

THE STOCK PROBLEM IN HUNGARY

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In the present paper the author reviews the results of an investigation aimed at estimating the relative level of stocks in Hungary in terms of international comparisons. Though international comparison was limited by scarcity of data, it has still become evident that stocks as a whole, compared to production and sales, seem to be unnecessarily high. The investigation has been carried out in relation both to the level of stocks and their rate of increase.

The global volume and building of stocks, however, did not give a satisfactory explanation, and the investigation had to be extended to the individual groups of stocks separately. In order to facilitate the comparison, stocks were classified into the following groups: agricultural stocks, goods in process, industrial finished goods and manufactures held by users, and retail stocks. The classification was based on the different function of the individual groups. This classification of stocks could be compared only with the data of the U.S.A.

The international comparison revealed that both the volume and the rate of increase of stocks in Hungary is unreasonably high. They are high even if we consider that the growth rate of the economy in Hungary was greater than in any of the countries examined.

The author refers to the fact that the stock problem was one of the starting issues in the economic research process which led to the reform of the Hungarian economic management system introduced on 1st January 1968.

Many aspects of the "stock problem" are well known in economics. I mention here only a few of them: the relation between fluctuations in the volume of stocks and the business cycle; the endogenous or exogenous character of stockbuilding; the statistical problems associated with the measurement of the volume and the value of stocks, etc.

In Hungary the "stock problem" has emerged in a special form. The main questions are: "How large should the stocks be?", "Are stocks in Hungary large or small?", "Should stocks increase, and if they should, at what rate?"

The problem did not emerge immediately after the introduction of planning, but much later, and not upon theoretical, but practical considerations. For in principle a rational economy without stocks and reserves is inconceivable. Furthermore, stocks constitute part of accumulation—and here reference should be made to the similar problems treated in the paper by my Czech colleagues, Mr. Goldman and Mr. Flek; consequently stockbuilding might have been considered useful and inevitable in view of future development.

A high rate of stockbuilding on the one side and shortage in certain commodities, mainly raw materials, on the other, has often prevented us from speeding up economic growth. Therefore, the problem in practice has appeared in the form that our stocks were small.

This practical experience could have been justified even in theory. For our starting point was that in Socialism every kind of production was destined for satisfaction of needs; i.e., everything that had been produced was needed, and thus

production capacities had to be fully utilized. These efforts were sometimes and in some places restricted by “bottle-necks”, i.e., shortage. The temporary and partial shortage was regarded as inseparable from our development. Under such circumstances the volume of stocks did not appear too large as a whole and the fact that year by year a considerable part of the national income went to stockbuilding could have been rationalized.

But practice has proposed the “stock problem” in another aspect as well. From time to time, there were signs suggesting that storehouses were stuffed, and products were stored in the open air, additional storehouses were required, etc. This problem, being more and more pressing, contradicted another practical problem, that there was a shortage in certain products. This contradicted not only a practical problem, but it was, somehow, incompatible with the thesis that in Socialism every kind of production is “necessary production.”

This was called the stock problem in Hungary. Besides, the stock problem has grown out of its own sphere and become one of the initial issues in the economic debate process which led later to the reform of the economic management system.

In the following I would like to show how we have made an attempt to quantify the stock problem.

The question of how large stocks should be, i.e., whether stocks in Hungary are large or small and what increase in stocks may be justified, can be answered only in view of a certain requirement—the requirement of the role of stocks in the economy.

The major requirement of the role of stocks is neither that they should be as large as possible, nor that they should be as small as possible, but as much as required, i.e., they should be “optimal.” By this definition, however, nothing has been determined and nothing could be quantified.

The first step, therefore, was to make this requirement concrete in relation to the individual groups of stocks separately. Thus, stocks have been classified by destination, i.e., in our case by holders. On the basis of this classification different requirements were set for the individual groups in view of both their level and their change. These groups were as follows:

1. Agricultural stocks, including livestock, crop reserves and work-stocks.
2. Goods in process due to the requirements of technology. The assets fixed in investments in process are essentially of the same character.
3. Stocks of finished goods in transportation and distribution (stocks held by wholesale, foreign trade and stockpiling companies and those of finished products held by industrial companies).
4. Stocks of manufactures held by users, which are destined for securing continuous production.
5. Retail stocks.
6. Emergency stocks (reserves). Such stocks are justified by the probable occurrence of events which cannot be planned, foreseen or determined in advance.

According to this classification the pattern of stocks in the economy was the following:

PATTERN OF STOCKS
(Percentage distribution, 1963)

| | |
|---|-------|
| Agricultural stocks (work stocks, crops, livestock) | 27 |
| Volume of investments in progress | 16 |
| Goods in progress (excluding agriculture) | 6 |
| Stocks of manufactures (held by users) | 24 |
| Stocks of finished goods (held by producers and wholesale distributors) | 21 |
| Of which: wholesale stocks | (5.5) |
| Retail stocks | 6 |
| Total | 100 |

Different requirements should be set for the different types of stocks in view of both their level and their rate of increase.

In case of *agricultural stocks* we are not confronted with the danger of large unrequired stocks. Livestock is small rather than large; its increase is slow. Crop reserves are, in general, small and tend to run down by the next harvest. Data covering a longer period show that agricultural stocks have not risen, i.e., the poor harvest results were balanced by the rich ones.

There are certain fluctuations of greater extent in the volume of *investments in process* depending on how much investment was started, but their increase and volume was, by and large, proportionate to the whole investment activity.

We had no special problem when assessing the volume and increase of goods in *industrial production*. The stock of goods in process was in relation to the industrial production only somewhat larger than in U.S.A. (with different industrial structure).

The increment in stocks of goods in process was proportionate to the increase in industrial production.

In case of stocks of finished goods, raw materials and retail stocks the question whether stocks were large or small and the increase in stocks was fast or slow was more complicated.

The stocks of finished goods, which are in the process of distribution by destination (or transportation) may grow simultaneously with the increase in sales, but this is not necessarily linear.

In principle, stocks of manufactures held by users may increase together with production but in case of greater stability and better organization linearity does not seem necessary. Moreover, temporarily these stocks may even decrease.

There are different requirements for the increase of retail stocks. The rise in the standard of living and purchasing power differentiates needs. Consumers wish to choose the appropriate article from a greater variety of commodities. The network of shops extends, as well. Consequently, retail stocks may increase even faster than sales for a certain period of time—especially if the starting level of stocks was low. The improvement of the organisation of trade and better adjustment to seasonality should cause relative decreases in stocks.

Figures show that the stocks of finished goods and manufactures held by users, which constitute half of total stocks, increased at a rate greater than

industrial production during the same period. It seems that the trouble was seated somehow here.

We could get some information on the relative magnitude of stocks only by the help of international comparison.

The possibility of comparing the *global volume of stocks* on an international basis was limited by the scarcity of data available.

In case of two countries—the United Kingdom and Norway—the ratio of the volume of stocks to the national product is published. A comparison covering the years 1960–1964 shows that stocks in Hungary expressed as a percentage of the national product were nearly two times that of United Kingdom and more than two times that of Norway. In 1964 for example, this ratio was in Hungary, the United Kingdom¹ and in Norway² 90 per cent, 45 per cent and about 35 per cent respectively.

By types of stocks we could compare our data only with those of U.S.A.

STOCKS IN U.S.A. AND HUNGARY IN 1964

| As percentage of sales | |
|---|------|
| Materials and Supplies | |
| United States | 4.8 |
| Hungary | 16.1 |
| Work in process | |
| United States | 4.3 |
| Hungary | 6.7 |
| Finished goods | |
| United States | 4.9 |
| Hungary | 10.3 |
| As percentage of average monthly sales ^a | |
| Industry (manufacturing) | |
| United States | 1.69 |
| Hungary | 3.97 |
| Wholesale trade | |
| United States | 1.20 |
| Hungary | 2.21 |
| Retail trade | |
| United States | 1.31 |
| Hungary | 2.04 |

Source of U.S. data: *Statistical Abstract of the United States*, 1966.
U.S. Bureau of the Census, Washington, D.C., 1966.

^a Ratios based on stocks at the end of the year.

The comparison unambiguously points out that the relative level of stocks in our country is, in general, high. It is high even if a number of reservations are made when appraising the performance in terms of international comparisons. (E.g., in Hungary imports are of great importance and this in itself requires a level of stocks higher than in countries like the U.S.A.; and further, we have recourse very rarely to selling out our stocks at reduced prices, etc.)

¹*National Income and Expenditure* 1965.

²*Statistisk Arbok* 1966.

As for stockbuilding, there are more data. By making this comparison we would like to learn whether it is true that stocks should always increase with the development of the economy. In our country the problem concerning stocks is not only that their level is high, but even that this large volume of stocks increases year by year.

We have made an investigation for a period of six years—1959 to 1964—of stockbuilding expressed as a percentage of gross national product in our country and in some others. From this comparison it has become evident that whereas the ratio of stockbuilding to GNP in countries examined varied between 0.2–2.8 per cent, this ratio in our country was considerably higher, 4.4 per cent.

THE AVERAGE RATIO OF STOCKBUILDING TO GNP
(1954–1964)

| | |
|-------------------------|------------------|
| Belgium | 0.2 |
| Norway | 0.7 |
| U.S.A. | 0.8 |
| Sweden | 0.9 |
| Italy | 1.1 |
| United Kingdom | 1.2 |
| France | 1.5 |
| German Federal Republic | 1.7 ^a |
| Netherlands | 2.3 |
| Switzerland | 2.3 |
| Austria | 2.8 |
| Hungary | 4.4 |

Source: *Yearbook of National Accounts Statistics* 1965, United Nations

^a In 1959, the Saar and West Berlin are excluded.

The following table contains figures on stockbuilding expressed as a percentage of GNP for individual years. To promote further conclusions the rate of yearly increase in gross national product has also been indicated for every country.

On the basis of this comparison the following conclusions might be drawn:

The rate of increase in stocks was considerably higher not only on average but even on a yearly basis in our country than in other countries examined.

A probable explanation may be that the rate of increase in GNP is relatively high in Hungary, which may justify the higher rate of stockbuilding. This assumption does not seem impossible. The comparative data show that although the growth rate in Hungary was rather high—especially in certain years—there were countries where economic growth—for a short period—was similar, but without substantial increase in stocks. An increase in stocks equal to or even exceeding the rate of growth in GNP was not found in any of the countries examined, except Hungary. From these findings the conclusion follows that rapid economic growth need not necessarily be accompanied by as great an increase in stocks as in Hungary.

Further: economic growth may take place with practically zero change in stocks; moreover, there are examples proving that stocks may even decrease when there is an upswing in the economy.

STOCKBUILDING AS PERCENTAGE OF GNP (a) AND PERCENTAGE YEARLY INCREASE
IN GNP (b)

| | | 1960 | 1961 | 1962 | 1963 | 1964 | Average of 1960-64 |
|----------------------------|----|-------------------|------|------|------|------|-----------------------|
| Belgium | a. | -0.1 | 0.4 | 0.1 | -0.1 | 0.3 | 0.1 |
| | b. | 5.6 | 4.7 | 5.0 | 4.8 | 5.2 | 5.1 |
| Norway | a. | 1.4 | 1.6 | 0.7 | -0.3 | 1.4 | 1.0 |
| | b. | 5.6 | 6.4 | 3.0 | 5.0 | 6.9 | 5.4 |
| U.S.A. | a. | 0.7 | 0.4 | 1.2 | 0.9 | 0.6 | 0.8 |
| | b. | 2.4 | 2.1 | 6.5 | 3.8 | 5.1 | 4.0 |
| Sweden | a. | 2.4 | 1.8 | 0.7 | -0.2 | 1.2 | 1.2 |
| | b. | 3.6 | 5.6 | 3.7 | 5.1 | 7.2 | 5.0 |
| Italy | a. | 1.6 | 1.4 | 1.3 | 0.9 | 0.6 | 1.2 |
| | b. | 6.8 | 8.3 | 6.3 | 5.3 | 3.0 | 5.9 |
| United Kingdom | a. | 2.4 | 1.2 | 0.3 | 0.6 | 1.7 | 1.2 |
| | b. | 4.9 | 3.3 | 0.9 | 4.6 | 5.3 | 3.8 |
| France | a. | 2.4 | 0.9 | 1.6 | 1.2 | 1.9 | 1.6 |
| | b. | 7.6 | 4.6 | 6.6 | 5.1 | 5.4 | 5.9 |
| German Federal Republic | a. | 3.2 | 2.0 | 1.1 | 0.7 | 1.4 | 1.7 |
| | b. | 15.3 ^a | 5.4 | 4.1 | 3.3 | 6.6 | 6.9 ^a |
| Netherlands | a. | 3.4 | 2.8 | 1.7 | 1.5 | 3.6 | 2.6 |
| | b. | 8.9 | 3.5 | 3.8 | 3.1 | 8.2 | 5.5 |
| Switzerland | a. | 3.0 | 3.9 | 2.7 | 1.5 | 1.7 | 2.6 |
| | b. | 5.8 | 7.3 | 5.1 | 4.5 | 5.1 | 5.6 |
| Austria | a. | 5.2 | 3.8 | 1.3 | 1.6 | 2.9 | 3.0 |
| | b. | 8.3 | 4.6 | 1.6 | 4.4 | 6.0 | 5.0 |
| Hungary | a. | 3.6 | 5.6 | 4.3 | 4.5 | 5.2 | 4.6 |
| | b. | 9.3 | 7.9 | 3.9 | 6.5 | 5.1 | 6.5 |

Source: *Yearbook of National Accounts Statistics 1965*, United Nations.

^a In 1959, the Sarr and West Berlin are excluded.

On the basis of international comparison it was possible to ascertain with high probability that there was no functional relation—at least in the period covering only some years—between changes in stocks and economic growth. Balanced economic growth may take place with an increase in stocks, with no change, and even with a decrease in stocks.

The answer to the question of whether stocks should always increase with economic growth, and whether it is inevitable for them to increase at such a great rate as in our country, was negative.

The results of these studies have led the organs of economic policy to draw far reaching conclusions. In 1965 and 1966, with the help of central administrative bonuses and credit measures, stockbuilding as a whole was slowed down, though not stopped. In certain fields there was even a substantial disinvestment in stocks.

A radical solution to this problem can be reached only by revealing and eliminating the causes producing these symptoms.

We had to discover first what may cause the building of stocks or rather the building of unrequired stocks. The building of such stocks was due—as was known already—to the methods of economic management applied. Our interest was centered on producing “as much as possible” regardless of demand conditions under the given circumstances (the structure of prices, the size and distribution of

income, efficient exports or investment). It followed necessarily from this that some unrequired stocks were piled up, and that there was a permanent shortage in certain other products.

The economic reform accepted by the Hungarian economic management to be introduced on January 1, 1968, is intended to solve—besides other problems—the stock problem.

Dans cet article, l'auteur fait la critique des résultats d'une recherche qui avait pour objectif l'estimation du niveau relatif des valeurs boursières en Hongrie et ce, en termes de comparaisons internationales. En dépit de ce que de telles comparaisons soient limitées par la rareté des données, il est néanmoins apparu clair que le montant global des actions est inutilement élevé, comparé à la production et aux ventes. La recherche a été menée à la fois en fonction du montant et taux de croissance des actions.

Le volume global des actions et leur émission ne nous a pourtant pas donné une explication satisfaisante; aussi la recherche devait-elle être étendue à des groupes séparés d'actions. Afin de faciliter la comparaison, les actions ont été classifiées comme suit: actions agricoles, valeurs d'industries de biens intermédiaires, de biens finis, et de manufactures détenues par leurs utilisateurs, actions de détail. La classification était basée sur les fonctions différents des groupes distingués. Elle ne pouvait être comparée qu'avec les données des U.S.A. La comparaison internationale a montré que le volume aussi bien que le taux de croissance des valeurs boursières sont inconsiderément élevés en Hongrie. Cela reste vrai même si l'on tient compte de ce que le taux de croissance de l'économie hongroise est plus grand que celui de tous les autres pays considérés.

L'auteur fait référence au fait que le problème des valeurs boursières a été l'une des amorces du processus de recherche économique qui a abouti à la réforme du système de gestion de l'économie magyare introduite le 1 janvier 1968.