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THE GLOBALISATION OF THE GENERAL CRISIS OF FORDISM

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RESUME

LA MONDIALISATION DE LA CRISE GENERALE DU FORDISME : 1967-1984

Fondé sur une analyse en termes de "régime d'accumulation" et de "mode de régulation, cette intervention suit le développement de la crise présente dans ses aspects internationaux de 1967 à 1984. Par "internationaux" on entend ici soit les caractères de la crise qui se reproduisent plus ou moins dans toutes les économies nationales ayant adopté après 1945 le modèle de développement "fordiste", soit les mécanismes liés à l'interaction même des économies nationales.

Sont ainsi distinguées : une phase d'érosion de la croissance fordiste (1967-1974), une phase de gestion keynésienne de la crise (1974-1980), un "choc monétariste" dont les effets ne sont pas encore dissipés (1980-...).

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ABSTRACT

THE GLOBALISATION OF THE GENERAL CRISIS OF FORDISM 1967-1984

Based on the concepts of the so-called "French School of Regulation", this paper presents the developments of present crisis in its international dimensions from 1967 to 1984. By "international dimensions" one refers either to those of the features of the crisis which are in some way reproduced in each national economy involved in the post-war "fordist" model, or to the very linkages between the national economies.

Thus are distinguished : a period of erosion of the fordist growth (1967-1974), a period of keynesian management of the crisis (1974-1980), a "monetarist shock" whose effects have not yet vanished (1980-...).

MOTS-CLES : Crise - Economie internationale - Histoire économique.

In 1976, the Parisian publisher Dunod published two collections of economic articles, one 'neo-classical', the other 'Marxist' or 'radical': Fluctuation in a Prosperous Economy and Rupture of an Economic System. History, unfortunately, has vindicated the latter. Nobody any longer contests the duration and the depth of the crisis, and in spite of the spectacular but fragile U.S. upturn, very few today risk announcing that the end of the tunnel is in sight. Yet the crisis officially begun by the first 'oil shock' in 1974 (of which the warning signals can, in retrospect, be seen in the ten previous years) is quite different from that of the thirties. Given that in many OECD countries the average rate of growth remains high, it has been argued by some that the post-1974 crisis amounts to nothing more than a succession of more or less contingent shocks in a progressive evolution which, when all is said and done, has been mastered. To so argue, however, is to ignore the intolerable poverty accumulating at the end of the chain in the Third World, including the pockets of poverty in the most prosperous metropoles. It is to ignore the immensity of the mutations that are occurring. Above all it is to ignore the progressive generalisation of uncertainty about the future, contrasting with the straightforwardness of the expectations which governed the mode of development of the glorious post-war years. "The old is dying; the new has not yet been able to be born": in economics too Gramsci's formulation aptly grasps the essence of the crisis.

This paper seeks to sketch on a broad canvas this painful process of gestation, in the light of some recent studies sometimes designated the 'French school of regulation'. It is necessary at the outset to underline the imperfect nature of these works. If they have (in my view) succeeded in considerably advancing the analysis of the roots of the crisis as

it manifests itself *country by country*, especially in the U.S.A. and in France,[1] the methodology which they propose suffers from lacunae as far as the international, or rather the global, dimension of its application is concerned: and this for deep-seated reasons, as will be seen. Some recent extensions of it[2] nonetheless offer a sketch of such developments, which will be presented in what follows.

In the first section, I will review the elements of the problematic in terms of 'regime of accumulation' and 'mode of regulation', which will serve to establish our point of departure: the fordist model of development, with its international aspects. In the second section, I will analyse the system's entry into crisis, from 1967 to 1974. The third section will present a transitional regime which schematically links the two oil shocks, a regime characterised by a 'Keynesian management' of the crisis in the developed countries, and the take-off of 'peripheral fordism'. The fourth section will measure the damage done by the 'monetarist shock'. A fifth and onluding section will underline the scale of the problems remaining to be resolved before one can speak of 'emerging from the crisis'.

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1 See in the U.S. the seminal work of M. Aglietta, Regulation et crises du capitalisme [Paris: Calmann-Levy, 1976]. (English translation: NLB, 1979) and, based on some collective research on France in 1977, of R. Boyer and J. Mistral, Accumalation, inflation et crise [Paris: P.U.F., 1978] (2e edition 1983) and A. Lipietz, Crise et inflation: pourquoi? [Paris: F. Maspero, 1979]; Le monde enchante. De la valeur a l'envol inflationiste [Paris: F. Maspero- La Decouverte, 1983]. (Engiish translation: Verso, forthcoming); and L'audace ou l'enlisement [Paris: Decouverte, 1984].

2 This concerns essentially work done at the CEPREMAP by Boyer, Lipietz, Mistral and at the Centres d'Etudes Prospectives et d'Informations Internationales with Aglietta, Brender and Oudiez (see for example CEPII, Economie mondiale: la montee des tensions [Paris: Ecomomica, 1983] and "Dualite, change et contraintes exterieures dans cinq economies dominantes". Economie Prospective internationale No. 13-14 [1983].

1. A well-regulated regime of accumulation: Fordism

To understand the crisis -- to understand that it cannot be reduced to some shocks caused by the carelessness of rulers (monetary laxity) or the sudden greed of some of the groups sharing the total world product (the trade unions of the centre countries or the rentiers of OPEC) -- is to understand how 'the old which is dying' used to work, in the glory of its maturity, in the epoch which President Johnson called 'the U.S. summer'. We must still understand what had to be made to work.

(i) The contradictions of capitalist accumulation

Everyone knows that the capitalist mode of production is a combination of two fundamental relations: the market relation and the wage relation.

> *Market relation*: the owners of means of production offer on the market the products of the labour processes which they have initiated. The product of these labours, independent from each other, thus appears as a value which must be socially validated by exchange for cash; this is 'realisation', sale.
>
> *Wage relation*: the owners of these means of production buy the labour power of wage-workers, in exchange for a sum of cash representing a value less than that which they produce, the difference being surplus value.

Individually, the capitalist, the owner of a sum of money, exchanges it for means of production, in particular fixed capital (i.e. investment) and labour power, organises the process of production, sells the merchandise, and *reaccumulates* capital and surplus value. The initial value which he possesses is thus *value in process*, which grows over time *if he has put it to use correctly and valorised it*. Symmetrically, the wage worker spends his wage and so reconstitutes his labour power for the following cycle:

thus is reproduced on the one hand the wage relation, and on the other the market division of labour.

We know that subject to certain limits the *rate of profit* (the surplus value accruing to capital) is positively related to the rate of surplus-value (the relation of this to value added), and negatively to the 'composition of capital' (the relation of value added to capital employed). These two factors themselves depend on norms of production (which define productivity and the coefficient of fixed capital per capita) and norms of consumption of the wage workers.

Socially, the reproduction of the whole presents itself as follows: 'values-in-process-capitals' march alongside each other, exchanging goods with each other, or exchanging goods for those very special values-in-process which are wage revenues. How is it possible that this interlacing of autonomous processes weaves a coherent social product, where all the private employments of labour (by means of the expenditure of capital) are affirmed as valid? As in every social relation, the acquired experience of the possibility of a solution is in itself one of the bases of the solution. The capitalist, by virtue of his acquisitions (his previous revenues) and his knowledge of the market (tested in the previous periods) bets that it is all right to review the wage relation, to buy more constant capital, and by this very fact already contributes to the validation of the product of his colleagues and of the labour power offered by the wage-earning class. The conditions inherited from the past and the expectation of a continuing future are the conditions of the present social bond. The continuity of accumulation, the habits acquired as regards an allocation which is equilibrated between the different branches of the division of labour, and the expectations with regard to the social orien-

tations of the transformations of the norms of production and consumption, all ombine to dominate the private bets of entrepreneurs (and their bankers) like an immanent force, laying the foundations of a 'social mould', which under circumstances we will call a *regime of accumulation*.

The regime of accumulation is a systematic mode of dividing and reallocating the social product, which achieves over a long period a certain match between the transformation of the conditions of production (volume of capital employed, distribution between branches, and norms of production) and transformations in the conditions of final consumption (norms of consumption of the wage workers and the other social classes, collective expenditures, etc.).

Once the accumulation expands, the growth of output of production goods and consumption goods must match the growth of capital commitments and the growth of purchasing power of wage-earners. It is thus convenient to summarise the coherence of a regime of accumulation by means of a *reproduction* scheme describing from period to period the allocation of capital (and through it, labour) between the two fundamental *departments* of the production of use values defined solely by their social function (Department I: production goods which reproduce the monopoly of capitalist property; Department II: consumption goods which reproduce the free workers' subsistence). The reproduction scheme is a sort of skeleton of the different regimes of accumulation, an outline of its formal coherence.

In this conceptualisation there appear several typical regimes of accumulation: extensive accumulation (simple homothetic growth of the two departments validating each other), intensive accumulation without mass production (where the expansion of constant capital alone validates the

growth of department I), intensive accumulation with growing mass consumption, etc.... But naturally, beyond this stylised representation, the analysis of a concrete regime of accumulation calls for some refinements.

Every concrete regime of accumulation is in effect surrounded by an 'exterior', in two senses of the word. First, all the production in a national community is not governed by capitalist relations. To begin with the reproduction of labour power: the patriarchal social relation, or domestic mode of production, or sexism, assures its reproduction, using the 'means of reproduction' which its wages purchase.

But another dimension appears when the economic relations *between communities* organised by capitalism are taken into account. Historically, the first practices identifiable as forming 'capitalist relations' commonly crossed the frontiers of feudal or tributary states. But the modern nation state, conceived of as a community of individuals linked by a social contract, developed with the generalisation of market practices. It was in this frame work that the wage relation was codified and institutionalised, in the shadow of the sovereignty of the state, cemented by the history of civil and foreign wars. It was at the level of the nation state that the social contradictions were regulated, and, therefore, at this level that the coherence of true regimes of accumulation was gradually affirmed, the unification of states and the 'densification' of regimes of accumulation mutually supporting each other.

The 'creation of the internal market' by the development of capitalist relations never led to the disappearance of international exchanges: according to the evolution of the regimes of accumulation they were restricted or extended in importance. So it is useful, for an analysis of a

national regime of accumulation, to isolate an 'export department'[3] whose revenues support the financing of the purchase abroad of 'Department I' or 'Department II' use values. From a certain angle one can even speak of 'world regimes of accumulation'.

So these are the bases of our 'social mould'. It remains true that regimes of accumulation do not materialise by themselves. The problem is to know what coercive forces, what institutional forms, will assure the coherence of the strategies and expectations of the agents of the capitalist market economy, to make them converge towards the realisation of the schema of reproduction.

We are thus led to the problem of regulation. We will therefore call a 'mode of regulation', the ensemble of institutional forms, the networks, the explicit or implicit norms, which assure the compatibility of behaviours in the framework of a regime of accumulation, in conformity with the state of the social relations, and thereby with the contradictions and the conflictual character of the relations between agents and social groups.

In the capitalist mode of production, the forms of regulation must at the very least deal with:

-- the regulation of the wage relation (fixing the norms of working hours, of the intensity of work, of the value of labour power, the norm of consumption for wage earners, the reproduction of the hierarchy of qualifications and of the segmentation of the labour market, the division between direct and indirect wages, etc....)

-- the regulation of the reallocation of money-capital set free by the validation of goods in this or that branch and according to this or that degree of intensification of the composition of capital

-- the reproduction of the management of currency, its issue, its circulation, its forms of productive employment, etc.

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[3] H. Bertrand, "La croissance francaise analysee en sections productives". Statistiques et Etudes Financieres, Serie Orange, No. 35.

-- the forms of state intervention, from the juridical to the economic.

It is considered to be of great heuristic utility to polarise two modes of regulation characterised by contrasting institutional forms, according to whether the hazardous social validation of the goods and labour power offered was simply established *ex-post*, or whether the high probability of its realisation was integrated *ex-ante* in the behaviour of agents. In the first case, the values-in-process make the 'dangerous leap' of the metamorphosis into money one by one, or they are eliminated. In the second case, on the contrary, the values-in-process integrate their own growth with the transformation of the social norms of production and exchange in order to steer their own metamorphoses. At one extreme, labour power will be sold on a daily basis, at a price depending on market pressures, or it will be unable to reproduce itself. At the other extreme, not only will it be guaranteed a minimum income, but it will lease itself to a particular entrepreneur on a multi-year contract, integrating the changes anticipated in the economic environment.

It is impossible to retrace here, even briefly, the complex history of capitalist development models, characterised by a regime of accumulation, itself rooted in a dominant form of organisation of the immediate process of production,[4] and a mode of regulation. Let us come directly to the point

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[4] This prevalence has led some marxist authors, such as Paul Sweezy and Ernest Mandel, to explain the expansion phases of capitalism (identified to the long cycles of Kondratieff) by the appearance of technical innovation clusters. Beyond the uncertainty of identification of the long cycles themselves, this explanation is criticized by the school of regulation, which prefers to identify a succession of regimes of accumulation disarticulating themselves through the effect of their own contradictions. From this perspective, techniques are themselves social relations, which only produce their economic effects in the environment determined by all the forms of regulation. One will find however a great convergence between these two approaches in C. Perez's concept of "technological paradigm" ("Structural chang-

of departure of our more limited canvas: the fordist model, as it was consolidated in the developed capitalist countries at the end of the Second World War.

(ii) The fordist model in its Golden Age.

In the twenties a revolutionary mode of organisation of work was generalized in the U.S.A., and partially in Europe: *Taylorism*. It consisted in expropriating, by a gigantic and capillary deepening of the capitalist control of the labour process, the know-how of the collective workers, a know-how which was henceforth systematised by engineers and technicians according to the methods of the 'Scientific Management of Work'. A further step was the incorporation of this know-how in the automatic system of machines, which dictated the method of work to the workers who had thus been robbed of initiative: such was the *productive watershed of fordism*.[5]

In the inter-war years, the development of taylorism and embryonic fordism provoked the first big wave of intensive accumulation. Productivity grew at the rate of 6% per year (three times the average rate of the nineteenth century). But the growth of purchasing power remained moediocre. This scissors effect, very favourable to the rate of profit, via a raising of the rate of exploitation which was in no way offset by the growth of the composition of capital, which remained modest, provoked an also unprecedented crisis of overproduction: the crisis of the 1930s. It

es and assimilation of new technologies in the economic and social systems". Futures [1977]) and great similarities with the concept of "social structure of accumulation" developed by S. Bowles, D. Gordon and T. Weisskopf, "The social structure of accumulation and the profitability of the postwar US economy". [1983] (unpublished).

[5] B. Coriat, L'atelier et la chronometre [Paris: Bourgois, 1979].

was more than a question of the 'low point' of the cycle. Competitive regulation was no longer adequate to intensive accumulation. One can therefore characterise this big crisis of the thirties as both the *first crisis of intensive accumulation and the last crisis of competitive regulation*.

After the reconstruction of Europe (by its nature mainly extensive) and the Korean War, the OECD countries underwent a new intensive expansion, which this time lasted for twenty years, during which productivity increased again considerably, as, moreover, did fixed capital per head. But this time the increase in the purchasing power of wage-earners (productive and unproductive) paralleled almost exactly the rise in productivity. As this rise in productivity affected the two Departments more or less equally, the organic composition of capital remained roughly unaltered, and the rate of exploitation likewise.

We will qualify these results later. But for the moment, they allow us to give a broad characterisation of the 'Golden Age'.

In this 'Golden Age' model:

-- The rates of growth of the global technical composition of capital (i.e. approximately, of fixed capital per capita) and of the productivity of Department I are the same. This 'counter-tendency' to the rise of the technical composition of capital inhibits the tendency of the value-composition of capital to increase.

-- The rates of growth of consumption of wage-earners, and of the productivity of Department II, are the same. The 'counter-tendency' of the rate of profit to fall, which the rise in the rate of exploitation would have constituted, was certainly inhibited, but by the same fact so was the tendency towards a crisis of under- consumption. And, as the organic composition of capital did not vary, the general rate of profit remained stable, and accumulation could therefore follow a regular rhythm.

These two conditions held, approximately, in the developed countries up to the middle of the sixties. Now, nothing assured *a priori* that this would be so.

The first condition was verified in near-miraculous fashion,[6] and in fact statistical data show that it was decreasingly verified during the sixties in the main industrialized countries. On the other hand, the second condition was assured more or less explicitly by a policy of regulation of the wage relation: mass production was accompanied by mass consumption, thus realizing the full development of fordism. This partial regulation was one among a set of institutional forms which constitute a variant of monopolistic regulation.

Schematically, the mode of regulation which was consolidated after 1945 combined the following institutional forms:

A collective 'contractualization' of the direct wage. The worker did not need to negotiate day by day, individually, the sale of his labour-power. Collective agreements covered the majority of the wage-earners, so that the employers could agree among themselves (and incidentally with the trade-unions) on the wage increases which would be imposed on all, at the level of a region or a country. To complete this obligation of 'sharing the fruits of growth' a 'guaranteed minimum wage' was established.

The welfare state (Social security + a system of unemployment insurance). It ensured every wage-earner, and then nearly all of the population, a guaranteed income immune to the risks of everyday life.

[6] It would be too complex to show here how monopolistic regulation favoured however an intensive accumulation of capital. See Lipietz, Le monde enchante, op.cit.

The growth of the tertiary sector. This stabilization of the wage relation was accompanied by its generalization to most activities, including those of management, of trade and finance regulation and of control.[7]

Important modifications in the relations between banks and industrial firms, allowing these firms to redirect their production from division to division, while maintaining their prices in the declining divisions.

A very important modification of the role of the state. The most important changes concerned the management of the wage relation (the management of the welfare state and of the direct wage relation), and the *management of currency.* Its nature was modified by a series of institutional innovations. Henceforth, the private banks freely put currency into circulation, by opening lines of credit to firms and households. This 'credit currency', anticipating the validity of values in process, and liquidated on reimbursement, is wagered on the bet that the borrowers will effectively be able to pay. The Central Bank, dependent on the state, conserves however, by a battery of mechanisms, the ability to exert pressure on this freedom to create currency. It thus can facilitate credit, to stimulate business, or limit it. The last resource open to the interventionist state rests on the control of its own expenditures and of its own receipts: when business slackens, it can cut taxes and increase spending, relying on the ensuing growth to cover its deficit. Such are the instruments of 'Keynesian policy'.

It is the functioning of this mode of regulation, superimposed on the generalization of fordism in the labour process, which has permitted the *a priori* acceptance of the two rules of the 'scheme of the Golden Age' of

[7] M. Aglietta and A. Brender, La connfiguration mondiale des annees quatre-vingt: les risques d'une deflation generalisee. CEPII (mimeo).

intensive accumulation. The different countries of the OECD were thus able to experience, during a fifteen-year period, an exceptionally strong, lengthy and regular growth. Of course, there were some downturns (the 'recessions'). There were great differences between national rates of growth, but one can say that each country experimented with and developed fordism for its own purposes, by increasing its internal demand. The country initially most advanced, the U.S., of course experienced a slower growth (but of the order of 4% per year) than the countries of more recent fordism. Only Great Britain, because of the strength of its craft unions and the disinterest of its financial bourgeoisie, deviated notably from the fordist model of production and experienced a more mediocre growth.

(iii.) The implicit hegemony of the U.S.A.

As we have seen, the fordist model of growth gives only a secondary importance to international trade. Its engine is the internal transformation of the industrial production processes. Its target is the growth of the *internal* market by the increase of purchasing power. Thus, 'external markets' in dominated countries, the traditional form of regulation of competitive capitalism, lose much importance.[8] In fact, the ratio of exports to the internal market in manufactured goods reached its lowest historical point towards 1965. Furthermore, internal trade developed mainly within continental blocs and within the OECD: Europe, North America (see Table 1).

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[8] A. Lipietz, "Towards Global Fordism". New Left Review 132 [1982].

Tendentially, the South was limited to the role of provider of manpower and raw materials. The control of these sources was the essential task of the political and military hegemony of the U.S. Of course, certain countries (in Latin America and Asia) attempted to latch on to the fordist model on their own account, behind strong tariff barriers: it was the "first policy of import substitution". This policy failed, because of its inability to attain the rate of productivity growth of the developed countries, and this for complex but mainly internal reasons.[9]

International economic relations are thus mainly 'North-North' relations.[10] Is it possible to consider them as a regime of accumulation, as a world mode of regulation? In fact, it consists essentially of a vast 'catching-up' movement by Europe and Japan in relation to the U.S., starting from a strongly differentiated situation. This 'differentiation/catching-up' couple constitutes itself as a regime of accumulation and a form of regulation, the basis for what G. Arrighi has called "the implicit hegemony of the United States.[11] Victor of the Second World War, with a considerable lead in industrial productivity, producing by itself 63% of the Gross Domestic Products of the five main countries (U.S.A.,

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[9] A. Lipietz, "New Tendency in the International Division of Labour: Regimes of Accumulation and Modes of Regulation". In Scott and Storper, ed. Production, Work, Territory. (forthcoming).

[10] In this presentation we will totally exclude the so-called socialist centralized economy countries, which have a different regime of accumulation and especially a quite different mode of regulation (see however D. Leborgne and A. Lipeitz, "Est, Ouest: deux modes de regulation du capitalisme". Reflets et perspectives de la vie economique No. 4 [1983] and B. Chavance, "Les formes actuelles de crise dans les economies de type sovietique". Critiques de l'Economie Politique No. 26/27 [Janvier 1984].

[11] G. Arrighi, "Une crise d'hegemonie". In G. Arrighi, et.al., La crise, quelle crise? [Paris: F. Maspero, 1982].

United Kingdom, FRG, France, Japan) and 57% of the manufactured value-added in 1950, the U.S. imposed its model of development, culturally to start with, then financially (with the Marshall and MacArthur plans), and finally institutionally (Bretton-Woods agreements, the creation of the GATT, the IMF, the OECD).

In these conditions, no form of international regulation of wage relations was necessary: in different concrete forms, the same principles ('contractualization', welfare state, growth of purchasing power) were adopted everywhere. The dollar became the international currency. This currency was in fact based on the indisputable validity of the American values-in-process: the productivity differential was such that American capital goods, which incorporated the best norms of production, would always find buyers in Europe or Japan. The American trade balance was thus systematically in surplus. The problem was rather that of Japanese and European capacity to buy American capital goods. This problem was first resolved by U.S. state loans, then more and more by the foreign investment of American firms: the U.S. balance of payments was thus, on the contrary, structurally in deficit. These deficits constituted the basis of an international currency, the xeno-dollars, a basis theoretically guaranteed by the U.S. gold reserves, but in fact, once again, by the undisputed validity of American capitalist production. This became clear when, once this validity became more problematic, the U.S. refused to exchange for gold the dollar balances held by foreign residents.

We thus have, not a regime of accumulation strictly speaking, but a *world configuration* which provisionally realizes the compatibility of a juxtaposition of similar accumulation regimes, differentiated by their rates of growth and their mode of international insertion. Schematically, the U.S.

equips Europe (or Japan) in exchange for a claim on European labour power, the purchase of this labour power (by the multinational firms) in turn giving rights to American capital goods, the purchase of which, linked to the accelerated generalization of fordism, permits Europe[12] and Japan to catch up. This catching up does not occur in the 'import substitution' countries of the South, because of the lack of sufficient social reforms.

As we will see, the world economy would never surpass this level of implicit organization. There would never be institutional forms regulating world demand, there will not be any supranational sovereign authority regulating the money supply. The complementarities and antagonisms of the national economies would remain *configurations* of relationships, partial and unstable, and it is only as a figure of speech that it is possible to talk about any "world regime of accumulation."[13]

2. From Slow Erosion to Manifest Crisis (1967-1974)

If one characterizes the crisis by the general slowing of the growth of manufactured production, causing a general and continuous rise in unemployment, and by the loss of regular growth, then one must perceive its

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[12] We consider here Europe as a bloc, but in fact a 'virtuous complementarity' configuration can also be identified between the member states of the European Economic Community. Schematically, the FRG is the capital goods workshop of France and Italy, who sell consumer goods in exchange, the adjustment being done 'by prices' (by changes in parity) and 'by volume' (through moderate 'cooling-off plans').

[13] For a methodological reflexion on this problem (which implies a prudent approach to the systemist vision of a 'world economy') see Lipietz, "New tendency in the International Division of Labour". op.cit.

symptoms as early as the recession of 1967 (see Graph 1). Not only is the curve linking the high points of the world short cycles inflected lightly starting from this date, but, above all, the curve linking the low points, until then quite close and parallel (at a rate of 6.6% per year) diverges significantly from it. It decreases to 4.8% from 1967 to 1971 to 2.5% from 1971 to 1975, and we shall see the following after 1975.

The search for more fundamental indicators leads us first, taking into account what we know of the dynamics of fordism, to the study of manufacturing productivity. It is here of course that the root of the crisis of fordism rests, a crisis which is generalized during the period under study. We will examine firstly this *general* crisis, in respect to what *all* the national regimes of accumulation have in common. Then, we will consider the *interaction* of these regimes, which plays something of an amplifying role.

(i) The roots of the general crisis of fordism

In the development of the present crisis, three different sets of phenomena and linkages must be distinguished:

1. those that proceed from the general crisis of fordism, and which are found more or less in all countries that have adopted this mode of development;
2. the amplifying linkages due to the interconnection of different socio-economic formations;
3. the specific phenomena of each of the relevant social formations.

We will evidently not refer here to these national specificities, although their study is now one of the more fertile areas of inquiries

inspired by the School of Regulation.[14] The distinction between the two first types of linkages must, however, be quite clear, and its political implications are evident. If we limit ourselves to the second set of linkages, the crisis appears as a crisis of the sole national monopolist regulation coming into contradiction with the internationalization of production: a way out of the crisis by a concerted expansion can be envisaged. If we consider the first type of linkage, the crisis strikes, moreover, the roots of the regime of intensive accumulation grounded on the Taylorist principles of organization of labour and on the fordist development of mass consumption. We will attempt to present here a synthesis.

The clearest symptom of the crisis of the regime of accumulation is the general slowing down of productivity gains, which occurs at the end of the sixties, and affects the most typically fordist branches, such as automobile production.[15] But how does this slowing down produce a crisis?

A first approach consists of underlining the contradiction between the slowing down and the maintenance of the rise in purchasing power. The crisis would then be the result of a 'profit squeeze' caused by the rise of the wage cost per unit produced. However, statistical data do not seem to confirm this diagnosis for all the industrialized countries at the start of the seventies (with the transitory exception of Germany and Japan). More exactly, the increase of purchasing power does not manifest an

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[14] See especially the works of the CEPII in number 13-14 (1983) of the journal Economie Prospectives Internationales. These works take into account the different conditions of apportionment of productivity surpluses between the manufacturing (and internationalized) sector, on the one hand, and the tertiary (and protected) sector, on the other.

[15] R. Boyer, "Determinants et evolution probable de la productivite et l'emploi: un essai de sythese de travaux recents". CEPREMAP No. 7922.

autonomous acceleration, and in the (rare) cases where it outpaces productivity gains, it is because these have slowed down (see Table II). Furthermore, if such was the origin of the crisis, a simple slowing down of (direct or indirect) wage increases would have been sufficient to check it.

More convincing is the taking into account of the other component of the profitability of capital. These decreasing productivity gains required as early as the middle sixties, an increase in the value of capital per head, or, in marxist terms, of the organic composition of capital.[16]

Table III (below) indicates that productivity gains no longer compensated for the higher technical composition of capital, the volume of fixed capital per head. The 'mark-up' procedures characteristic of monopolistic regulation initially compensated for this 'instantaneous' decrease in the profitability of capital through a nominal rise in profits, but this led to a general increase in prices and wages, and then in the share of depreciation in the gross margin of reinvestment. This led to a tendency of greater firm indebtedness, and an increase of financial costs which, added to the rise in depreciation and in the relative price of investments, led to a latent crisis of investment capability in an inflationary envionment.[17] Hence, the slowing down of investment, combined with the decline in the employment generated by each new investment, led to the rise of unemployment, and thus also to a rise in the costs of the welfare state.

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[16] A. Lipietz, "Derriere la crise: la tendance a la baisse du taux de profit". Revue Economique No.2 [Mars 1982].

[17] A. Lipietz, Le monde enchante. De la valeur a l'envol inflationiste [Paris: F. Maspero-La Decouverte, 1983]. English translation: Verso (forthcoming).

Whether one stresses the profit squeeze or the increase in the organic composition of capital, the present crisis of intensive accumulation appears as a crisis of *profitability*, in contrast with the crisis of 1930, which was one of *overproduction*. The institutional forms of monopolistic regulation in fact limit the 'depression spiral': the increase in the indirect wage stops the decrease of the global purchasing power (in spite of the growth of unemployment), the strength of credit currency permits the survival of values in process (and so of firms) which would have been reduced to bankruptcy in the context of a banking system under the gold standard. The crisis thus assumes the form of a *stagnation* (and not of a collapse of production) coexisting with *inflation* (and not a collapse of prices).

But why a slowing down of productivity? Here, the analyses which we have just evoked are most clearly distinguished from the theory of 'the long wave of innovations'. It is indeed quite difficult to identify a slowing of technological innovation during the sixties. On the contrary, nothing fundamentally new laid the basis of post-war growth, and transistorized computing was already well developed at the start of the seventies. On the other hand, the successes, followed by the failures of the Taylorist then Fordist principles of labour organization, are manifest.[18]

After half a century of taylorism and fordism, it has become 'natural' to expect that each year a worker produces more than the year before, and 'mysterious' to find that this growth is slowing. However, when Taylor and Ford invented their new methods of organization of labour, they

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[18] Coriat, op.cit.

broke up a routine which had previously known only a few forward leaps. Their method was before all else one of discipline and extraction of know-how. After fifty years, there remain few reasons to think that 'the one best way' has not been detected, disaggregated, systematized and generalized. The 'massification' of labour finally exhausted the great font of worker knowledge. Not that there no longer exist great reserves of productivity in human ingenuity; but they can no longer be exploited by taylorist methods, those of drudgery, of the parcellization of tasks, of operations indefinitely repeated. Furthermore, parcellization itself encountered its own limits: loss of time between operations, delays concentrated at the end of the production line, etc.

It is here that we rediscover the class struggle, at the root of the slowing down of productivity: the great victory of the employers during the twenties had dilapidated its own bounty. Against the factory masters, the employers, methods' offices, time-keepers, foremen, now rose the massified bloc of specialized workers.

The years 1967-1974 are first those of a worker counter-offensive superimposed on the employers' immobile 'social technology'. A counter-offensive of the specialized worker, avenging the defeat of the professional worker. This is the grain of truth in the assertion that the workers put capitalism in crisis, much more than did the petroleum states regaining control of their resouces.

It remains to be understood how this latent crisis of fordism, undermined on the whole by minimal changes, but ones which tend to accumulate, could degenerate into manifest recession. It is necessary to take into account the international dimension, and governmental and employer reactions.

(ii.) From the erosion of U.S. hegemony to the first petroleum shock

Starting in 1967, a qualitative transformation radically modified the international configuration: the productivity of Japan and of Europe (particularly of West Germany and of France) closed on that of the U.S. (see Graph 2), to the point where the differences in wage costs per unit produced became unfavourable to U.S. competitiveness, at the current value of the dollar (see Graph 3). This catching up was caused both by the growth of multinational firms in Europe and by the generalization in Europe and Japan of fordist methods: the rate of investment in these countries remained indeed much higher than the U.S. rate (see Graph 4).

From that point onwards, the trade balance of the U.S. was in deficit. The mass of xeno-dollars was no longer covered by the Fort Knox gold reserves. These dollars could no longer be considered as representing a 'currency-commodity' (gold), nor as representing values in process indisputably validated at the international level (since American production was less and less competitive). The dollar thus appears overvalued.

By degrees[19] the dollar abandoned its role as a fixed point of reference, and started to float downward against all currencies. American capital lost its capability for foreign investment (but the subsidiaries of its multinational firms could now finance themselves directly from external sources). On the other hand, a trade war was launched between the three poles of the world economy, of more or less equal competitiveness.

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[19] In 1968, the abandonment of the gold pool made the dollar a forced rate currency. On the 15th of August 1971, its reference to gold was finally abandoned and its parity relative to the other currencies became totally floating, beginning in March 1973. This evolution became official in January 1976 under the Jamaica agreements.

The differentiated configuration of the fifties and sixties was succeeded by a linkage of three poles in which the phases of expansion and recession tended to directly echo and amplify one another.

The world boom of 1973 thus in every way augured a general recession the following year. But, mainly, it produced an extreme tension on the raw materials markets. At the same time, the blows struck at the explicit hegemony of the United States (in Indochina) provoked a wave of nationalism in the Third World. The Arab-Israeli war of October 1973, in this objective and subjective conjuncture, gave the petroleum exporting countries the opportunity to recover control of the fixing of the rent of oil (raised to $11 a barrel).

Theoretically, this constituted only a shift in the ownership of a minimal share of world value-added.[20] But, in the developed countries, already menaced by recession, and where the latent crisis of fordism exacerbated tensions over the share-out of this value-added, this sudden deduction immediately provoked an inflationist flare-up in the struggle for the redefinition of the share-out. Under the pretext of a rise in inflation, employers and governments attempted, by squeezing wages and restricting credit, to impose a decrease in the purchasing power of wage-earners. The first results obtained in this direction during 1974,

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[20] Let us recall that, for 'classical' economic thought, the increase of ground rent presents two aspects:

-- For Ricardo, it is subtracted from capitalist profit. But we will see that the oil rent will be recycled as investments.

-- For Malthus, it reinforces the real demand for 'luxury' goods. And this is what will occur, warplanes replacing coaches!

The oil shock thus cannot be considered as an autonomous cause of the crisis, at the most it revealed the latent contradictions.

produced a depression of world demand which, added to a catastrophic reduction of inventories, brought on the first great recession of the crisis.

From 1975, however, worker and union resistance everywhere in the world choked off this first austerity offensive. In particular, the automatic stabilizers of the welfare state, often reinforced by the precipitate extension of unemployment insurance (all the more 'generously' granted in that the dominant classes did not believe in the seriousness of the crisis) prevented a depressive spiral, guaranteeing the stability of consumption in spite of the growth of unemployment.[21] A security net thus limited the recession, and by 1975 there was a general recovery, all the more since the oil deduction, financed on credit, multiplied effective world demand. Such was the strange configuration which we will now examine.

3. A Transitional Configuration: 1975-1979

The second half of the decade of the seventies was marked by a strange contradiction. On the one hand, the crisis of fordism got worse. On the other, Keynesianism survived quite honourably on its own base, at both the national and international levels. This survival is the main aspect which colours the period: it is therefore with this that we will start.

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[21] R. Boyer, "Origine, originalite, et enjeux delacrise actuelle en France: une comparison avec les anees trente". La crise economique et sa gestion. [Montreal: Boreal Express, 1982].

(i.) A social-democratic management of the crisis

One can characterize this first phase of the management of the crisis as 'social-democratic'. In Germany, in Scandinavia, social-democrats were in power. In Britain, the Labour Party's Callaghan. In the United States, the Democrat Carter. In France Valery Giscard d'Estang and Jacques Chirac organized the recovery, even though one cannot distinguish the role of political manoeuver from that of economic conviction. In general, the dominant idea was then that Keynesianism remained valid. It was only necessary, by borrowing (as in Sweden), or by putting world credit currency into circulation (as in the U.S.), to wait out the oil shock and the adjustment of supply to the distortion of the world demand structure towards the capital goods and military equipment ordered by the OPEC countries.

At the national level, this policy of 'absorbing' the oil shock was practised in a particularly consequent manner by the Carter administration. As the main 'engine' (to use the OECD expression in use at the time), the United States under Carter, at the cost of a discretionary currency increase, supplied the world with a credit currency whose validity was universally accepted, even though its international purchasing power was increasingly disputed. At the internal level, despite, or rather because of, a marked absence of productivity gains, the United States was able to generate millions of jobs (essentially in the tertiary sector). Western Europe, and especially Japan, provided machines and consumer durables, not only to the U.S., but also to the OPEC countries, to the Eastern bloc, and especially to the countries of the South which were adopting in turn a variant of the fordist model, which we will examine further below.

Of course, this American 'monetary laxity' produced a precipitate drop in the value of the dollar which the U.S. could not cure. But this devaluation favoured its domestic expansion since, taking into account the U.S.A.'s low import coefficient, this laxity only caused a moderate increase in inflation. The nominal decrease in value of the dollar relative to other currencies translated into a *real* devaluation of American costs, reestablishing the competitiveness too long compromised by overvaluation (see Graph 3). That is, taking into account the inflation differentials on the one hand, and the nominal devaluation on the other, the average 'bundle' of American goods cost less and less, in the same currency at the current exchange rate, relative to the average 'bundle' of German or French goods. Thus, compared to an American 'bundle' of the same price in 1970, a German one was worth 90% more in 1980!

(ii.) The relative paralysis of Europe

While the U.S. was preserving the growth of employment by a headlong devaluation and at the cost of stagnation in productivity, Japan pursued the same devaluation policy (with the same absence of dramatic consequences for internal inflation, and for the same reason: the low share of imports). But it used this weapon to conquer market shares and flood the world market with fordist-type manufactured products (cars, hi-fi's, optical instruments,etc.). On Graph 5 (below), these two countries are set apart from the others in terms of industrial growth. By contrast, the European countries experienced a growth still remarkable for a period of crisis, but clearly weaker than the U.S. and Japan.

The reasons for this weakness are assuredly fundamental and are linked to the seriousness of their industrial crisis, characterized by the

heavy weight (in terms of capital intensity) and the great rigidity (in terms of social relations) of the European variants of fordism. Wanting to remain, for this presentation, at the 'non-national' dimensions of the crisis, let us particularly underline an important obstacle to the implementation in Europe of the 'Keynesianism + devaluation' tactic. It consists of the perverse mechanics of 'austerity internationalization'.

More and more integrated at the industrial level, Europe remained fragmented into distinct nations *each* of which had to watch its trade balance. However, their production was becoming more and more 'complementary': they had to remain each others' customers. In such conditions, devaluation loses much of its effectiveness, since 'price-effects' have less impact. To reestablish its trade balance, a country must then import less, consume less, invest less. Even for 'substitutable products', price competition, in the free trade zone without a common policy which Europe has become, imposes a strong form of protectionism: protectionism by restrictions on wages, by 'competitive stagnation': 'austerity'. For the wage cost, determined by the 'standard of living' of a given country, acquires a new dimension: it becomes one of the determinants of international competitiveness.

The wage cost, or more exactly the cost corrected for productivity, what is called the wage cost per unit of output, has always been, for each firm, a condition of competitiveness relative to other firms. This is why, in the twenties, Ford could not win his bet alone. Collective agreements, the minimum wage, etc. were necessary to ensure that each firm abandoned competition, in the same country, on the basis of low wages, which would have decreased national demand. But, here is the hitch: there are

no international collective agreements, there is not even a 'European social space'.

Thus, the different European countries found themselves, relative to one another, in a situation of 'competitive regulation', which, earlier than anywhere else, compromised the effectiveness of internal Keynesianism. We shall see how this configuration of stagnation became general with the second oil shock and the monetarist shock. But, for the moment, this local European configuration found itself in a more favourable environment, constituting a 'world Keynesianism', whose most spectacular effect we will now examine: the growth of peripheral fordism.

(iii.) Peripheral fordism

We have already often described the internal logic of periheral fordism, which triumphed during the seventies in a handful of 'Newly Industrialized Countries': Mexico, Brazil, Korea, Taiwan, etc..[22] It consists essentially in the adoption of the fordist model of industrialization, from the perspective of the immediate labour process, but only very partially (and, at the limit, not at all) from the perspective of the regulation of the wage relation. In such conditions, 'effective demand', the markets, can only be international: the NICs import the north's capital goods and sell it manufactured goods.[23] During the seventies, this strategy seemed to encounter miraculous conditions of implementation. Schematically, this was the configuration:

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[22] A. Lipietz, "New tendency in the international division of labour". op.cit.

[23] In fact, they also continue to sell their raw materials (when they can!). Further, some East bloc countries, such as Poland under Gierek, follow the same road (with the same results).

-- The countries of the OECD, and especially the U.S., with low productivity gains and lagging investments, pursued growth through a lagging but not decreasing consumption.

-- These countries financed their imports on credit, and thus permitted the expansion of an international credit currency (xenodollars) based on the American credit currency.

-- This liquidity, loaned by the banks of the surplus countries (OPEC and Japan) to certain countries of the South (the NICs), permitted them to purchase on credit capital goods from the OECD.

-- The NICs hoped to reimburse these loans by selling their manufactured goods to the OECD and OPEC countries. This was a 'playable' option for two reasons:

1. the productivity gains of these 'new' countries were very rapid (while they had slowed considerably in the North), and their hourly wage costs were 5 to 10 times lower;

2. the world market continued to expand because of the 'social-democratic management of the crisis'.

In this transitory but brittle configuration, the NICs were able to attain rates of growth in the order of 10% per year, which is quite respectable for a 'great crisis'! Better still their demand for capital goods from the North more than compensated for the loss of jobs in the old industrial countries resulting from their productivity gains in the consumer goods sector.

By a strange trick of history, one finds here something of a mirror image of the virtuous U.S.-Europe-Japan configuration of the fifties. In a sense, the increase in the oil price financed by the 'monetization' of the American deficit, and then recycled by the private banks towards the NICs, plays the role of a '*forced* Marshall plan for the Third World'! One must, however, insist on the extreme brittleness of this private recycling, and of the periphery fordist model itself. Extremely dependent on the evolution of world demand, it affected only a very limited number of countries of the South, while destabilizing their internal structures.

Even before the end of the decade, it collapsed under the weight of its own contradictions in Iran, in Nigeria, in Turkey, etc.

(iv.) Continuation of the crisis of fordism and search for new ways

This period was thus that of the gentle management of the crisis. Productivity, production, consumption, nonetheless continued to grow, and unemployment increased only slowly. But to maintain a growing consumption with a decreasing industrial workforce, a slowed productivity growth required an increasing deduction from the value added to sustain the costs of the welfare state. This cost was paid by the firms (since it had been decided not to impose too great a cost on wage-earners). In France, the profit share fell from 30% in the sixties to 25% in the seventies.

This decrease in the share of profit shares was added to the rise in the cost of fixed capital (and thus of investments), which was accelerating inasmuch as both employers and governments were attempting to replace men by machines even faster, and fuel-based generating plants by nuclear-based ones. If we compare 1977 to 1972, we find that the 'apparent productivity of capital' literally plunges, especially in the most fordist industries: in France, it became necessary to invest 17% more to produce the same valued added!

Because of the welfare state and Keynesian policies, fordism survived, but its fundamental crisis was more and more evident, and it manifested itself in the contrast between an 'abnormally' slow growth and an increasingly rapid inflation: 'stagflation'.

But, under the appearance of a credit-based continuity, things were changing. Capitalism was exploring new ways, new arrangements for attempting to get out of the crisis.

Peripheral fordism, the transfer of vulgarized fordist production to low wage and low social security countries, was one of those ways. But, more fundamentally, in the industrialized countries themselves, the wage relation saw two great changes taking shape, the first regressive, the second potentially progressive.

First, the undermining of the conditions of labour power production. During the period of growth, the productivity-direct wage link had played the principal role, the welfare state a supporting one. As the role of the latter was developed, ensuring a kind of permanent income to wage-earners and their families, firms attempted to free themselves from their heavy contractual obligations to their employees. The 'hard core' of wage-earners (permanent workers) started to dwindle, while a world of non-status, temporary, part-time, etc. workers proliferated, who survived mainly on welfare state handouts and, from time to time, on a wage. Quite a profitable arrangement for individual firms, but whose cost fell on the whole of the population and all firms through the increase of compulsory deductions. Furthermore, this evolution accelerated the breaking down of the fordist consensus: the last traces of 'status' or of a 'trade' were disappearing for young people, condemned from the start of their entry into the labour force to a succession of 'small jobs' and welfare.

The second, more interesting tendency, was the search for new sources of productivity. Sources sought, at the heart of the labour process itself, both in the promise of the electronics 'technological revolution' and in the replacement of taylorist principles: reaggregation of tasks, individual or collective involvement (through 'quality-control groups'), involvement of the producers in the search for efficiency, etc.

Evidently, we are leaving the area of the 'developments of the crisis' to enter into the barely explored area of the ways to resolve it. What is being groped for is the new principle of the organization of labour which will lay the basis for the future regime of accumulation. It is thus no longer a question of 'catching-up' or imitating a pre- existing model (such as the U.S.A. offered in the fifties). The spectacular leap forward in Japanese productivity, which left standing the two other competitors (West Germany and France) pursuing the U.S., is evident from that period in Graph 2. It is even more evident when one considers the industrial sectors in detail (see Table III). Japanese capitalism did not 'catch-up' with the U.S.. It overtook it, by inventing a new, post-fordist method of transforming the manual and intellectual producers' ingenuity into productivity.

But these seeds of the future, like taylorism earlier, could only grow in a favourable macroeconomic and social environment. This was demonstrated, in contrast, by the monetarist shock.

4. A Needless Catastrophe: The Monetarist Shock

It was thus in a morose but not discouraging environment, and when industrial production had progressed, relative to 1970, by 30% in Germany and England, by nearly 40% in the U.S. and France, and by 45% in Japan, that the second 'oil shock' occurred in 1979. The '$11 dollars a barrel' of the first shock had been largely absorbed by world inflation: the terms of

trade of 'oil versus products of the industrial world' had returned to the level of the end of the Korean War, i.e. the point of departure of fordist growth. The increase to $34 dollars a barrel brutally reintroduced the vexing issue of oil rent. Return to 1974?

No, and it is not very easy to understand why. Everything was to turn out, in fact, very differently, as if the dominant classes no longer believed, or could no longer believe, in Keynesianism.

(i.) A recess in adjustment to the second petroleum shock

Future historians will long discuss the chain of events which led from the second oil shock to the monetarist shock of 1981. Objective constraints had accumulated since the first shock, reducing the margins of the Keynesian game: threatening trade deficits in France and in Great Britain, accumulated public debt in the U.S., in West Germany and in Japan.[24] Furthermore, international capitalist centralization had increased through the crossing of financial flows between the industrial economies, flows which were essentially destined for mergers and purchases of firms competing with one another: what Madeuf, Michalet and Ominami call "investments without accumulation".[25] The complementarity of these economies had thus been reinforced, and the possibilities of autonomous Keynesian policies had been restrained: the European stagnation configuration had widened and deepened.

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[24] J. Le Dem and J. Pisani-Ferry, "Crise et politiques economiques dans les grandes economies industrielles: permanence et changement". Critiques de l'Economie Politique No.26/27 [Janvier 1984].

[25] B. Madeuf, C.A. Michalet and C. Ominami, "D'une crise internationale a un crise mondiale". Critiques de l'Economie Politique No. 26/27 [Janvier 1984].

But, perhaps more fundamentally, the world elites, the heads of firms and politicians of the Trilateral Commission, stopped believing in international Keynesianism. The shortcomings of this regime were evident:

> -- If the 'security net' of monopolistic regulation in the North prevented depression, it also constrained the redirection of production and consumption towards new norms, by the rigidity it conferred on the labour force and on the allocation of capital between sectors.
>
> -- International credit was, like all credit, based on the wager that the regime of accumulation would be re-established, that the country issuing the currency (the U.S.) could unconditionally offer the equivalent in competitive goods of these monetary symbols, and that the indebted countries of peripheral fordism would find in the North large enough outlets to repay their debts.

Towards the end of the seventies, it was clear that none of these assumptions was valid. Growth was still sluggish, productivity gains continued to be slow and capital per capita continued its acceleration, American currency was more and more questioned and continued to lose its international purchasing power.

The accession to hegemony of monetarist or simply less Keynesian coalitions, in England with the victory of the Conservatives, in the U.S. with the nomination of Volker to head the 'Fed' prior to the election of Reagan's presidency, in West Germany with the hegemony of the Liberals in the centre-left coalition, in France with the full implementation of Barrism after the defeat of the Left in 1978, all reflect this avowal of impotence. By the simple effect of the vacuum, the ideas of liberalism reimposed themselves: the simple play of market forces would favour those firms implementing the processes of the future, would eliminate the slag of the past, would reconstitute the compatibility of behaviours.

By 1980, the change was quite clear: West Germany and France imposed on their wage-earners a downward adjustment to the oil shock, decreasing industrial production by 5%. Great Britain had clearly chosen

monetarism by 1979: we shall return to it. The Fed under Volker attempted to implement the same policy, with similar results (a decrease of 7%), quickly reversed in the face of electoral deadlines. Only Japan experienced a growth of 10%, on wages permitted by its protectionism and the efficiency of its exporting sector: it let its currency plunge (see Graph 3). But even Japanese growth would be broken by the third shock: the monetarist shock.

(ii.) The monetarist catastrophe

With the accession of Reagan to the presidency, the U.S. joined Great Britain in the extreme monetarist camp. Cutting welfare spending and blocking the 'pseudo-validation' through credit of the values-in-process based on the fordist regime of accumulation (by cutting the issue of credit), these two coalitions erased in their respective countries, in a few months, the growth of the previous five years. In so doing, they started a rather complex chain reaction.[26] Not only did they condemn all the other countries to abandon their social-democratic management of the crisis including France under Mitterand,[27] through the mechanism of austerity-internationalization, but they also dried up the creation of international credit by erasing OPEC surpluses through the world recession they provoked. Credit became scarce and costly, world demand was quickly decreased: periphery fordism found itself incapable of repaying its debts.

[26] Aglietta and Brender, op.cit. and A. Lipietz, "Le fordisme peripherique etrangle par le monetarisme central", a paraitre dans Acualite Economique. English translation: New Left Review [June 1984].

[27] A. Lipietz, L'audace ou l'enlisement [Paris: La Decouverte, 1984].

We must underline that it is difficult to attribute the bankruptcy of the NICs (especially the Latin American ones) to the oil shock itself. Of the same order as the first (in terms of the modification in the terms of trade), it should have had similar results. By contrast, the real interest rate of the developing countries (i.e. the rate of eurodollars deflated by the price of their exports, OPEC included), which had plunged to -30% in 1974 (because of the oil price increase) and had oscillated around 0% from 1975 to 1978, only fell to -10% in 1979 but went up to +20% in 1981 and 1982! To this was added, decisively, the reduction of world demand.

However, the very imminence of the bankruptcy of the NICs, added to the tangible multiplication of chains of bankruptcies in the main industrial countries and especially in the U.S.,[28] began from July 1983 to greatly worry the American administration, which relaxed monetary constraints. Too late: in August, Mexico declared a suspension of payments, signalling a general insolvency. We were close to a world financial crash.[29] The Reagan administration then abandoned monetarism, ordered the world banking system to accept a general rescheduling of the Third World debt, and crudely restored, domestically, the old Keynesianism, in an almost Kennedyist style. Tax cuts and increased defense spending produced a gigantic budget deficit, largely financed by the Federal Reserve. A 'boom' largely based on household consumption (notably housing) reestablished American industry in one year (1983) to its level of 1979. The considerable external deficit which resulted broke the recession in the OECD

[28] Lipietz, Le monde enchante op.cit.

[29] O. Berger, "Le systeme bancaire international: au bord de la faillite at au coeur de la crise". Critiques de l'Economie Politique No. 26/27 [Janvier 1984].

countries, with an export-based recovery in Japan and a housing and consumption recovery in Germany.

But the issue of credit remained limited to the needs of the American administration. The recovery was not enough to reconstitute the OPEC surpluses. The NICs, insolvent (except for those in the Japanese sphere), were unable to repay their debts, so the multiplying mechanisms of xeno-dollar creation remained inactive. The dollar continued to be scarce and costly outside the U.S. The effects of the monetarist shock were far from overcome.

As far as positive effects are concerned, they remain doubtful, even in the U.S. The recovery is not based on a new model of development: it is a return to the seventies. Inflation has certainly slowed down considerably, by the internal decrease of the price of imports and by the short-term productivity gains due to re-employment of idle capacity. But the overvaluation of the dollar, based on American power, as at the end of the sixties, is liable to experience a new downfall as in 1971. And the contraction of traditional industries, such as the auto industry, while it has permitted an extensive rationalization, does not point in any clear way to the possibility of a new growth period based on new technologies. This is the point to be examined in conclusion, in a necessarily abstract manner.

5. As a Conclusion: Two Plausible Resolutions of the Crisis

Some months before his death the futurologist Herman Kahn identified the American recovery of 1983 with the take-off of a new Kondratieff

cycle, ascending until the year 2000. We are not yet there. We only know that the curve linking the two last 'low points' (1975-1982) is nearly horizontal and we do not know if the curve linking 1979 to the next 'high point' (1984? 1985?) will be at least as steeply rising as the previous one (2.5% between 1973 and 1979: see Graph 1).

The hypothesis of a new Kondratieff is based on the emergence of new sectors around the automation-electronics revolution. The formation of a new 'centre of the world economy' on the Pacific rim is also invoked. Let us pass over the strange topology of this centre. If there is to be a new Kondratieff, it will not relegate New England to its periphery, nor some very active regions of old Europe. True, it seems that a 'virtuous configuration' today ties Japan and the Asiatic NICs to the rocket of U.S. recovery. But we must underline the brittleness of this recovery: based on immense public (in the U.S. and Japan) and external (the U.S.) deficits, it is only maintained by pumping capital out of the rest of the world, through the unprecedented real interest rates offered in the U.S. This pumping limits the European recovery, maintains Latin America in a depression, plunges whole areas of the Third World into famine and death. No global virtuous cycle has yet emerged.

More profoundly, we must reflect on the real effects of the 'electronics revolution'. Because, between technology and a model of development, there is a series of links, social relations. From technology to technical implementation: *the immediate relations of production* (Who decides? How is collective labour organized?) From production to the economic: *the overall socio-economic relations* (Will there be enough consumers, enough investors? What is produced? To insure what form of full employment?). In other words, a new regime of accumulation, and a new mode of regu-

lation, especially of the wage relation (or other relations of production, why not?) remains to be invented. But this model of development must be compatible with a new *international configuration*. Let us briefly examine these three sets of problems.

What do informatics accomplish? Not so much productivity gains by second of machine-time used, but essentially two things: the possibility of *full-time* use of the machines of a workshop and of making this workshop *flexible.*[30] A fordist workshop, based on the double specialization of machines and persons, does not make efficient use of their time: waits between two operations, piling up of intermediary stocks, disequilibrium between work stations... The automated management of the workshop permits a leap forward in the fluidity of the production process: each part arrives in time at its proper place and the elementary acts are more precisely interconnected. This is the great source of profitability that informatics create in this context. It is costly in initial investment; networks of wire-guided conveyor, central and peripheral computers, etc. But they are utilized in full.

But this is not all. Electronics above all make machine systems *flexible*. Automation in the workplace is not new. Men have long made machines performing their own gestures on their own, like the transmission belts of an automobile factory, or press-shops. But these enormous installations could only perform one set of actions, to always produce the same product. The robot can adapt itself, change tools, go from one task to another with a quick reprogramming. The robotized

[30] B. Coriat, "Crise et electronisation de la production: robotisation d'atelier et modele fordien d'accumulation de capital". Crtiques de l'Economie Politique No. 26/27 [Janvier 1984].

workshop can thus adapt itself to a fluctuating demand, jumping from short production series to short production series.

First bifurcation: two axes of evolution present themselves to the post-fordian reorganization of the labour process. The automation of the management of the production process presents the temptation of pushing further the break between the theoretical conception of the process and the implementing actions of the collective worker. The operative workers would then become simply flesh-and-blood links in the automated process. This is the road chosen by the majority of U.S. firms and some European ones. By contrast, automation can produce a partial requalification of the collective worker, the practical know-how of the operators being mobilized in real time in the actual automation process, as in the permanent adjustment of the devices. This is the road that a majority of Japanese firms and some European ones seem to be following. This bifurcation is the field of a tremendous social conflict, whose stake is the negotiation of a new social compromise between the involvement of the workers and the apportionment of the new productivity gains.

For -- and this is a second bifurcation -- it is necessary to know who and what these productivity gains will serve. The first variant of the post-fordist model will mobilize even more fixed capital than aging fordism. Productivity gains will be reserved for profits and the final demand will not grow. The 'flexibility' of automated processes itself makes possible the profitability of massive investments, through a succession of short production series destined for the segmented and versatile consumption of a well-off clientele. But these productivity gains without any increase of mass consumption will bring about the growth of unemployment and the risk of a division of society into three parts: a

dominant class benefiting from the new gadgets of the electronics revolution, a stable but limited core of permanent wage-earners, and a growing mass of uncertain workers under a weakened social security system, gaining transitory employment in the tertiary sector during conjunctural recoveries. Such seems, again, the present road followed in the U.S. The other road consists of a new negotiated apportionment of productivity gains, with mass access to new consumption goods, which require *consumption time*: optical and accoustic cultural devices, home computers, etc. These relatively cheap goods (compared to the automobile) call for an apportionment of productivity gains in the shape of a massive reduction of work-time.

Naturally, a model of development grounded on the mass extension of non-wage-earning activity (leisure, creativity, intellectual enrichment) may well not be very competitive (in terms of hourly wage costs) relative to a model grounded on the intensification of labour without any reapportionment of productivity gains. Two roads are again open. Either the unending struggle for hegemony or at least for trade-balance equilibrium, through 'competitive stagnation': and the world will enter a new long period of stop-and-go cycles, to the rhythm of the choices of 'expansion' or 'retrenchment' of the hegemonic power. Permanent trade war which can lead to the conflictual disintegration of the world economy. Or, international institutional forms will be put in place, permitting in the best case the joint adoption by the interested party of a variant of the second model (international norms relative to work-time and wages, etc.), at least the de-linking of those nations (or communities of nations) who would adopt such a model of development, relative to those who would

choose a more productivist and competitive model (protectionism on the basis of social criteria, direct control of trade balances by quotas, etc.).

In a very concrete way, the manner in which the problem of Third World indebtedness is resolved will provide us with decisive indications. Practically, the 1982 crisis was resolved by a moratorium of three years on the average, the IMF imposing moreover an 'adjustment' of the NICs' regime of accumulation towards greater exports, i.e. in fact an 'austerity' programme which pushes the new middle classes back into poverty, the workers towards wretchedness, the poor towards death. We have here an illustration, at the level of international relations, of the first variant, which appears quite close to the prophecies of Jack London in the Iron Heel. Perpetual indebtedness would be a way to maintain the industrialized Third World in the role of a sweatshop, committed to the production of popular intermediary or fordist goods, while a minority of developed countries would enter 'post-industrial civilization'.

The other alternative implies the *de facto* cancellation of the Third World debt, whether by balancing out (as for the German and Russian debts between the wars) or by the consolidation of the loaned amounts, permanently frozen like those of a shareholder. The free issue and distribution of international currency would then permit the recovery of the periphery fordist countries on a more autonomous road, on a more self-centered regime of accumulation.

Without even mentioning a non-capitalist (or apocalyptic) resolution of the crisis, two roads are open, for each question, for a capitalist resolution: a repressive way of a new type, a social-democratic way of a new type. Is it necessary to recall that, during the thirties, Naziism and the New Deal also offered two solutions to the crisis? And that it took

strikes, revolts, a war, and tremendous commotions on the planet for a variant of the second way to impose itself?

TABLEAU I

ECHANGES EXTERIEURS ET PRODUCTION

(En %)

	1899	1913	1929	1937	1950	1959
Part exportée de la production de produits manufacturés :						
France	33	26	25	12	23	18
Allemagne (territoire du Reich jusqu'en 1937)	31	31	27	15	-	-
République fédérale allemande	-	-	-	-	13	23
Royaume-Uni	42	45	37	21	23	19
Etats-Unis	5	5	6	5	5	4
Japon	25	40	29	40	29	23

SOURCE : MISTRAL [1977]

TABLEAU II

ACCROISSEMENT DU SALAIRE REEL ET DE LA PRODUCTIVITE

(en taux de croissance moyen annuel)

Grande-Bretagne	(s/p)	(1950 -1955) 3,0	(1955 -1960) 2,3	(1960 -1970) 3,1		(1970 -1974) 1,2	
	II	2,0	2,3	2,6		2,4	
Etats-Unis	(s/p)		(1956 -1961) 2,9	(1961 -1966) 2,4	(1966 -1970) 2,5	(1970 -1975) — 0,2	
	II		2,3	3,6	0,9	0,3	
RFA	(s/p)	(1950 -1955) 5,5	(1955 -1960) 4,8	(1960 -1965) 5,5	(1965 -1970) 4,9	(1970 -1974) 5,1	
	II	7,2	5,2	5,0	5,3	3,8	
France	(s/p)		(1957 -1959)* 2,4	(1959 -1964) 5,6	(1964 -1968) 4,5	(1968 -1973) 4,9	(1973 -1975) 4,2
	II		4,1	6,1	4,8	5,4	1,8
Japon	(s/p)	(1954 -1957) 5,8	(1957 -1964) 7,7		(1964 -1970) 8,6	(1970 -1973) 11,6	(1973 -1975) 5,6
	II	8,6	9,4		9,6	6,5	0,5

* Ancienne base de Comptabilité Nationale.

SOURCE : LAPIERRE-DONZEL [1980]

TABLEAU III

TAUX DE CROISSANCE ANNUELS DE LA COMPOSITION TECHNIQUE K/N ET DE LA PRODUCTIVITE Q/N (INDUSTRIE)

	K/N					*Q/N*				
	1950 -1955	1955 -1960	1960 -1965	1965 -1970	1970 -1975	1950 -1955	1955 -1960	1960 -1965	1965 -1970	1970 -1975
Japon		5,7	11,0	10,9	11,2 9,9 (c)		12,5(b)	7,8	13,1	3,5 5,4 (c)
RFA	1,8	6,1	8,0	5,9	7,6 7,5 (c)	8,5	5,4	5,4	5,4	3,2 3,3 (c)
France										
A base	3,2	3,5	5,7			5,1	5,6	5,1		
N base			4,1	4,9	5,0 4,8 (c)			6,1	7,0	3,1 4,9 (c)
Royaume-Uni ..	2,3	3,8	3,7	4,3	4,6(d) 5,0 (c)	2,2	2,4	2,9	3,2	3,4(d) 5,5 (c)
Etats-Unis		5,0(b)	2,0	3,6	4,3 1,8 (c)		2,1(b)	4,5	1,0 — 0,6	2,6 (c)

(a) 1951-1955 (b) 1956-1960 (c) 1970-1973 (d) 1970-1974

SOURCE : LAPIERRE-DONZEL [1980]

TABLEAU IV

NIVEAUX DE PRODUCTIVITE PAR TETE DANS LES BRANCHES MANUFACTURIERES EN 1980

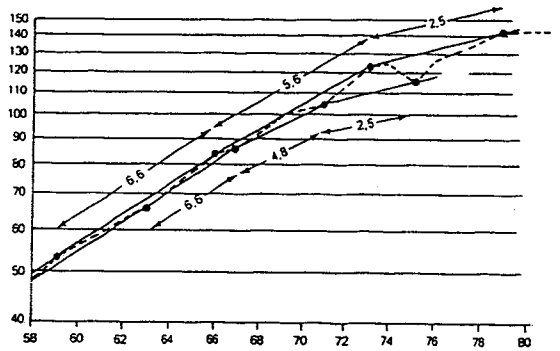
(base 100 : États-Unis)

	France	RFA	Royaume-Uni	Japon
• Branches métalliques	62	64	28	122
dont : Sidérurgie-métallurgie	70	91	38	137
Construction mécanique	71	65	27	117
Matériel électrique et électronique	50	40	26	135
Matériel de transport*	55	55	21	94
• Branches non métalliques	73	70	47	59
dont : Matériaux de construction	71	76	38	47
Textiles	64	69	46	48
Bois - Papier et divers	63	67	42	66
Chimie	78	79	46	101
Agro-alimentaire	76	48	54	43
• Industrie manufacturière	69	67	38	90

* Les évolutions relatives sont rapides dans cette branche. Ainsi, en 1981, le Japon a-t-il dépassé les États-Unis (niveau relatif : 101).

SOURCE : CEPII [1983B]

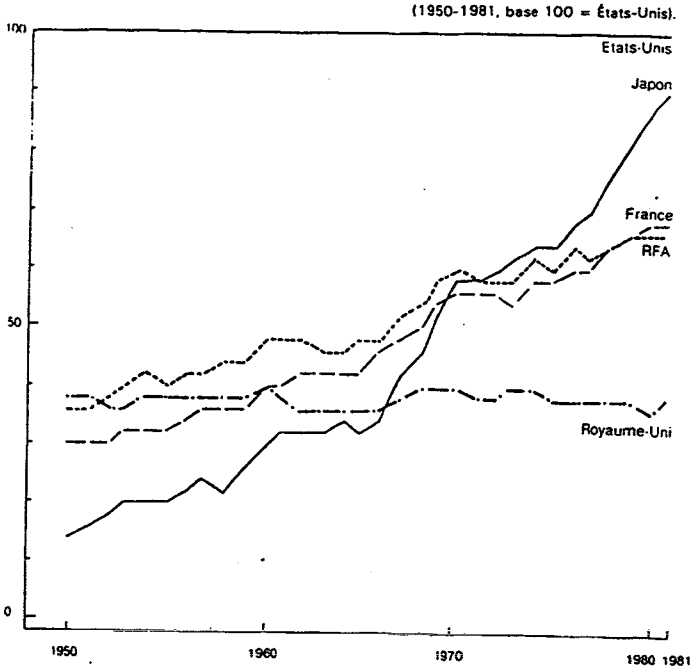
GRAPHIQUE 1 . Production manufacturière mondiale
(Pays à économie de marché, base 100 : 1970)



SOURCE CEPII [1983A]

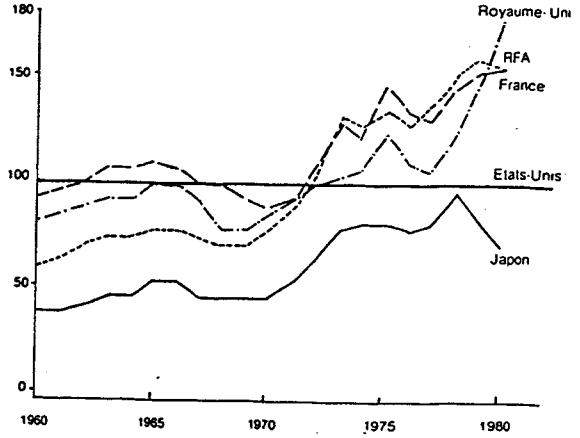
GRAPHIQUE 2 — Niveaux de productivité par tête dans l'industrie manufacturière

(1950-1981, base 100 = États-Unis).



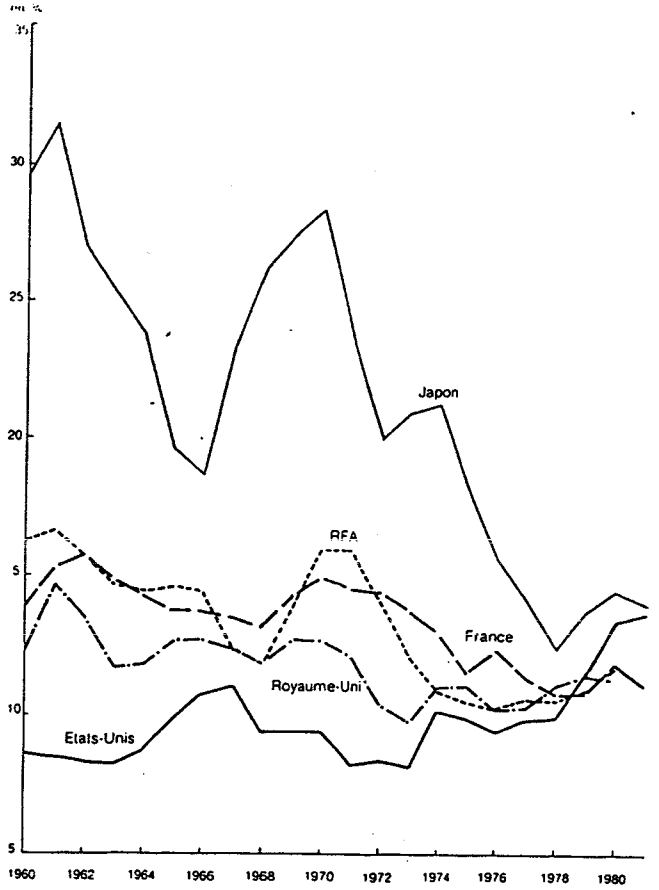
SOURCE : CEPII [1983 B]

GRAPHIQUE 3 - Coûts salariaux unitaires dans l'industrie manufacturière



SOURCE : CEPII [1983B] Coûts évalués au taux de change courant.

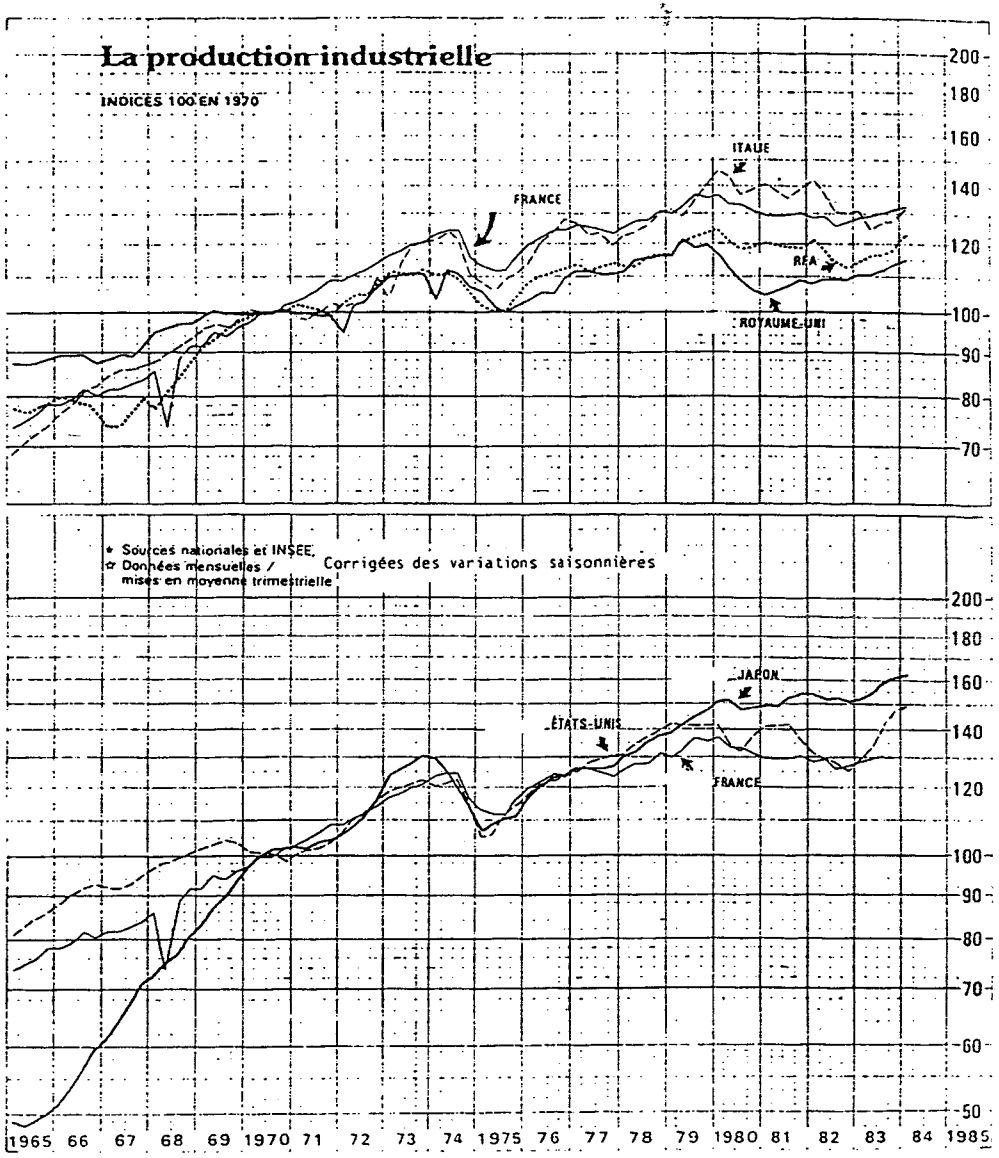
GRAPHIQUE 4 — Taux d'investissement* du secteur manufacturier



*: Rapport de l'investissement en volume à la valeur ajoutée brute en volume, base 100 = 1970.

SOURCE : CEPII [1983B]

GRAPHIQUE 5


La production industrielle
INDICES 100 EN 1970
ITALIE
FRANCE
RFA
ROYAUME-UNI
* Sources nationales et INSEE,
☆ Données mensuelles / mises en moyenne trimestrielle
Corrigées des variations saisonnières
JAPON
ÉTATS-UNIS
FRANCE
200
180
160
140
120
100
90
80
70
60
50
1965 66 67 68 69 1970 71 72 73 74 1975 76 77 78 79 1980 81 82 83 84 1985