

THE ROLE OF NATIONAL ACCOUNTS IN CONJUNCTURAL RESEARCH—THE CASE OF CZECHOSLOVAKIA

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This article discusses the revival of interest in research on cyclical behavior in the socialist countries, and the resulting shifting requirements placed upon the national income accounts. The first section discusses the economic experience and the institutional factors leading to this shift in emphasis. The second section deals with the use of national accounts in cyclical analysis, with particular reference to the Czechoslovak experience. The third section extends the discussion to the use of national accounts data for economic forecasting. The final section discusses the theory of economic fluctuations under socialism, and compares it with cyclical behavior in capitalist economies.

(a) *Factors making for a change in the demand for national income statistics*

The unquestionable existence, so far, of quasicyclical fluctuations in the growth rate in some socialist countries, as well as the growing recognition of this fact among research workers and planners, are among the basic factors likely to bring about a far-reaching change in the countries concerned, relating to the demand for current statistical information. As the National Accounts supply his daily bread to any economist specializing in macro-economic analysis and projections, particularly in the short period, any adjustments will, probably, concentrate upon the traditional Material Product System.

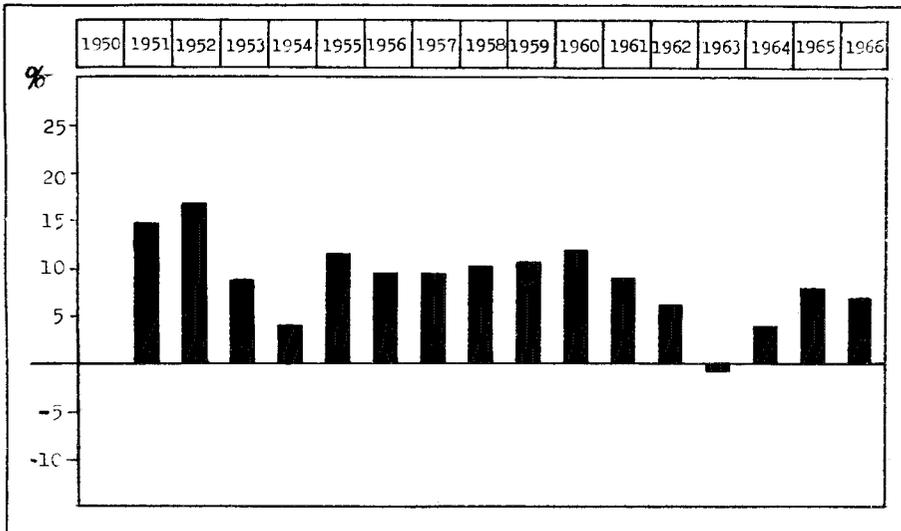
The main factors inductive to such development relate both to the gnoseological and institutional spheres. As to the former, there is the re-discovery of the decisive influence—in the short run—of endogeneous forces working within the economy, as against the transformative ambitions of the planner. In addition to the plan, as we now know, there have always been felt the effects of relatively autonomous decision-making, both at the enterprise and at the workshop levels, operating as a rule in line with, but sometimes contrary to the provisions of the plan.

As shown below, it was the combined effect of macro- and micro-economic decision-making which resulted in the growth-rate fluctuations presented in *diagram no. 1*. (Analogous data could be given for some other countries, likewise industrially developed and, in view of their natural resource endowment, rather heavily dependent on foreign trade.)

In contrast to an over-simplifying exposition of the “law of steady economic growth under socialism”, generally accepted under dogmatic influence until quite recently, it was the bitter experience of the early 1960s, particularly in Czechoslovakia, that served to drive home an important lesson. This experience showed that one cannot assume that the undoubted potential advantages of a new socio-economic system will be implemented automatically, or even that they are actually already in existence.

As a result, such terms as “Konjunktur” and “Konjunkturforschung”,

DIAGRAM NO. 1



Rate of Growth of Industrial Output (producers' goods)

which had been eliminated from our economic dictionaries for a very long time,¹ came to be fully rehabilitated. In its turn, such development necessarily led to a renewal of interest in the national income and expenditure statistics, which—as discussed below—have to be re-modelled so as to provide the indispensable framework only within which can conjunctural research be carried out effectively. But there also is another factor operating in the same direction.

In close connection with gnoseological developments there followed institutional changes. The system of economic planning that was based, primarily, on management by binding directives (commands) has been under discussion for many years. Gradually it is being transformed, in Czechoslovakia and elsewhere, into a system in which the economic policy of the centre is to be implemented, primarily, through the application of an adequate combination of policy instruments (including the plan, assigned a position of *'primus inter pares'* within the rather large family of policy instruments). It is an economic policy

1. In evidence of the pioneer efforts of the Soviet economists of the 1920s, particularly of A. Mendelson, his definition of conjunctural analysis may be quoted:

“ . . . ‘Konjunkturforschung’ ascertains certain facts in a field delimited by theory, giving a quantitative statistical picture of the various elements of the economic process, in addition to establishing empirical tendencies against the background of the laws of reproduction revealed by the abstract theory of reproduction.

“It is self-evident that for Marxist analysis, dialectical methods of research are indispensable: the ‘Konjunktur’, being a certain phase—of shorter or longer duration—of the process of reproduction *in concreto*, is analysed in its evolution, being both the result of preceding and the germ of future development. Once the facts are ascertained and systematized, and the various elements brought into an unified system reflecting the given economic process, theory has to supply their interpretation.” A. S. Mendelson: *Problema konjunktury*, Moscow, 1928, p. 20. (See in more detail chapter “The Concept of the Plan” in *Soviet Economists of the Twenties on the Mechanism of Functioning of a Socialist Economy*, by J. Klacek and J. Rybáčková, Institute of Economics of the Czechoslovak Academy of Sciences, Prague 1967 (in Czech)).

instrumentarium, conceived in such a way, that now has to induce the economic subjects to act in conformity with the economic policy of the centre as embodied primarily in the provisions of the plan.

Such institutional changes were bound further to reinforce the interest in conjunctural research, and indirectly, in a National Accounts System, suitable to serve as an effective tool in economic analysis and planning.² Until quite recently, as far as analytical work is concerned, there virtually was a monopoly of traditional plan-implementation analysis, confining itself, basically, to a comparison of planned and actual developments (i.e. of command and command fulfilment). At the present, however, there is a shift of emphasis towards comprehensive short-term analysis, examining the operation of endogenous forces within the economy under the impact of the chosen combination of policy instruments. Thus, conjunctural research, operating within the framework of an up-to-date National Accounts System, has to provide the central planning authority with adequate information, enabling it to select a suitable programme-mix.

In addition, conjunctural research, in its follow-up analysis, has to supply current information on the effects, in the economic behaviour at enterprise and workshop levels, of the combination of policy instruments adopted. Speaking more concretely, it has to examine to what extent the structure of interests set up by the given system of economic planning and management, and by the selected programme-mix will secure such a pattern of economic behaviour as will be conducive to the implementation of the plan.

Moreover, the new concept of the plan, centering on the projection of macro-proportions, is bound to result in a shift of emphasis from output (and input) statistics in physical units to national accounts statistics. Up to the present, the balance of the national economy, as the national income and expenditure statistics were called, tended to be the domain of a few specialists versed in the intricacies of a system of rather restricted relevance in practical planning. Now, it will have to serve as the primary point of issue both for current planning and short-term economic analysis.

There should, however, be no illusions; it would be rather dangerous to assume that the national income statistics could take over such a new and rather important function without being subjected beforehand to major changes. In particular, these changes relate to the familiar issue of the material versus the comprehensive production concept, in addition to problems of classification, periodicity, etc. In addition, under the influence of thegnoseological and institutional transformations mentioned above, in the field of statistical and analytical work there is a growing recognition of the need for concentration on short-term

2. “. . . For three years already, the State Planning Commission and the National Commissariats have been trying to construct a detailed, long-term plan (*kalendarnaya perspectiva*) of economic growth for our country. Planners at Gosplan came to the conclusion that such a plan of the economic development of the USSR can only be drawn-up in the shape of perspective national accounts. This is a new problem in economic science and practice.”—V. A. Bazarov, *O metodologii konstruktivnykh planov*. *Planyoye khozyaystvo*, 1926, n. 7—Theses of lecture held in the Methodological Commission. (Quoted from paper by Jana Rybáčková, *loc. cit.*)

economic analysis, as against the preoccupation in our countries so far with long-term projections. Side by side with this development there is a shift of emphasis, considering the past allocation of the analytical and predictive research potential, from rather sophisticated econometric model-building back towards "naive" forecasts, based primarily on successive approximation methods. These facts are also likely to affect the demand for national accounts statistics.

(b) *The Use of National Accounts in Conjunctural Analysis*

In this review there certainly is no need further to elaborate the proposition, tacitly or explicitly accepted by researchers ranging from F. Quesnay or Lavoisier to A. F. Burns or A. Mendelson, to the effect that national accounts provide the only framework within which conjunctural analysis can be usefully carried out. The more reliable, more detailed and more operative is the National Income Accounts System, the more dependable and more operative will be conjunctural analysis (and the less unreliable and less risky will be economic forecasting). In fact, this is one of the rather frequent cases where we in Czechoslovakia are rediscovering the validity, independent of the given socio-economic system, of many economic laws and propositions—including the rather obvious instance of the law of supply and demand.

The mechanism of the wave-like movements in the growth rate which were mentioned above may be summarized as follows. In a relatively small, industrially developed socialist country there is a tendency for the raw-material base to lag behind the growth of manufacturing industries whenever the rate of growth exceeds a certain optimum level.³ Such development is due to a tendency for underfulfilment of production (and investment) plans in the extractive and basic materials industries and for overfulfilment of such plans in the higher-stage manufacturing industries, resulting in the formation of what has come to be known as the raw-material barrier.

This in turn will bring about additional imbalances in foreign trade. That barrier, likewise, is bound to slow down economic growth, particularly in a smaller country with limited raw-material endowment. The particular role of fixed-capital investment was found to be in the fact that the investment cycle, originally started in the beginning of the fifties, gives the operation of the raw-material and foreign trade barriers its specific, oscillating character.⁴

Within the scope of this paper it is not possible, however, to analyze the interdependence of the raw-materials and foreign-trade barriers, although they form a system of interconnected vessels, with the same specific behaviour in the quasicyclical movement of the economy. As a result of their joint operation, a turning point is reached in the concluding stages of both the phase of accelera-

3. Cf. Prof. Michal Kalecki, *Outline of the Theory of Growth for a Socialist Economy* (in Czech translation), Prague 1965, p. 137.

4. Economic disequilibrium ensuing from a growth rate planned in excess of the rate of balanced growth and resulting in a turning point being reached in the upward movement of the growth rate is intensified by the additional strain due to over-investment. Therefore, it seems to us that at this point the wavelike movement in the growth rate can be ascribed to the effects of subjectivist decision-making. As a result, it is held, for our conditions, that such movement is man-made and not endogenous to the given socio-economic system. This is also the reason why the term "quasicyclical" is used in the given context.

tion and of deceleration. (For details, see "The Wave-like Movement in the Growth Rate and the Cycle in Inventory Formation" (in Czech), *Plánované Hospodářství*, 1967, no. 9, pp. 1–16.)

A graphic presentation of the mechanism of wave-like movements in the growth rate is to be found in *diagram no. 2*.

In the first line of our diagram, data are presented on year-to-year changes in investment activity, covering a period in excess of two full cycles. Below, the echo-effect of these fluctuations is shown in two significant peaks in the increments of the flow of new industrial production capacities. With a time lag of about eight or nine years, corresponding to the length of the construction and gestation period under given conditions, the two peaks in investment activity about 1951–52 and 1959–60 correspond to similar peaks in the increments of the flow of new fixed assets, coming into operation in industry in the 1959–60 and 1964–66 periods. (See line two).

The third line in our diagram indicates a fairly satisfactory synchronization of the flow of new output capacities (mainly in heavy industries) with the rate of growth of the output of producer goods industries. The latter is, as might be expected, at a maximum when a peak is reached in the flow of completed investment projects coming into operation. Since throughout the period under investigation investment tended to be concentrated on the extractive and basic manufacturing industries (i.e. iron and steel, power, and building materials in addition to heavy chemicals), the peak in the flow of such new output capacities represented the primary factor, alleviating the raw-materials barrier at this phase of quasicyclical development.

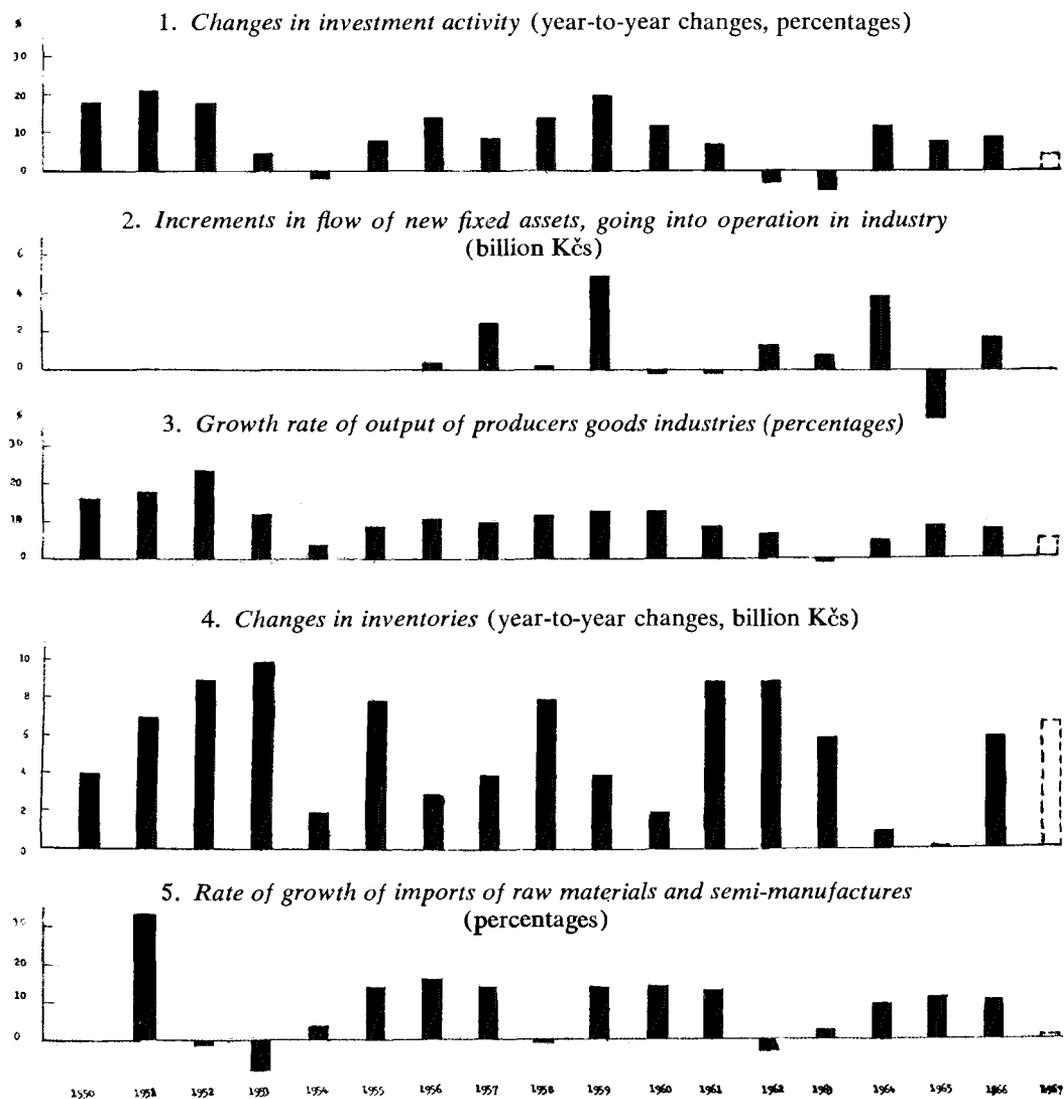
Finally, the last line presents a further echo-effect of the investment cycle, showing up in significant inventory changes due to expectations relating to further developments in the supply position. In those years when the increase in the flow of new industrial capacities is at a maximum, the supply position is improving. Enterprises will adjust themselves to such a change by lowering their inventory-turnover ratio, thus alleviating still more the supply position in the economy as a whole. As a result, there will arise a strong and self-perpetuating tendency towards inventory reduction, and the growth rate will tend to rise. And *vice versa* for the results of a decrease in the flow of new capacities.⁵

A somewhat deeper insight into the decelerating effect of excessive investment in inventories and capital under construction—and the accelerating effect of investment—is made possible by incremental analysis, using year-to-year changes in accumulation (i.e. net investment) data, instead of the figures themselves. In 1961, for instance, out of the increment in national income (of about fifteen billion crowns) approximately two-thirds was used for raising net investment and about one-third for raising consumption. The increment of inventory

5. Cf. in more detail a paper on "Fluctuations in the Growth Rate in a Socialist Economy and the Inventory Cycle" (A contribution to the theory of "Konjunkturforschung" applicable to conditions of Socialist country). Proceedings of the SSRC Conference "Is the Business Cycle Obsolete?" held in London, April 1967. (Edited by Prof. Martin Bronfenbrenner).

DIAGRAM NO. 2

MECHANISM OF WAVE-LIKE MOVEMENTS IN GROWTH RATE
 (The echo-effect of investment waves in new-output-capacities flow, in growth rate of
 producers goods industries, and in inventory formation)



investment and of investment in fixed capital-under-construction was, however, larger than the rise in consumption or the rise in operational fixed capital formation (i.e. net of capital-under-construction).⁶

Anticipating the problems of economic forecasting discussed below in section (c), we may here add that in this respect there is an analogy between economic development in 1966 and in 1961. Last year (1966) the increment in inventory investment and in capital-under-construction was likewise larger than the increase in consumption or the increase in fixed capital formation (net of capital-under-construction). *Viz.* section (c).

On the other hand, development in 1964 was in sharp contrast with development in 1961 or in 1966 as described above. In 1964, the increment of national income was far smaller; in spite of that the increase in consumption was as large as, for instance, in 1966. This was made possible by the fact that in 1964 there was a relative decrease in inventories and in capital-under-construction. Thus, disposable national income (that is national income that is reduced for a rise in the volume of inventories and capital-under-construction—or increased for a decline) was considerably higher than national income in the current definition. On the other hand, in 1961 as well as in 1966 disposable national income was considerably lower than national income as currently defined, for the very reason that inventories and capital-under-construction rose at a high rate.

If we compare the process of reproduction to a pipe-line into which there enter the factors of production and from which there flow final products, either for consumption or for raising the volume of productive and “non-productive” capacities in operation, then we may say that in 1966 (as in 1961) there was an excessive increase in the volume of factors of production that are moving inside this pipe-line. For this reason, the output of final products for consumption or fixed capital formation was relatively lowered in relation to the input of factors of production. The pipe-line effect was negative.

On the other hand, in 1964, for instance, an opposite process was in operation. Inventories and capital-under-construction declined. Therefore, the output of final products was considerably larger than might have been expected from the input of factors of production. The pipe-line effect was positive.

Thus, in 1964 disposable national income was higher by 6,5 billion Kčs than national income in the current definition. On the other hand, in 1966 the opposite holds true. Disposable national income was about 6 billion Kčs lower than national income in the current definition. It is obvious that a negative change in the relation between “statistical” and disposable national income in the range of more than 12 billion Kčs—or roughly of 7 per cent of national income—must have a decisive effect on economic equilibrium, bringing about increased tension in the economy and rendering quite possible another period of deceleration in the rate of growth.

For these reasons inventory investment and investment in capital-under-construction, as shown separately in the national accounts, represent one of the main factors which alternately make for an intensification or alleviation of economic tension, for intensification or alleviation of economic imbalance and for the resultant fluctuations in the rate of economic growth.

6. I.e., the increment in the flow of new fixed assets going into operation in industry.

(c) *The Use of National Accounts in Economic Forecasting*

Having now dealt with the use of national income accounts in conjunctural analysis, we may now pass to the more difficult case of economic forecasting. In spring 1967 our conjunctural research department was faced with the following economic situation.

Already from mid-1966 some deceleration of economic growth was to be observed in the decisive and dynamically most sensitive section of the economy, i.e. in industrial production. In the first half of 1967, deceleration continued.

The decline in the rate of growth of industrial output was not the only signal which might indicate a turning point in the quasicyclical movement of the growth rate. The increase in inventories which likewise started in 1966 was continuing to an even greater extent in 1967, thus absorbing a considerable part of the national income increment.

Finally, some further strain could be observed in the balance of trade with the countries of the West, with exports to these states developing more unfavourably than imports. Investment activity, likewise, was such that we could not exclude the possibility that a peak had been reached in this field. However, it is quite possible that a slight decline in investment activity was already the first result of anticyclical policy being adopted in these days.

Thus, there were three significant symptoms (or four if the decline in investment was the effect of a spontaneous process and not of concerted economic policy) which set up a certain analogy between the 1967 situation of the economy and conditions that prevailed, say in 1961, in the first year of deceleration in the last quasicycle.

On the other hand, there were significant differences. While the foreign trade barrier was already operating, the materials barrier made itself felt in some sectors only. The acute imbalance between basic and manufacturing industries which characterized the corresponding phase in preceding quasicycles, 1953–1954 or 1961–1963, did not show up in the contemporary situation.

Not yet having at our disposal a series of leading indicators for identifying turning points in the growth rate of the economy in advance, such as was evolved e.g., at the National Bureau of Economic Research by Moore, Burns and Shishkin, we were in a rather tricky position, even if our forecast was to serve for experimental purposes only. (There is, however, the possibility that the time-lag between growth-rate and inventory cycles which shows up in diagram no. 2 might after further research justify the employment of inventory data to serve as “blinkers”, giving a warning of a near turning point ahead).

It is true that, as mentioned already, the raw-materials barrier did not seem to operate to any great extent. In this connection, however, we had to take into consideration another factor. The behaviour of enterprises—particularly under conditions of the new system of economic planning and management—is influenced not so much by given conditions in the sphere of supply of materials and semi-manufactures as it is by expectations relating to future development. Uncertainty in this sphere is, possibly, a more significant signal than statistical data, which, anyhow, are relatively few and not very reliable so far. An enterprise which expects a worsening of its supply position will obviously “economise” supplies and possibly even restrict the growth of its production.

It will do so in order to safeguard a smooth flow of its own output for future months. (As to the impact of the simultaneous “hoarding” of materials and semi-manufactures, see above.) It is for this reason that increasing uncertainty as to further development of the supply position may in itself bring about unfavourable development. Expectations, being a subjective factor, may in themselves become an objective factor which determines the development of real economic processes.

However, the behaviour of enterprises, described above, and sometimes referred to as a kind of “socialist speculation”, is not as irrational as it might appear at first sight from the macroeconomic point of view.

Under capitalism, the inventory-turnover ratio forms one of the major problems of production management. The enterprise will carefully balance the costs and risks of minimization of inventories as against the expense incurred by holding excessive inventories. The smoother is the supply (and transport) situation, the lower will it be possible to hold the inventory-turnover ratio, optimizing this relation on the basis of economic calculation.

This principle, however, applies (or ought to apply) to production management in socialism as well, particularly under the new economic system. Therefore, excessive inventory accumulation sometimes referred to as a speculation is, as a rule, dictated by the given or rather the expected supply situation, and in line with the principle of economic calculation at the enterprise level.

Such rational behaviour of production managers in inventory formation, even if rather dangerous from the macroeconomic view as a cycle-generating factor, should be taken as a significant indicator of changes in economic equilibrium and of imminent alterations in the rate of growth that are bound to result from these changes in economic equilibrium.

For these reasons it may well be that the mechanism of fluctuations in the growth rate still continues to operate, especially in the present situation. Autonomous factors inside the economy which in the past made for quasicyclical changes in the rate of growth may continue to operate, particularly—but not only—because of the restricted extent, so far, of the operation of the new system of economic planning and control.

The traditional system of planning and management was rightly criticized for the fact that it lacked an economic mechanism which would call for rapid reaction to economic tensions at a time when they are only *in statu nascendi*, below the surface of current economic life. When the new economic system is fully implemented and the market mechanism sufficiently objectivized, then signals from the market and other information will more rapidly indicate turning points in the development of the rate of growth. Thus, following comprehensive analysis, such signals will give rise to adequate countermeasures, which will make it possible to reduce the amplitude of fluctuations or to prevent them altogether. As a result, far-reaching economic losses, due to under-exploitation of productive resources in the trough phase of the quasicycle, may be lessened to a considerable extent or even made to disappear entirely.⁷

7. This, of course, requires that there will be no recidivism into a chronic disease so far, that is into overinvestment.

For these reasons, we concluded that a process similar to that described above might well be in its initial phase at the given stage of development of our economy. It seemed to us that with the rate of growth of industrial output at a high plateau for some time, new tension and strain were developing with a resultant deterioration in the supply position. Enterprises adjusted themselves to such a change by raising their inventory-turnover ratio, thus worsening still more the supply position in the economy as a whole. As a result, the growth rate somewhat declined. In our opinion, such a process, jointly with the effects of more or less unavoidable frictions due to the transition from the old to the new economic system, might make for deceleration of growth. Final judgement and quantitative evaluation of the relative weight to be attributed to one or the other factor making for deceleration must, of course, be left to a later stage of analysis.

Some objections which may be made against such an interpretation of present developments will now be discussed. Firstly, the interval between the onset of the deceleration in 1961 and, possibly, in 1967 would be somewhat shorter than the intervals observed in the preceding quasicyclical development. Such reduction in the cycle length might, however, be explained by the fact that of the two cycle-generating factors, the inventory cycle is gaining in importance, as against the investment cycle. As can be observed from data for mature capitalist countries, inventory cycles have a strong tendency to reduce the wavelengths of economic fluctuations.

Another objection might relate to the fact that the flow of new industrial capacities (as compared with the stock of existing capacities) is of too small a size to induce fluctuations in the growth rate. However, the interpretation of the complex interrelation in the dynamics of supply and demand factors must be based on incremental analysis. Increments in supply, absolutely small in size, may have a fairly large effect on relative changes in the development of the supply-demand ratio. Such changes in their turn will bring about the cumulative reaction in enterprise behaviour (relating to inventory formation) which was described above.

It is particularly in this context that the role and importance of comprehensive and operative “Konjunkturforschung” shows-up most clearly. As was fittingly noted by Prof. Branko Horvat, the fact that the existence, so far, of quasicyclical fluctuations in a number of socialist countries has been virtually ignored on the basis of a fictitious “law of steady economic growth in Socialism” necessarily led to the further fiction that there is no room for “Konjunkturforschung” in a Socialist economy.⁸ The costs to the economy of such dogmatic fictions are however, being more and more realized. One of the major items to be included in a related profit and loss account is represented by a degeneration of the national accounts system as against earlier concepts developed in the Soviet Union in the ’twenties, or in Czechoslovakia e.g., in the late ’forties. This is so because insufficient, unsuitably classified and rather clumsy statistical information in this field necessarily led to inadequate economic decision-making.

8. The “Classical Age” of Soviet economic science did not recognize this fiction—as it ignored many others.

(d) *The Use of National Accounts in the Theory of Economic Fluctuations under Socialism*

The basic causes of both deceleration and acceleration are linked to the development of the relation between supply and effective demand, under Capitalism as well as under Socialism. While, however, in a Capitalist economy deceleration is due to deficiency of effective demand, the opposite applies to a Socialist economy. There, deceleration is due to economic strain and tension which ensue from the lagging behind of supply under the intensified operation of the raw-material, foreign trade, and production capacity barriers.

It is for this reason that the way out of the trough in the wave-like movement in the growth rate (i.e. the transition into acceleration) differs in Capitalism and Socialism. In the classical model of Marx, recovery will start when the moral and physical "Verschleiss" of fixed productive capital gradually balances the relation between supply and demand; under modern conditions, acceleration will be brought about by co-ordinated application of the new instruments of economic policy, including local wars and more intensive war preparation. In Socialism the transition into acceleration is rendered possible, first of all, by maturing production capacities, the construction of which was started in the period centering about the peak of the preceding investment cycle. Thus, supply is increased, while simultaneously the fairly low rate of growth (and low investment activity) will relatively reduce demand, particularly in the basic branches of industry.⁹

An analogous argument applies to the transition into depression or deceleration. Under Capitalism, maturing investment projects accentuate the excess of supply in relation to effective demand, thus strengthening the basic contradiction of Capitalism. Under Socialism the excess of effective demand is accentuated at the peak of the quasicycle by maximal investment activity, connected with an increase in the volume of capital-under-construction.¹⁰

In both social systems, we are thus confronted with analogous processes proceeding, however, in opposite directions. The inventory cycle, analysed above, apparently increases the amplitude of fluctuations in both social systems. In this field, too, cyclical development again operates in opposite directions. Under Capitalism, in the initial phase of a decline in output (or of deceleration), inventories are being reduced, thus still more increasing supply, compared with current output. In a socialist economy, inventories are steeply rising at this phase, as a result of "speculative" tendencies, mentioned above, which accentuate the excess of effective demand.

An objection may be raised on the following grounds: Our interpretation of the mechanism making for growth rate fluctuations assumed a causal nexus which operates in a definite one-way direction. The foundation of an investment wave, e.g., in the 1950–52 period as shown in line one of diagram no. 1, brings about a lagged maximum in the flow of new industrial capacities, in the 1957–59 period in this case (see line two in our diagram).

This leads to a peak in the rate of growth for the output of producer goods industries, synchronized with the increase in the flow of new output capacities, as is apparent from line three.

9. The feedback effect of micro-economic decision-making in stock formation, which, though secondary in the chain of cycle-generating factors, is of major importance, is mentioned below.

10. See footnote no. 9.

Finally, the cycle-generating echo-effect of investment waves is accentuated by the inventory cycle, as described above. (See line four). The slight, but significant, time-lag of the inventory-investment series as against the industrial-growth-rate series will be discussed at a later point.

Such an interpretation of the causal nexus between investment waves and growth rate fluctuations is in sharp contrast with another explanation. Some economists hold that the causal nexus operates the other way round. According to them, it is precisely the peak in investment activity which makes for a high rate of growth, particularly in producer goods industries.

This theory is, in fact, modelled on the Keynesian trade cycle under capitalism. There, it is quite clear that, under conditions of underemployment of the factors of production, a rise in investment activity brings about an increase in demand and, therefore, in industrial output. In an economy of our type there prevail conditions of relatively full employment of the factors of production (at least under the previous planning and control system, and excluding the through phase in the output growth rate). There is no need, therefore, for additional investment to raise the degree of utilization of output capacities and man-power. On the contrary, it is exactly the peak in the investment drive which, under our conditions, intensifies economic strain and tensions, induces inventory hoarding and thus sets up conditions for a decline—and not for a rise—in the rate of growth of output in the immediately following phase.

This is only another instance where it can be seen how important it is carefully to differentiate between a demand-oriented capitalist and a supply-oriented economy of our type.¹¹ With us, acceleration is not due to additional investment (i.e., to additional demand) but primarily or, more precisely, initially to additional output capacities coming into operation (i.e., it is due to additional supply).

Finally, there is an interesting time-lag problem. Examining in more detail our diagram, we find that inventory investment reaches its maximum at a point when the output growth rate is already declining. This fact seems to be in agreement with our thesis that it is inventory investment which, under a kind of multiplier-effect, reinforces the deceleration in output growth which would follow from the fading-out of the echo-effect of changes in investment activity on the flow of new output capacities.

Again, another interpretation is possible. It may be held that here, too, the causal nexus operates in the opposite direction. It may well be that it is the deceleration in the rate of growth which makes for higher inventory investment, as a result of a temporary decline in demand. A definite answer to such an objection will only be possible when more data will be available and analyzed relating to the structure of inventory investment. Reference is made to the question whether the changes in inventory formation primarily relate to stocks of raw-materials and semi-manufactures, or to stocks of finished products ready for shipment. However, it may well be that there is, in this case, a two-way interaction, with a significant feed-back effect.¹²

11. Cf. *Problems of Economic Dynamics and Planning; Essays in Honour of Michal Kalecki* (Warsaw, 1964), and "Economic Growth", pp. 27–30.

12. Postponement or abandonment of some investment projects will result in the cancellation of orders placed with the engineering industries though work on these orders may already have begun. Thus, inventories will be increased still further because of the rise in "work in progress", and not likely to be completed!

The time-lag of inventory investment as against the industrial growth rate is not only apparent in the phase of deceleration of industrial growth. Though the lagged correlation is not so close in this case, the time-lag shows up in the phase of accelerated industrial growth as well. Industrial growth is already accelerating when inventory formation is still near a minimum. This fact seems to be in line with our interpretation that the causal nexus works primarily from inventory investment towards the rate of output growth, and not the other way round.

Cet article se propose de discuter les raisons du regain d'intérêt que connaît l'étude du comportement cyclique des économies socialistes et ce que cela implique pour les calculs de comptabilité nationale. Dans une première partie, l'auteur analyse les expériences économiques et les facteurs institutionnels qui mènent à ce changement d'intérêt. Ensuite, il aborde le problème de l'utilisation des comptes de la nation dans l'analyse des fluctuations. L'expérience tchécoslovaque est présentée en guise d'exemple. Dans la troisième partie, la discussion s'étend à l'utilisation des données de comptabilité nationale pour des fins de prévision économique. Enfin, l'auteur discute la théorie des fluctuations économiques en régime socialiste et la compare avec celle qui règne dans les économies capitalistes.