordism as a regime of accumulation. (1)

From the point of view of the labour process, it appears as a development of Taylorism. The latter consists in a growing systematisation of work operations, by which the know-how of the skilled worker is taken over by the technicians and engineers of the Bureau des Methodes. Tasks of conception are separated from tasks of execution, and the latter are controlled by a system of norms dictated by the Bureau des Methodes. Properly speaking, Fordism is when this systematised know-how is incorporated in an automated machine system, the movements of which govern the norms and harmonies of a deskilled labour of execution. The results of this tendency are:

- a rapid increase in apparent labour productivity
- an increase in the technical composition of capital.

From the point of view of the pattern of consumption, the experience of the 1930's has shown that an enlarged reproduction of capital under intensively Fordist conditions of accumulation cannot be maintained without allowing the mass of workers access to Fordist consumer goods (cars, domestic equipment etc.). Fully developed Fordism supposes a growth in the purchasing power of wages in parallel with increases in productivity.

But this comparability, which characterises the regime of accumulation, cannot exist without bringing into being a "monopolist" pattern of regulation, that is to say, an ensemble of constraining and stimulating institutional forms to assure that managements will arrive at agreements despite their conflicting interests. Such forms are: collective agreements, minimum wages, the Welfare State. These forms of regulation of wage relations are obviously accompanied by other forms relating to money, to state intervention, etc.

However, the stability of such a regime of accumulation rests on very strict conditions. These are:

- that the rate of growth of global technical composition (that is to say, approximately, of fixed capital per capita in output, K/N) and the productivity of section 1 are the same. This counter-tendency in the increase of technical composition inhibits the tendency towards an increase in the organic composition of capital.
- that the rate of growth of wage consumption and of productivity in section 2 are the same. The counter-tendency towards a decline in the rate of profit which would have constituted an increase in the rate of exploitation is indeed inhibited, but at the same time the tendency towards a crisis of under-consumption is also inhibited. And, as the organic composition of capital does not vary, the rate of general profit remains stable, and accumulation can thus proceed with rhythmic regularity.

These two conditions were more or less observed in the developed countries until the middle of the 1960's. But there was no a priori guarantee that this would be the case.

The maintenance of the rate of exploitation was on the whole stabilised by the same principle of monopolist regulation. The risk came from the evolution of organic composition. This has been measured by Bertrand (1976) in two ways:

- by "work-composition" (Fig. 1)
- by "the apparent productivity of capital" (Fig. 2).

This second way, obtained by measuring the relationship of the growth in volume of product Q and of fixed capital K , is in fact a convenient way of measuring the inverse of organic composition, supposing a homogeneous evolution of productivity. We can analyse:

$$\frac{Q}{K} = \frac{Q}{N} \times \frac{N}{K} \quad (N = \text{positive})$$

between a result "productivity (Q/N)" and a result "technical composition".

As we can see in Figs. 1 and 2, organic composition has tended to grow (and the productivity of capital to diminish) on average since the end of the 1960's. But Figs. 3 and 4 show that this result is the outcome of contrasting evolutions. While the "manufactured goods industries" (cars, electro-mechanical etc.), typically Fordist, evolved propitiously until the beginning of the 1970's, the building industry declined slowly but surely, since the increase in technical composition did not generate sufficient increases in productivity. We shall now consider this.

II - Building: a Logic "Exogenous" to Fordism

The atypical evolution of building shows the specificity of the evolution of the production process. On the other hand, it compels a transfer of surplus value from the Fordist sectors to compensate for the decline in organic composition.

1) Investigation over long periods

The long-period series established by Basle et al. (1979) shows clearly the following points.

- In spite of urbanisation, building represents in volume one of the least important parts of production. At no time has it been the "motor" of Fordist development (Fig. 5).
- Within the industry wage forms appear backward and incomplete.
- The growth of fixed capital per head did not really get started until towards 1960 (Fig. 7). It was accompanied by a growth in intermediate consumption (Table 1).
- But "capital productivity" (the reverse of organic composition?) was initially strong, and declined during the 1960's (Fig. 8).

So we have backward mechanisation and wage forms without Fordist-type productivity increases. Why?

2) Why building "misses out" on Fordisation

It has been shown (Lipietz 1974) that the specific socio-economic conditions under which building activity took place during the Fordist epoch prevented it from adopting the "assembly line" form of organisation characteristic of Taylorism. The difficulty of finding credit-worthy preliminary demand in the market, and the control of property rent (which does not conform to strict capitalist logic) over conditions of production, impose on building a more random form of production. Faced with this difficulty, the building profession in France was divided

between industrial capital (the builder) and finance capital (the entrepreneur) (Fig. 9). According to Bettelheim (1970), the "Proprietor" of the production process is not its "owner". It follows from this that the deprivation of the craftsman has itself been moderated.

As the studies of labour-economists and -sociologists have shown (2), site work is characterised by its variability, by the non-standardisation of operations. This puts a check on orthodox Taylorisation. The typical structure of the production team is that of organised craft-work, where the site-foremen co-ordinate the activities of skilled workers, assisted by plant. Mechanisation itself shows the development of machines which are no more than "mega-tools", extensions of the skilled worker's hands (like cranes) rather than dictators of his actions.

The only domain in which a Fordist process has been able to develop is in heavy prefabrication. Because of the dearth of markets able to offer sufficiently large projects, there has been little of this except during the peak of urbanisation (at the end of the 1960's).

As to the question of the labour force in building, it is far from the laws of monopolist regulation:

- above average mobility
- less qualified workers
- less professional structure
- less seniority

Nevertheless, the non-Fordist building sector is deeply immersed in the Fordist pattern of development.

3) Building and Fordism

Although produced by non-Fordist means, housing is the structuring motif of the Fordist way of life. Urbanisation, the need to produce the sorts of houses and towns which render inevitable the consumption of Fordist goods, turned building into an indispensable auxiliary of the Fordist model of development. Reciprocally, the broadening of the wage-earning category and its monopolist regulation, together with its increase in purchasing power, the settling of the expected horizons of household incomes, the development of fringe benefits and credit, and the growth of public financing, offer the possibility of mass consumption for that sector which has nonetheless had difficulty in espousing the norms of mass reproduction.

Moreover, the ambiguity of rent (or more precisely of "urban land rent"), which is as much "real estate" as "rent", permits the

entrepreneur to reflect the land price in the price of housing (Lipietz 1974). Since credit-worthy demand exists (and it devolves on the state to enlarge this by means of credit at low interest rates), pressure on construction costs is able to remain relatively weak.

Besides, there is in this an historical constant. The rise in land rent and in organic composition have repercussions on the cost of housing for the final consumer (Fig. 10). The transfer of surplus value (or "productivity surplus") towards building thus realised by relative price movement guaranteed to this sector too a particularly high level of profitability in the 1960's. (See Fig. 11. The "peak" of 1964-65 corresponds to the influx of repatriates from Algeria.) But at the end of the 1960's this profitability started to decline, due to the rapid rise in organic composition, and to the lowering of rates of exploitation resulting from the sharp rise in salaries following the struggles of May 1968.

And so, during the "great days" of Fordist growth, the logic of the building sector was exogenous to that of Fordism. It was not the sector's own productivity increases which permitted the widening of mass consumption on the housing market. On the contrary, this consumption was financed by increases in purchasing power released in other sectors, either by the ebb and flow of relative prices, or by the transfer of capital via public financing. These transfers, which financed widespread intensive accumulation in the building industry, weighed all the more heavily on other sectors.

For house-dwellers, these transfers meant that housing costs bore heavily on the household budget. In 1973:

- 8% for social housing (heavily subsidised by public financing)
- 10% on average for home owners
- building 1/3 for new dwellings in the Paris region

The average debt per household increased over twenty years from two week's income to 15 weeks, of which 85% was devoted to housing.

This lack of connection between the growth of the sector, Q (logarithmically derived from the product over time), and the growth of productivity in the sector, is to be found in more or less all the countries of Europe. The "Kaldor-Verdoorn law" (high product/productivity elasticity), characteristic of Fordism, and which is highly applicable to industry in general, is far less applicable to building (Fig. 12).

III - The Crisis of Fordism: Its Effect on Building

Basically, the crisis of Fordism results from a lowering of the profitability of capital due to a rise in the organic composition of capital. This rise itself results from a growing split in the acceleration in the rise in technical composition, and a slackening of productivity increases. Taylorist forms of work organisation have outgrown their usefulness. Further problems are added to this, such as the impossibility of world-wide regulation. Attempts to establish profitability (and competitiveness) by pressure on salaries let loose in their turn a depressive tendency which did not improve profitability, at least during the 1970's (Lipietz 1984b).

This world decline in profitability involved in France a lowering in the rate of housing production (Fig. 13) due to the fall in purchasing power and to the fall in the amount of public capital available to subsidise construction. Fordism in crisis cannot allow itself those transfers which were possible in the epoch of growth. Besides, the brutal finish to urbanisation brought with it a qualitative change in the structure of production in the industry: growth in the areas of maintenance (Fig. 14) and of individual housebuilding (Fig. 16).

The result of this is a spectacular fall in the purchasing power of wages (Fig. 15), in spite of a growth in productivity which is still inferior to that of industry as a whole (Fig. 17). Again, weak productivity increases are obtained on an hourly basis. If we take account of the reduction in working hours (Fig. 18), it can be seen that there is complete stagnation in production per head in building.

Nevertheless, at least until 1975, building managed to safeguard its profitability thanks to the ebb and flow of relative prices. It was only after this date that all the crisis factors converged on building: rise in technical composition, rise in the relative price of fixed capital, fall in productivity in contrast to a slight growth in the purchasing power of wages, fall in demand (see the analysis in table 2).

The quasi-total stop to productivity increases in building is itself the product of three factors:

- the huge fall in investments
- The end to the building of vast projects (even though these allowed a "pseudo-Taylorisation")
- growth on the part of maintenance and of the construction of individual housing.

Thus, the inability of the building sector to bend itself to the Fordist logic of the labour process came to a head at the same time that the crisis in the pattern of development

prevented it benefitting from the distribution of productivity increases in the rest of industry.

But in fact, faced with this profound crisis, building transformed itself, particularly in structural work.

- Small enterprises exploited to the full their advantage of flexibility (in terms of adaptation to non-standard sites, and of adaptation of their working hours).
- Large enterprises went back to a more classical technology and began to make use of a division of labour between a stable nucleus allowing some autonomy on rationalised sites ("enveloppes", as defined by the Bureau de Methodes (3)) and casual labour on a piece-work basis.

Thus, hourly productivity progressed at both ends of the enterprise spectrum (Fig. 19), essentially because of "flexibility" (although this word does not mean the same thing in both cases).

Conclusion: What Future for the Building Industry?

Successive governments in France since the start of the crisis, including those of the left, have sacrificed building for the sake of financing industrial modernisation. Building does have, however, the great advantage of being a sector not "exposed" to international competition. And it attracts relatively little investment, especially since it has turned more and more to renovation, maintenance, and thermal insulation of existing buildings.

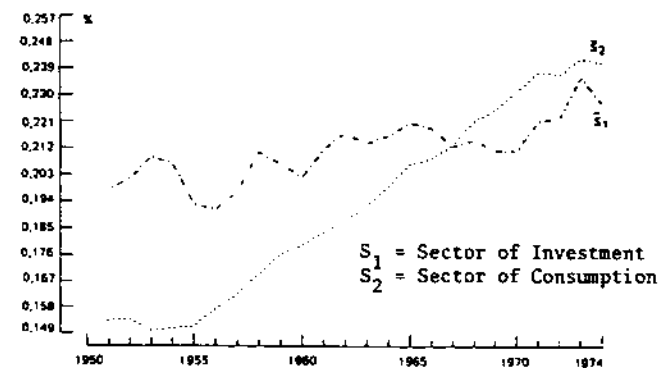
On the assumption that we can agree to admit the bankruptcy of Taylorism and the need for "more flexible" and "more autonomous" forms of work organisation, can we expect to see this sector leave behind the stage of Taylorism and enter wholeheartedly into the post-Taylorian era?

The matter is complex. "Flexibility" can at first sight involve fragility of social rights and contractual conditions for the labour force; and there is no doubt that building is particularly exposed to this form of evolution, which is a social regression. But, if by "flexibility" is meant a greater autonomy given to teams of versatile workers, then it is certain that the improvement of the built environment could be a privileged area of social innovation.

Notes

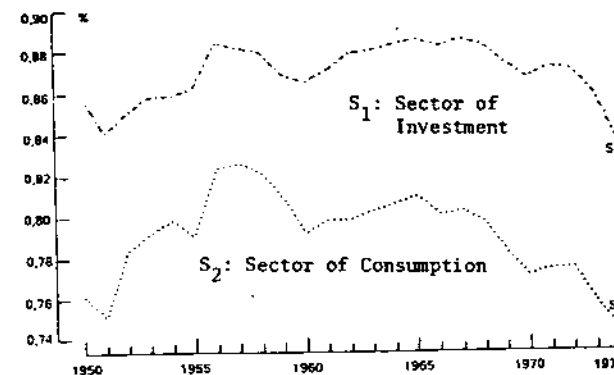
1. The concepts presented here (rate of accumulation, form of regulation, Fordism) have become known through Aglietta (1976), Boyer et Mistral (1978), Coriat (1978), Lipietz (1979). A summary presentation in Lipietz (1984 a and b).
2. If the now typical character of the building industry has been analysed from the early 1970's (e.g. Lipietz 1974), a surge of new studies on the subject has shown a concretisation in three more recent publications: CEPREMAP (1980), various authors (1984, 1985). Among these latter we mention especially the contributions of R. Boyer, B. Coriat, E. Campagnac and, above all, Myriam E. Campinos Dubernet, by whom also the admirable synthesis (1984). These fundamental contributions will be used in the following without further special reference.
3. These new tendencies of work organisation are often designated by the very improper term "neo-Taylorism" in 'various authors' (1984, 1985).

FIG. 1. "Composition of Labour" (indirect living labour/direct living labour) corrected by net accumulation, in large aggregates



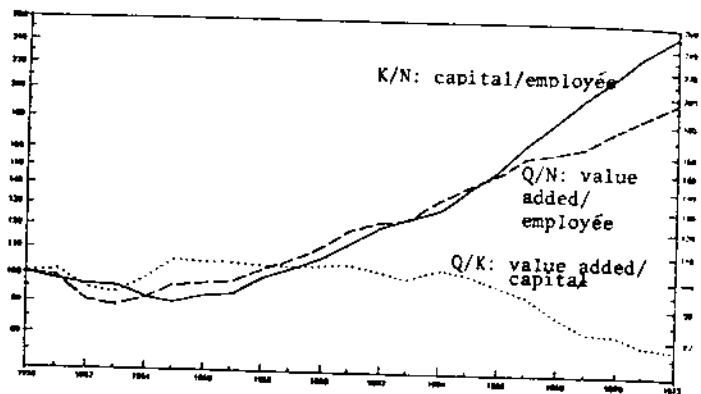
Source: Bertrand (1978).

FIG. 2. Apparent Productivity of Fixed Capital by Large Sectors



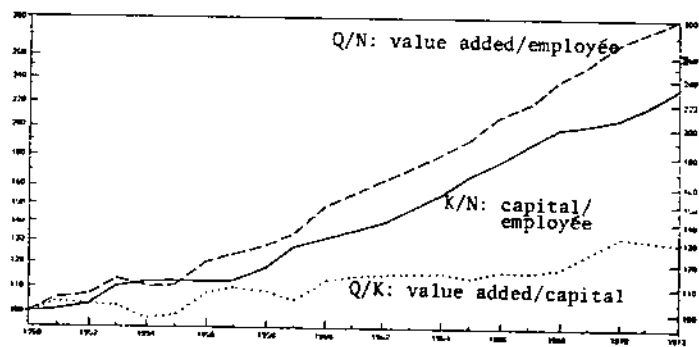
Source: Bertrand (1978).

FIG. 3. Apparent Productivity, Building and Civil Engineering



Source: INSEE: Fresque historique du système productif (1974).

FIG. 4. Apparent Productivity, Industry of Investment Goods



Source: INSEE, op. cit.

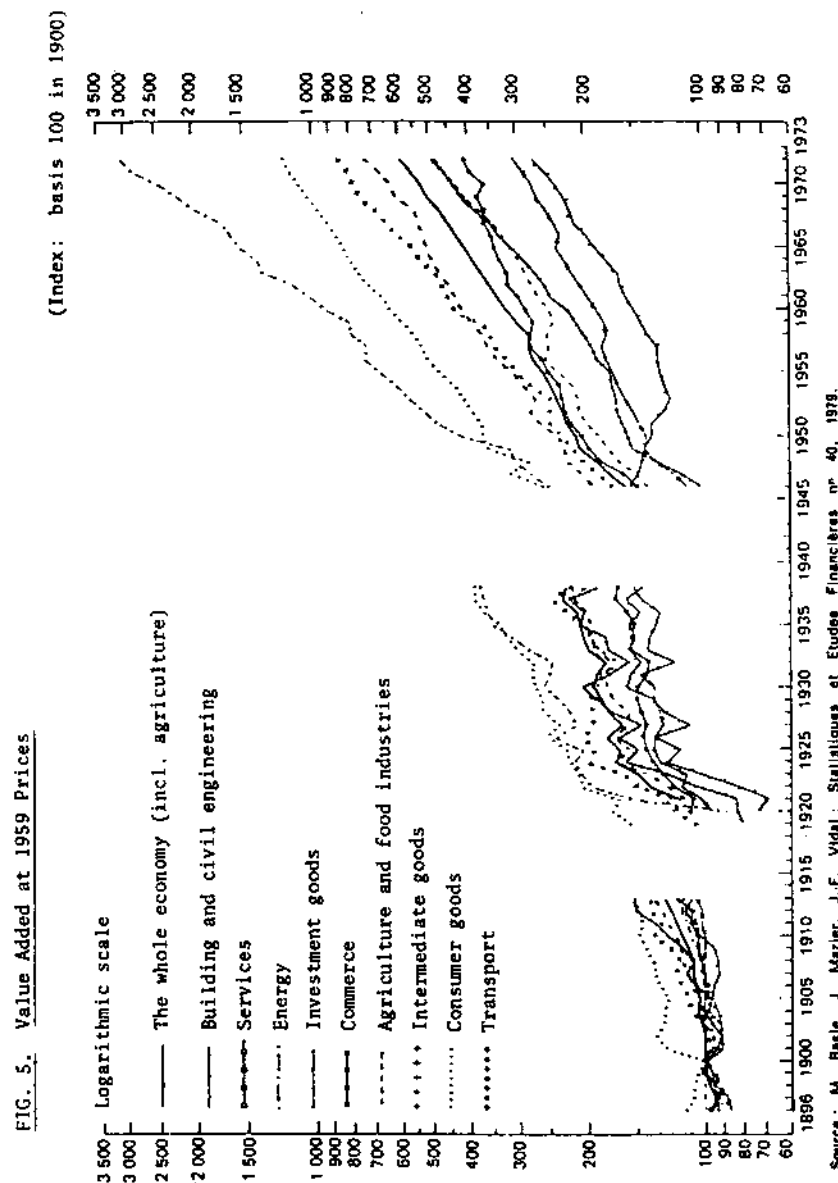
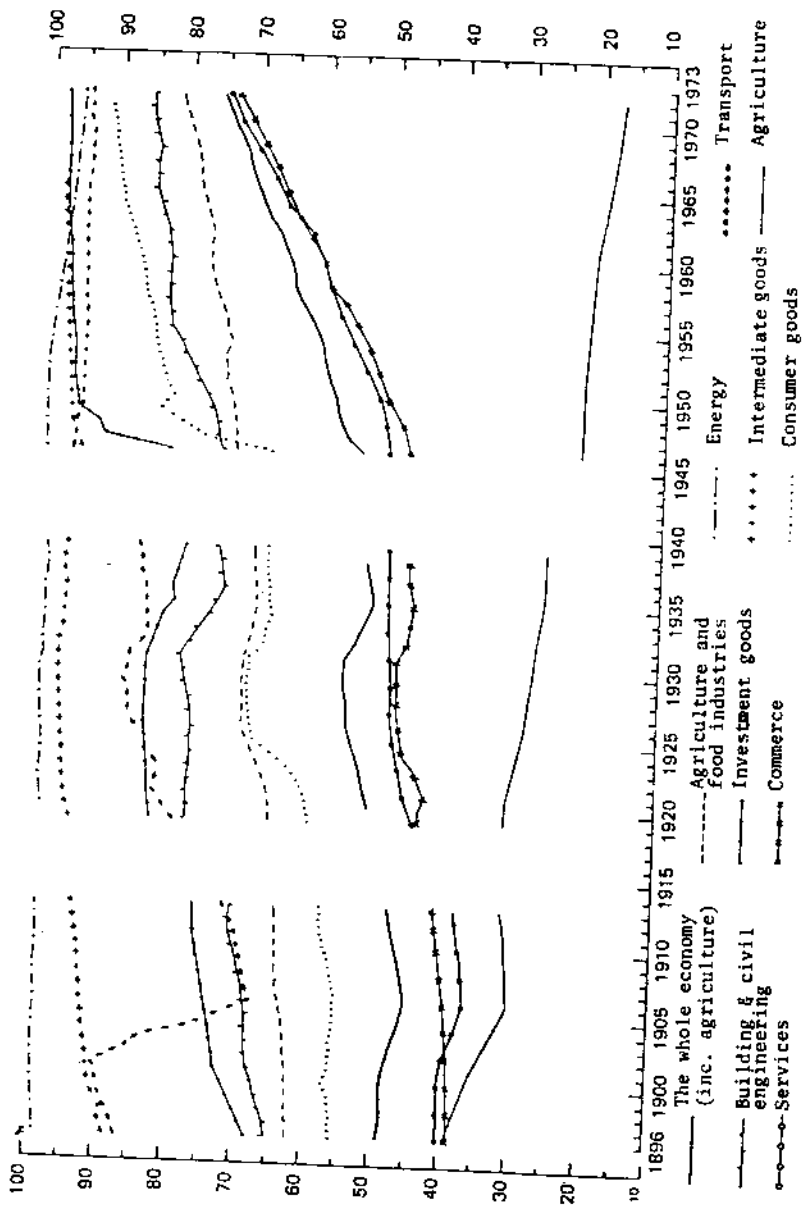
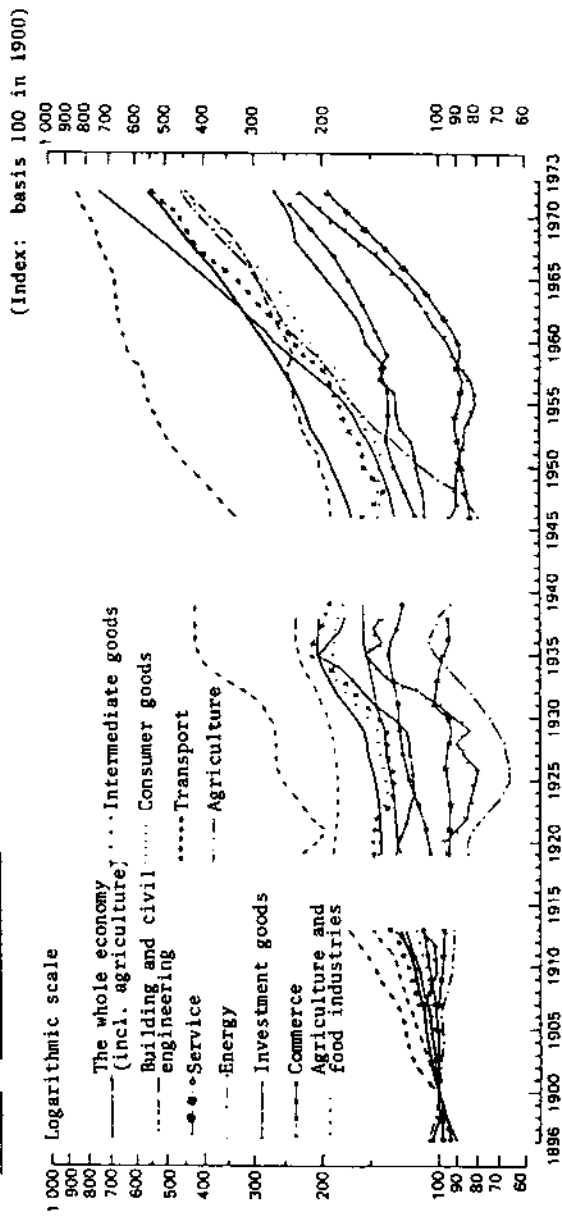


FIG. 6. Rate of "Salarisation" (in %)



Source: M. Basle et alii, op. cit.

FIG. 7. Capital per Capite



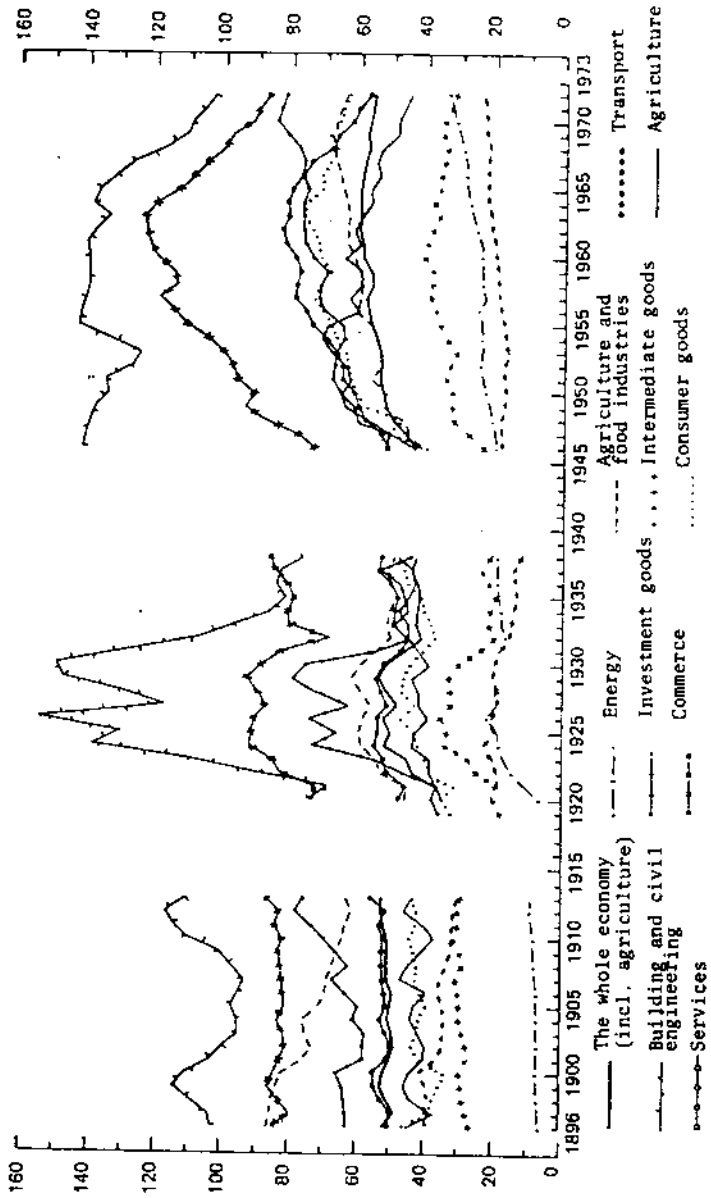
Source: M. Basle et alii, op. cit.

TABLE 1. Average Annual Growth of Value Added and Intermediate Consumption in Building in Civil Engineering (in %)

	1959-1964	1964-1968	1968-1974
Value added	8.5	6.7	4.9
Intermediate consumption	10.3	6.6	6.2

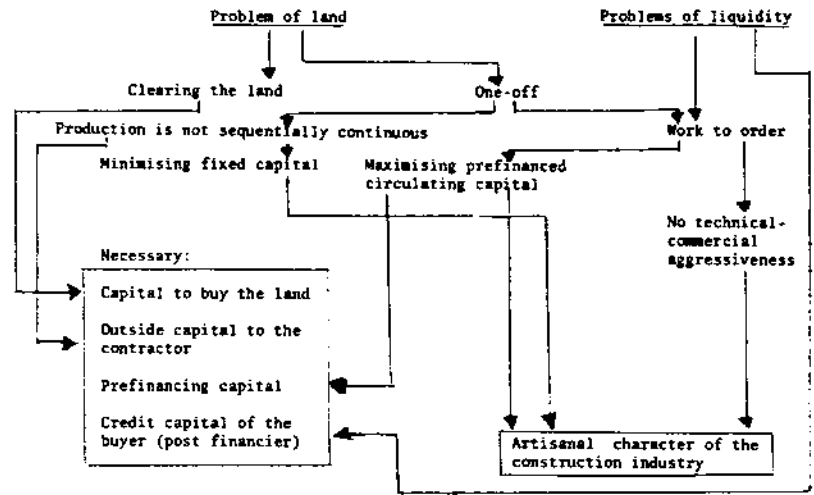
Source: les collections de l'INSEE - E 68.

FIG. 8. Relative Capital Productivity



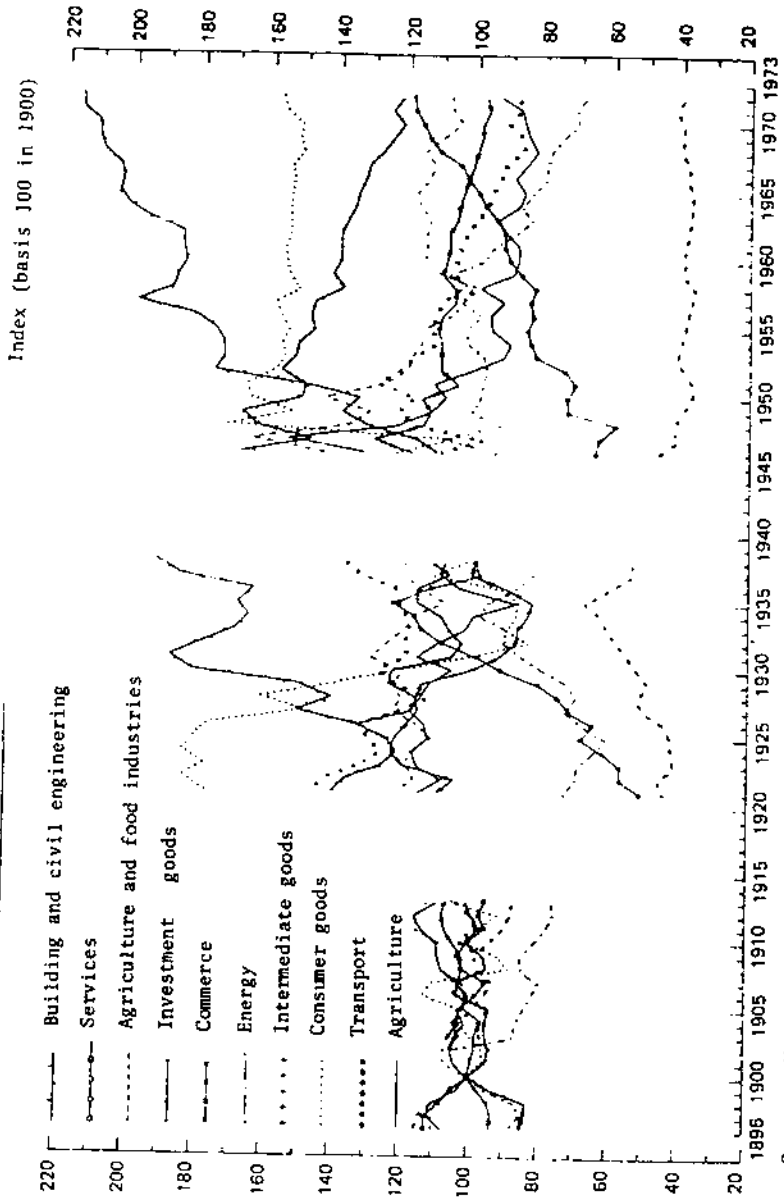
Source: M. Baste et alii, op. cit.

FIG. 9. Particular Conditions of the Construction Sector



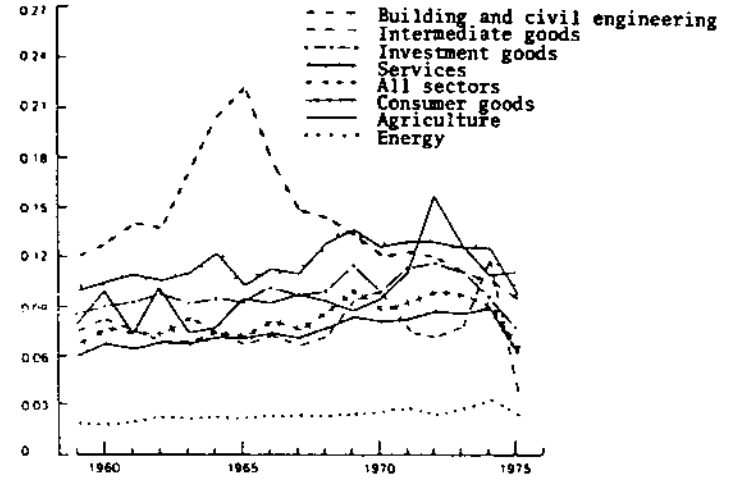
Source: Lipietz (1984).

FIG. 10. Relative Prices of Production



Source: M. Basie et al., op. cit.

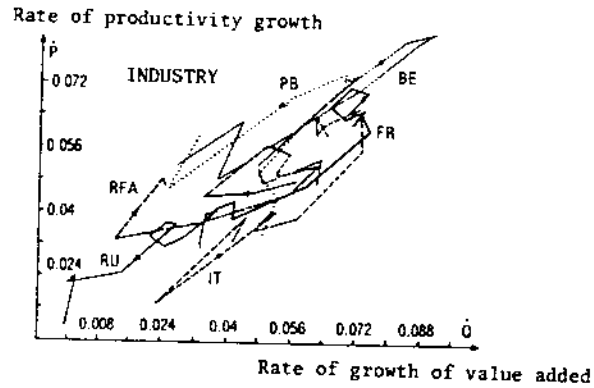
FIG. 11. Rate of Profit



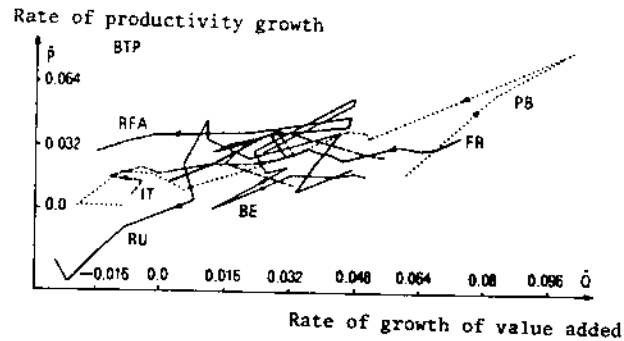
Source: Lapierre-Donzel (1980).

FIG. 12. Laws of Different Productivities

... in the industry: a close interrelation between growth of the market and increase of productivity



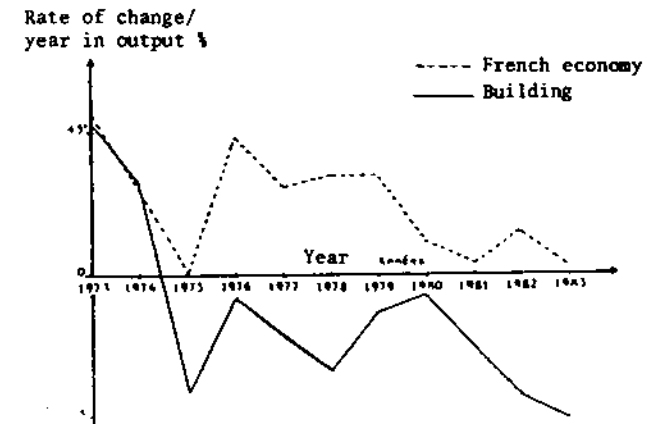
... in building and civil engineering: a quasi-independence of productivity in relation to medium-range periods of demand



- Legend:
- BE = Belgium
 - FR = France
 - IT = Italy
 - PB = Netherlands
 - RFA = W. Germany
 - RU = UK

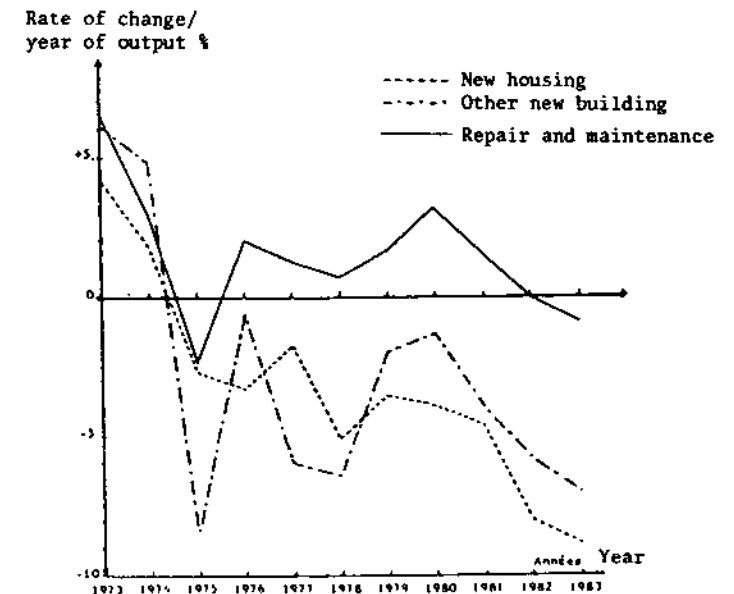
Source: Boyer-Petit (1979).

FIG. 13. The French Economy and Building from 1973



Source: INSEE et BIPE.

FIG. 14. Development of Building Production



Source: INSEE et BIPE

FIG. 15. Employees in Building
(number in '000s at 31 December of each year)

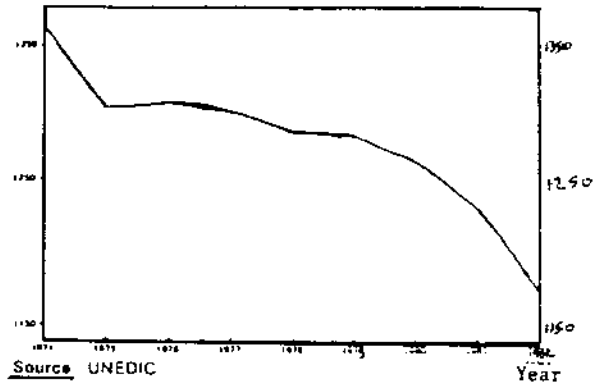


FIG. 16. Dwellings Begun by Type of Construction
(number of dwellings in '000s)

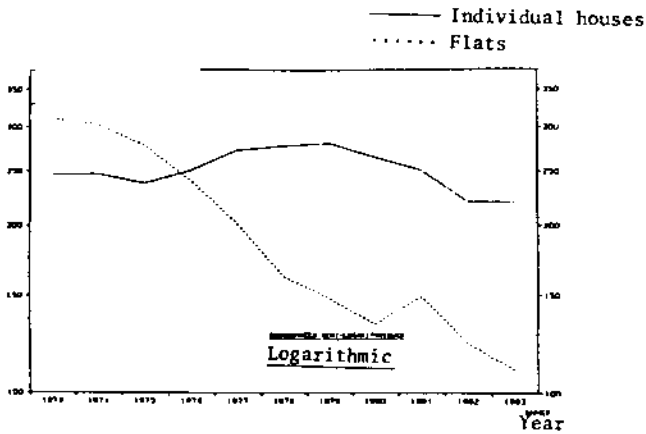


FIG. 17. Productivity from 1970

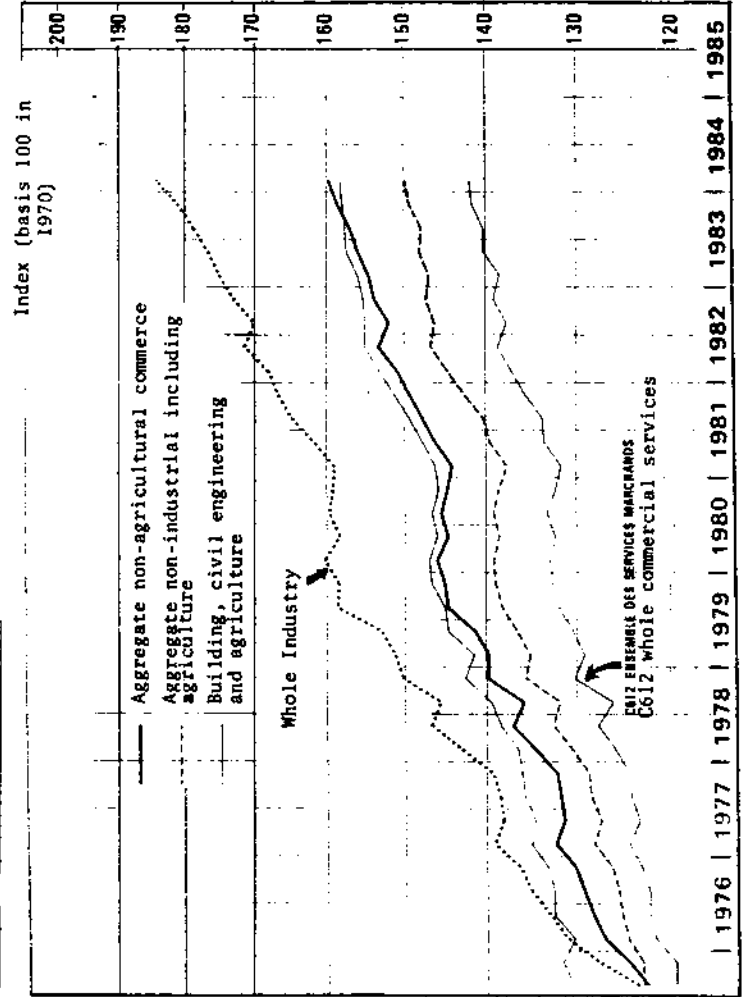
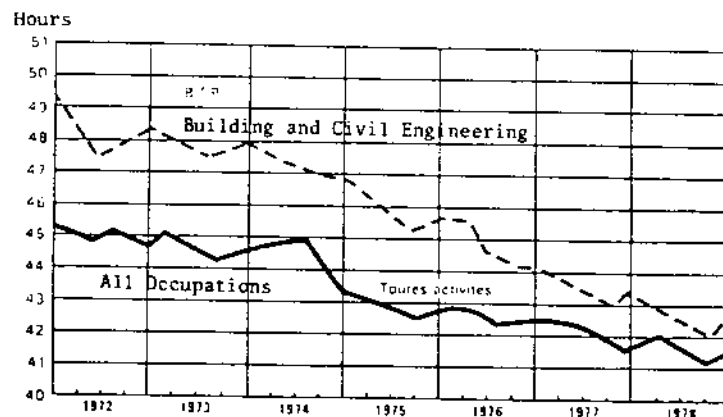


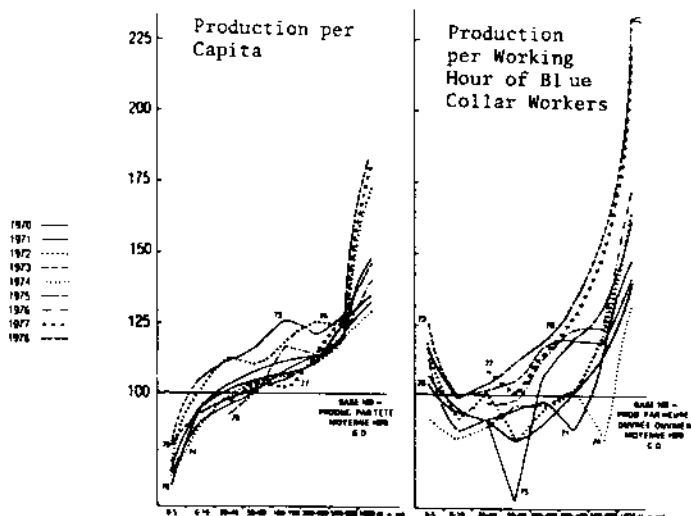
FIG. 18. Weekly Working Time (Workers) in Building and Civil Engineering in 1974



These series represent the average real working time of blue collar workers, generally taken for the last week of each third of a year.

Source: Ministère du Travail - INSEE - Series CVS.

FIG. 19. Development of the Dispersion of Productivity according to size range of firms - main construction 1970-1978, index (basis 100 = 1970)



Source: Campinos-Dubernet in Var. Auct. (1985)

TABLE 2. Development of Productivity in Building and Civil Engineering 1970-1978
Development of elements of the coefficient of capital (average annual growth rate)

	1970-1978		1970-1975		1975-1978	
	Industrial Manufacture	Building & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.
Capital intensity K/N	5.3	6.2	5.1	7.0	5.6	4.8
Labour productivity VA/N	3.9	1.5	3.8	2.5	4.2	-0.1
Coefficient of output capital K/VA	1.3	5.5	1.3	5.8	1.3	5.1
Relative price of capital (PK/P)	0.4	-1.3	0.7	-1.4	-0.2	-1.3
Coefficient of capital per value added K/VA	1.7	3.2	2.0	2.9	1.1	3.7

Development of the elements of the rate of profit

	1970-1978		1970-1975		1975-1978	
	Industrial Manufacture	Building & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.
Profitability (PF/K)	-4.7	-9.4	-6.8	-5.8	-1.1	-15.0
Share of profit in value added PF/VA	-3.1	-6.5	-4.8	-3.1	0	-12.1
Coefficient of capital K/VA	1.7	3.2	2.2	2.9	1.1	3.7

Development of the elements of the profit margin

	1970-1978		1970-1975		1975-1978	
	Industrial Manufacture	Building & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.	Industr. Manuf.	Build. & Civ. Eng.
Growth of purchasing power of the average salary (w'/pc)	4.5	4.0	4.9	4.7	3.8	2.7
Development of the price of value added in relation to the price of consumables (P/PC)	-0.5	1.2	-0.7	1.4	-0.4	0.8
Growth of labour productivity (VA/N)	3.9	1.5	3.8	2.5	4.2	-0.1
Share of personnel cost in value added (FP'/VA)	1.1	1.2	1.8	0.7	0	-2.1
Development of the rate of profit pf/VA	-3.1	-6.4	-4.8	-3.2	0	-11.4

Source: Boyer-Petit (1979).

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