

1974 A Downturn of the Long Wave?

In my book "Des mouvements économiques généraux", published in 1947, I devoted 276 pages (part III of the book) to an extensive statistical and theoretical analysis of the long waves of economic life. My outlook was very much akin to the outlook of Josef Schumpeter, as it appeared, separately, during the war. Although J. Schumpeter called the long wave the Kondratieff movement, to honour the first analyst of this phenomenon, he considered, as I did, that Kondratieff's analysis was too simplified, mechanistic and deterministic. The whole matter had to be reviewed again. I therefore decided to examine the long waves as an integral part of a conjunctural analysis, starting with secular trends, continuing with the long waves and ending with current business fluctuations. I thus developed a structural, real and monetary, explanation including all the conjunctural movements which prevail also in the shorter cycle: the long wave was embedded in general economic history and explained as an integral part of economic theory as it is used in business cycle analysis.

Let it therefore be clear that the commodious reference to the Kondratieff movement, which Schumpeter proposed, should be construed as an homage to a pioneer, but should not be understood as an acceptance of his theories, nay even of his approach. Kondratieff's correlations were circumstantial, within a gold standard system: as such, they cannot be extrapolated. A broader view is necessary, both for the period covered by Kondratieff (1850-1913), the period covered in my book (1789-1939) and for post-war developments. I consider this preliminary statement necessary, because reference to the long wave in English literature pertains largely to the original Kondratieff theory relating long waves to gold production or to the concurring Cassel-Kitchin explanation relating long waves to gold stocks. It is largely due to the reference to such simplistic and circumstantial

models that English and American economists looked askance at the long wave itself and dismissed it. But it is altogether too easy to reject a simplistic explanation and to throw the baby away with the bath. Let us therefore reexamine the baby.

The title of this essay puts a question mark: is 1974 a downturn of a long economic movement? The answer requires a treble analysis:

1. are we justified in considering the period 1946 to 1973 as an upward phase of the long movement?
2. should we consider that 1974 is a central date to be accepted as the termination of the upward phase?
3. are we justified in considering that phenomena of the downswing are sufficiently prevalent to-day to justify the denomination?

There is a general agreement that the period 1920-1939 should be considered as a downward phase of the long waves. Notwithstanding structural changes in the gold standard, the serious fall in gold prices (associated with devaluations of national currencies) could still be linked with the functioning of the gold system; the original explanations had to be adapted, but not discarded.

In the immediate post-war years, at the beginning of what I now recognize as an upward phase, the analysis could not be clear. In the face of post-war national adaptations it was hardly possible to ascertain whether the world faced only post-war reforms or was engaged in a new upward long wave. It was only clear that the pre-war downward wave had spent itself, after a normal delay of 20 to 25 years. Two intellectual attitudes were thus possible:

1. admit that the long wave movements, embedded in general, monetary and real economic conditions, had every chance to continue as a spontaneous urge and that the time was set for an upward movement; interpret accordingly the change in economic explanations and policies, as a reaction against the ideas of the 1930's and insert them in the reasons for an upswing;
2. consider, in the absence of statistical data, that the new expansionist monetary policies based on Keynesianism

and on full employment policies provided an autonomous and new form of economic development; sever, accordingly, all links with previous explanations of spontaneous development.

This second attitude became the economic belief of a generation: all intellectual and political statements considered that the level of employment was the direct result of full employment policies: it was therefore no more subject to any spontaneous development. If such policies are masters of events traditional long waves must disappear with economic cycles and leave room either to permanent success or to erratic consequences of errors of policy. I have always viewed this thesis with suspicion. Policies to suppress the long waves are less definable than policies to curb the shorter cycle. And in any case, no such policies existed. I therefore felt justified in looking for the tokens of a long upswing and to admit it as a valid hypothesis as long as statistical facts were consonant.

Let us now justify, in a retrospective approach, the hypothesis that the years 1945 to 1973-74 witnessed a long upward swing: more precisely, that typical upward trends moved smoothly till about 1970 and were followed by a rapid extension of tensions within the economic system.

The most immediate indication of a long upward trend is the fact that in the business cycles, phases of prosperity were elongated and phases of recession were shortened; this phenomenon was even clearer than in former historical periods. Remember how short was the crisis of 1958, how dampened the cyclical movements of the 1960's. Accordingly, there was a period of spontaneous development in economic life. Production and commerce grew quantitatively at unusually high rates — so fast indeed that their logarithmic continuation over a period longer than an upward phase must become impossible and that a break in real trends became inevitable. The expansionary movement seemed so easy that it produced an intellectual atmosphere according to which it appeared justified to extrapolate all sorts of trends to great length: rapid growth seemed a natural phenomenon not subject to any setback. This looked so clear that economists developed a specific branch of "growth economics". These growth economics insisted on quantitative developments, which were the subject proper of their statistical studies; but the very size of development implied rapid technical progress and this in turn pro-

voked rapid rises in real wages: qualitative progress was thus necessarily associated with quantitative developments, but the latter appeared prevalent in the now fashionable national income analysis.

In my "Mouvements économiques généraux" I ascertained that swings in the rate and size of credit expansion were a more basic and fundamental element of long movements than variations in gold production. Indeed, swings in credit development are inherent to the explanation, while swings in gold production were only the basis of credit expansion in a certain structure of the economy: but even between 1850 and 1913 there proved to be a clear autonomy and a precise mechanism of credit expansion or contraction.

Between 1945 and 1974 the credit expansion of the upward phase became even more characteristic than in former times and went to incredible lengths. At the bottom of the credit pyramid, percentage reserves of deposit banks at the central bank diminished: current deposits grew in relation to the fiduciary issues; the need for credit grew to the point that banks had to develop time deposits and issues of short term certificates, beyond their current deposits. This would not do: financial institutions of various sorts developed outside the banking system, so that the banks became only a part of a vaster financial system. Finally, the bond market was involved in the process and official borrowing went to unprecedented levels, while borrowing by firms had to increase, owing to the difficulty of issuing shares. Indebtedness of firms grew to a critical point. Such developments are, of course, bound to react on interest rates, especially on short term rates. This also has occurred in our period to what would have seemed an incredible degree. In 1948 discount rates were at 1.25% at the Federal Reserve Bank of New York and at 2% at the Bank of England; in December 1973 they reached 13% in London and in April 1974, 8% in New York; these were unheard of rates since more than two centuries! Nowadays, bond rates move around 10% in many countries: an incredible level and a brake on every type of borrowing, were it not for the fact that it is associated with rapid price inflation.

Let us summarize this: the upswing in the long phase started when recourse to credit was moderate in relation to disposable funds and when interest rates were low. They moved up as recourse to credit grew. Developments were such to 1970 that the system worked smoothly on the surface, notwithstanding growing tensions. But the movement ended up in swift and intense increases in all

types of interest rates. This happened precisely at the moment when the monetary system crashed, as a result of the growing tensions of the upswing. More about this later.

Let us now turn to the pricing system, which is central to the long waves. World prices remained high after the war, i.e. about two and a half times pre-war, owing to the absence of monetary reform or even of monetary restriction in England and America. But, from then on, they moved up at a steady but slow rate, of 1 to 2 per cent per annum for wholesale prices and somewhat more for retail prices. This was in entire conformity with historical experience of upswing phases; it eased economic calculus without troubling it. It was only after 1970, i.e. after the breakdown of the monetary system, that the pricing system became wildly inflationary. Something of the same sort had happened around 1872, but not to the same extent. Historical evidence thus points to more acute tensions since 1970 than in the past.

To substantiate this typical concourse of economic events, we should finally point to the psychological aspects of the movement. First, there is the general mood of the business community (which Phelps-Brown calls the climactics of the period), which was obviously optimistic and sanguine. Second, the very attitude of professional economists was also involved, according to F. Simiand's premonition: the monetary concepts of 1945, in the wake of Keynes, were obviously conceived as a contradiction of the events of the 1930's and had a strong inflationary bias; they influenced policy until nowadays; somewhat later, under the impact of rapid expansion, growth economics developed; correlatively, we witnessed the summary negation of conjunctural fluctuations, which full employment policies were meant to eradicate. Now, all these intellectual moods had to be questioned in the early seventies; they were obviously an outcome of the long wave.

Our next problem is to consider 1972-1974 as the focal point in a decisive turn of the long wave: i. e. the end of the upward swing in a most distinct manner, the beginning of a downward phase as the most obvious course for the future. The year 1974 witnessed a severe conjunctural crisis, after unusual strains had developed in the pricing and production processes. In order to explain it in reference to immediate circumstances, we can rely on typical business-cycle analysis. There is no need to invoke also a specific long wave

mechanism. One may only infer from the facts that when such a cycle is synchronous with a downward turn of the long wave, the crisis is apt to be particularly severe. In fact, that is the way it happened in 1818, 1872 and 1920. It is the case in 1974.

In good logic it should be so. The long wave is an underlying complex of trends working through ordinary business cycles. This means that the upward movement breaks precisely with and through an ordinary conjunctural crisis, while the lower point is associated with a severe and protracted depression. We must reject any temptation to search for a mechanistic and special explanation of the downturn of the long wave: everything is in underlying trends. Since 1974 we have rapidly become aware of the fact that logarithmic growth, so easily extrapolated without inhibition by growth economics and by statisticians, has been broken; new trends, as far as they can be ascertained, run at a much lower percentage and there are important sectoral setbacks. Markets are glutted and there is considerable overcapacity in men and plants in developed countries. The new situation has been rationalized in the policy proposals of the Club of Rome, going so far as to suggest zero growth. This goes beyond historical experience of downswings, which witnessed only slower rates of growth.

A further significant feature of the downward phase has always been an acceleration of technical progress, especially during the first ten years of the phase. This is easy to explain: less capital is needed to expand industrial capacity and, in the face of a pressure on prices, funds are switched to increase the competitive capacity of firms, i. e. to technical progress and to rationalization: as these develop, older machinery rapidly becomes obsolete, is left idle and finally disappears. This process has taken unusual dimensions these last years. With a fantastic increase in research laboratories, inventions have created immense new opportunities, right through the post-war years: they have become a part of an organized structural development. But as recent experience suggests, many opportunities were not seized during the upswing, so that there was an enormous unused potential of rapid technical appliances when the 1974 crisis broke out. At this very same time, under the pressure of dire circumstances, firms became cognizant of the fact that they had not rationalized their organization considerably and that there were vast possibilities of reorganization, with a serious decrease in personnel. Progress in produc-

tivity per man became unusually high and vastly surpassed the possible impact of an ordinary cycle.

The combination of broken trends in quantities and of high technical progress has produced an amount of endemic and protracted unemployment which people intimately feel to be more untractable than business cycle unemployment. And so it is: increases in production should not, nowadays, decrease unemployment before they become very substantial. Urges toward rationalization remain altogether too strong and they can be satisfied more easily by not reengaging personnel than by dismissing it. Within a few years, structural unemployment, practically nonexistent in 1970, has become the great social problem of the day. Beyond these problems of immediate concern, lurk two great problems, which people forget in periods of upswing: the fear of scarcity of natural resources and the growing realization of pollution. Before 1970, in an atmosphere of "primeval" growth, governments and business men showed practically no concern. It certainly is not meritorious that, except for a few specialists, hardly any economist showed any concern at all.

Such a lack of concern has existed persistently throughout former periods of upswing since the industrial revolution. It is typical that W. St. Jevons expressed his concern about logarithmic growth and diminishing reserves of coal in the 1870's; and A. Hansen formulated his theory of maturing economies, under the disappearance of the "frontier", in the 1930's; this latter argument resounds much like Sismondi's warning that crises might grow worse as external markets disappear: that was around 1820! In between, the industrial revolution was meant to produce growth with a considerable force of inertia.

Very characteristically, since about 1970 concern about the exhaustibility of natural resources has become a general and major topic for public opinion as well as for specialists. Lack of arable land as well as exhaustion of mineral resources are invoked, notwithstanding the extraordinary capacity of scientists and engineers to develop known resources since the last thirty years. Finally, the problem became blatant when the oil crisis broke out and showed suddenly how dramatic the problem could become through a combination of technical, geographical and political influences.

Pollution is the obverse side of the same problem of natural resources. In the past, it had appeared as a local concern, or specific

to certain industrial processes. Suddenly, it took dimensions which menaced, not only immediate environment, but also land, sea and air generally. Cognizance of this question became so acute that ecologists were able to muster political pressure groups. None of this happened in the heyday of growth economics.

Money has always been involved in the downturns of the long waves, very seriously indeed: whereas the monetary system as it stood worked smoothly in the upswings up to a point where tensions developed, the downturn stood in the center of monetary crises and reforms. Indeed, the institutional setup of the monetary system was transformed at these very moments: but every time, the process spanned a few years, before and after the crucial dates of the downturn in the pricing system. The gold standard system was introduced in England in 1818; the gold-silver bimetallism crashed in 1874; a general upheaval of currency parities was introduced after 1920.

The period centering around 1974, considered as the pivotal date of the downturn, witnessed vastly more devastating changes in the monetary standard of the world. Strains in the system of international reserves started to develop early in the upswing period, but remained "underground" while the monetary institution worked smoothly on the surface, to the point of allowing wide measures of liberalization of international payments. The world became conscious of this growing menace before it materialized in the years 1967 to 1974: R. Triffin was the first to describe it in this *Review* and in a book published in 1957:¹ the articles produced a vivid interest and developed consciousness of the problem in intellectual circles.

The first accident in the world monetary system arrived in 1967, as the long wave neared its end: it was the fall of sterling, which still looked like a classical move. But in 1968 the fixed price of \$ 35 to the ounce of gold was abandoned and a free gold market instituted: issue banks' reserves were still valued at the price, a fact which practically immobilized them; but the link between money and gold supply was severed. Conditions were set for the liquidation of the gold standard, which were very similar to those set in 1874 for the liquidation of the silver standard. Implications moved swiftly. In

¹ R. TRIFFIN, *Europe and the Money Muddle*, Yale University Press, New Haven, 1957; "The Return to Convertibility: 1926-1931 and 1958? or Convertibility and the Morning After" in this *Review*, March 1959, pp. 3-57; "Tomorrow's Convertibility: Aims and Means of International Monetary Policy" in this *Review*, June 1959, pp. 131-200.

1970, all currencies were rendered inconvertible in terms of dollars; in 1971 the dollar itself was rendered inconvertible in terms of gold. By various moves, the I.M.F. then turned away from the use of gold as a reserve currency and developed the special drawing rights system, instituted in 1968, as an autonomous type of reserve; for accounting purposes, the I.M.F. monetary unit became an average of a mixture of various currencies. Meanwhile, the market developed spontaneously a euro-dollar system of vast proportions. Simultaneously, floating exchanges became the accepted rule; a strong current of monetary economists advocated them in the name of pure economics and explained the former fixed rates away. The change is thus very radical: in current practice, in the institutional setting and in theoretical thinking.

As regards the pricing system, the situation is anomalous. The picture is correct until 1974: after a long and slow rise, prices were suddenly subject to an intense upheaval within a short time; all groups of prices have been involved, retail prices, and still more, wages growing faster than wholesale prices; but there were no serious accidents in relative prices. From 1974 onward wholesale prices became very unsettled and, on an average, kept well below retail prices, even if some prices like petroleum, shot upward. There were severe changes in relative prices, unsettling many branches of the economy. The relative rise in wages became the prevalent influence obliging rationalizations and technical progress. Price relations became obviously of the type conducive to economic recession and reorganization. Nevertheless, the general trend of prices continued upward, without relenting, at impressive rates; the world settled in an inflationary process, to the point that most prices doubled since 1970 in those countries which were able to limit best the inflationary process. There is no such thing as a general fall of prices which both the long wave and the cyclical process would have provoked in the past. Governments entered into half efficient anti-inflationary policies, which brought annual price rises back from somewhere between 12 to 15% in 1973-1974, to somewhat round 6%. Considering the urge toward monetary stimulations of economic activity which continued to prevail, public opinion was led to believe that a 6% per annum rise was not inflationary!

If such a standard is accepted as a theoretical background for economic policy, it means that governments and monetary authorities actually realize what J.M. Keynes considered a theoretically

interesting craze: a system of melting money resembling Silvio Gesell's regularly melting standard! 6% per annum is one half of the 12% Gesell took as an example. To measure its implications, in contradiction with former ideas about having a stable standard of value, let us state that at 6% increase per annum, the value of the standard falls from 100 to 1% in seventy nine years. The end of the long upward swing, with its smooth working of the monetary system, has always provoked monetary accidents. But no former case has had such sweeping consequences as present developments. The causes and consequences of melting money should be analyzed very urgently. Previously, the monetary institution was in askance; nowadays, the very concept of a standard of value is involved, in all its numerous consequences. It is not yet possible to predict what the outcome will be: a breaking away of the standard in accelerated inflation or efficient measures to restore it. Sheer extrapolation of existing price trends is the most unlikely hypothesis.

Interest rates have moved in the wake of price trends; they too increased suddenly when the pricing system broke away. The long phase has not provoked low interest rates, notwithstanding the high liquidity of the market resulting from monetary inflation: on the contrary, interest rates moved up in apparent relation with the fact of a melting standard of value for claims and bonds. From that point of view, they were insufficient, because the difference between interest rates and inflation rates mostly remained negative; it cannot be said that the market imposed a "real" rate of return instead of a monetary rate. From a debtor's point of view, rates prevailing since 1974 are entirely anomalous. They have never been practised in developed countries since the industrial revolution. They would not have been possible, were it not for the immense outstanding debts of public bodies and of private people (for housing); these may hope for an easing of their debts in due time by monetary depreciation. But the rates are definitively restrictive for business concerns, whose interest rates must match a marginal efficiency of capital from the very first year.

All commercial business, generally conducted on the basis of short term bank indebtedness, must also meet the cost of such high rates. This reacts, of course, on capital development: for, as diminishing and low rates of return on short capital show, borrowing rates should be lower to match the marginal efficiency of capital in new developments.

The question finally arises: what are the features of the downward phase of the long wave, as we can witness them four years after the crucial point of the downturn? The question is largely answered in the preceding pages, in so far as these features are the direct outcome of the specific problems facing the downturn. Further conclusions should be couched in general terms.

As regards real developments, we are obviously living for some time in a period where depressions are protracted, while phases of prosperity spend themselves rapidly. Underlying this phenomenon, trends of growth of the economy should proceed at a much lower rate than in the recent past. Furthermore, the wage component of national income is maintained relatively high by union action and technical progress proceeds rapidly under extensive research programs: lowered rates of profit press for rationalization. Under these combined influences unemployment should remain rather untractable and be a major social concern. Pressure will continue to push people out of primary and into tertiary production, including a relative growth of public employment.

The outlook in monetary and financial matters is less clear. As long as it lasts, the anomalous rise affecting the entire pricing system will entail a rapid depreciation of all outstanding debts, including the monetary assets. The extant overindebtedness, both national and international, could thus be wiped out in a few years, were it not for the tremendous rate at which public borrowing is proceeding. Coupled with the price rise, this borrowing becomes a new form of indirect taxation. The entirely new conditions thus maintained since 1974 sustain an excessive level of interest rates, both long and short; low interest rates, which would seem normal in the face of low borrowing by firms, cannot be expected as long as price inflation lasts.

Monetary authorities and the general public are certainly not yet cognizant of the full implications of a general system of floating exchange rates; contrary to certain expectations arising out of pure economic theorems, but in accordance with previous experience, floating exchanges are highly unstabilized and provoke serious purchasing power disparities. In such troubled times, national authorities take divergent views as to the acceptable rate of inflation. A rift of thought is maintained between those who advocate the end of inflation and those who want to maintain the use of monetary stimulation to provoke employment. The clash may last a long time,

with varying degrees of success. It is too early to say whether the world monetary system will return to some form of stable exchanges or plunge into the disorders of irregularly melting money.

Finally, we shall probably encounter other cases of sudden economic impacts of diminishing natural resources than petroleum. They should not be so dramatic but might multiply. The probable point of impact will be in the north-south relations, involving political as well as economic issues.

Louvain-La-Neuve

LÉON H. DUPRIEZ