The paper examines the principal features of the economic reform and the experience in Hungary following its introduction on January 1, 1968. It is shown that the reform has entailed the discontinuation of plan directives to the firm, it has provided managers with profit incentives and an increased freedom to make investment decisions, and has also introduced greater flexibility in prices. But administrative measures persist in a variety of areas and these "brakes" impede the realization of the principles underlying the reform. In the paper, suggestions are made for policies which could contribute to the success of the reform and the long-term development of the Hungarian economy.

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I Introduction

After the Second World War, the countries of Eastern Europe adopted, with a few variations, the methods of planning applied in the Soviet Union. Under this system, prices have primarily an accounting function, and firms are to follow central directives, presumably derived from the national plan. These directives pertain to output targets, the allocation of products among users, as well as to wages, employment, and new investment. Within the constraints imposed by the allocation of inputs, incentives to firm managers generally aim at the fulfillment of the production plan.

This system of "physical planning" had certain usefulness in the early postwar years when a limited number of economic objectives were pursued, because it permitted rapid shifts in resources which might have been more difficult to achieve by the use of the price mechanism. It also corresponded to the political conditions of the time: one-man rule with Stalinist methods, suspicion towards the economic and technical experts of an earlier period, and a crisis-prone international situation.

In the more developed of the East European countries, however, the disadvantages of the system of physical planning soon assumed importance. With the multiplicity of objectives and the growing complexity of the manufacturing industry, the task of centrally directing the national economy

without the use of prices in the allocation process became increasingly
difficult. The lack of scarcity prices created especial difficulties in
choosing among investment projects and among exports. Yet exports play an
important role in the countries of Eastern Europe whose small market size
and skewed resource endowment do not permit them to follow the "balanced
growth" strategy of the Soviet Union. In turn, the allocation of investment
funds would need to be correlated with the export targets.

These considerations apply with especial force to Hungary, which
has the highest share of foreign trade in national income in Eastern Europe,
and is among the industrially advanced countries of the area. This may
explain why, after a period of rapid growth, unit increases in consumption
required increasing efforts in the form of resources used for investments
and imports. In the 1958-65 period fixed investments rose 97 percent and
foreign trade subsidies 91 percent, whereas the increase of the net
material product was 46 percent and that of total consumption 41 percent.

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1/ Hungarian sources estimate the average share of exports and imports in
the gross national product measured according to Western concepts at
30 percent, which is exceeded among European countries only in Belgium
and the Netherlands. Cf. J. File, "A külkereskedelem hozzájárulása a
nemzeti jövedelemhez" (The Contribution of Foreign Trade to National
Income), Statisztikai Szemle (Statistical Review), 1967 (11), pp. 1086-
1112. In terms of industrial production per head, Hungary comes behind
Czechoslovakia and East Germany but ahead of Poland, Romania and Bul-
garia. Cf. F.L. Pryor and G.J. Staller, "The Dollar Values of the
Gross National Products in Eastern Europe 1955", Economics of Planning,

2/ The rise in foreign trade subsidies (in national accounts terms, the ad-
justment for differences between the domestic costs and the foreign
prices of exports and imports) can be taken as a rough indication of the
increased expenditure of domestic resources for securing additional in-
crements in home consumption through imports.

material product is defined as the net value of goods and productive
services, when the latter includes passenger transport and communications,
and cleaning, laundering and dyeing.
These developments were accompanied by a decline in the rate of growth of the net material product from 7.9 percent a year in 1958-60 to 5.6 percent in 1960-63, and again to 4.8 percent in 1963-66. At the same time, for various reasons, the rate of economic growth is overstated in Hungary. To begin with, the system of prices in effect imparts an upward bias to the results as the rapidly growing industrial production is valued above cost and agricultural output below cost. There may also be an upward bias in the industrial production figures themselves, in part because of distortions in relative prices within this sector and in part because the system of statistical reporting under centralized planning is conducive to an overestimation of increases in output on the firm level. Finally, from the welfare point-of-view, one may wish to make adjustments for misdirected investments and unsaleable inventories.

The deficiencies of the system of physical planning led to certain reforms in Hungary between 1957 and 1967. But the reforms were carried out in a piecemeal fashion and did not affect the basic character of the decision-

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2/ If prices are adjusted to reflect production costs, including an allowance for capital, the share of industry in 1961 is reduced from 58 to 37 percent and that of agriculture increases from 20 to 33 percent. At the same time, national accounts data show an 81.2 percent increase in industrial output and a 13.5 percent decline in agricultural production between 1958 and 1965. Cf. Sándor Ganczer, "Népgazdaságunk fő arányainak elemzése" (Analysis of the Principal Relationships of our National Economy) in Vita a magyar gazdasági mechanizmus reformjáról (Discussion on the Reform of the Hungarian Economic Mechanism), Budapest, 1966, pp.127-44.

3/ Cf. e.g. the comments on Ganczer's paper by Andras Brody, Ibid, pp.146-47.
making process. 1/ By contrast, the new economic policy (in official parlance, the new economic mechanism), introduced on January 1, 1968, aims at a comprehensive reform of the economic system. In the new economic mechanism, plan directives give place to market relationships among firms, and prices assume an allocative function. Prices are to express relative scarcities in the framework of an open economy, with export and import prices being linked to foreign prices by way of uniform foreign exchange conversion ratios. Firms are to respond to prices in seeking to maximize profits and they are to use part of their profits as well as budgetary and bank credits in carrying out new investments.

In this paper, I shall examine the principal features of the reform and the experience in Hungary following its introduction. Separate consideration will be given to the place of the firm in the economic system, the system of incentives and decisions on new investment, the determination of prices, foreign trade, and the macroeconomic balances. In the final section of the paper, I will consider the prospects for the reform and the possible directions of future economic development in Hungary.

1/ In commenting on the failure of partial measures introduced in Hungary, Joseph Bognar noted in his presentation of the outlines of the reform to the Hungarian Economic Association: "Experience has taught us that the system of decision-making is an entity whose elements are in close interaction with each other and hence changes in some of these elements -- leaving the others unchanged -- cannot bring the desired results." "A szocialista gazdaság irányítása és működése" (The Direction and Functioning of the Socialist Economy), in Vita a magyar gazdasági mechanizmus reformjáról, p.41.
II. The Place of the Firm in the Economic System

In a system of physical planning, firms act on the basis of central directives pertaining to output targets, the allocation of labor and capital inputs, and the exchange of products within the state sector. The directives should ideally reflect the planners' preferences as expressed in the national plan but, in the absence of objective criteria, they frequently became a matter of bargaining between the planning board and the industrial ministries, as well as between the ministry and the individual firms. Moreover, given the difficulties of planning product flows in great detail, the targets often proved to be unrealistic and the plans were subject to frequent modifications, when, the rigidity of the allocation process made the task of remedying the ensuing imbalances difficult.\(^1\) The incentive system based on the fulfillment of the production plan also contributed to shortages and surpluses in individual products since it put low priority on producing commodities according to the users' needs. Finally, in the absence of a charge for the use of capital firm managers regarded machinery and equipment as a "free good", and they had little incentive for cost reductions, quality improvement, and technical progress.

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\(^1\) A Hungarian economist gives a colorful description of the actual planning process: "It was not possible to correctly set the concrete tasks of the factories from above. But since these were nevertheless set, in practice they in part proved unrealistic or contradictory. The modifications of the plans began as early as January 2 and lasted virtually until the end of the year. The corrections undertaken during the year reflected largely chance influences (ability in bargaining, personal connections etc.) The continuing modifications often came into conflict with the original intentions, as a result of which the economic consequences greatly differed from expectations as well as from the basic proportions of the plan." Sandor Lakos, A gazdasagi mechanizmus reformjanak egyes kerdesei (Some Problems of the Reform of the Economic Mechanism), Budapest, 1967, pp. 12-13.
Changes in the role of the firm under the new economic mechanism are concisely stated in the resolution of the Central Committee of the Hungarian Socialist Workers' Party of May 7, 1966 which is the basic document of the introduction of the economic reform. According to this document,

"the development of an active role for the market requires that the laborious and bureaucratic system of the centralized allocation of materials and products ... should give place to commercial relations, i.e.

- producers should be able to decide, within their range of activities, what and how much they produce and offer for sale, as well as in what quantity and from whom they purchase the necessary inputs

- producers and users should be free to establish commercial or cooperational relationships -- sellers and buyers should be free to agree on the conditions of sale and, within the limits of governmental price determination, also on the prices;

- the buyers should be free to choose, within the limits dictated by the national interest, between domestic goods and imports, and the sellers between selling on domestic or on export markets".

The replacement of administrative directives by market discipline is supplemented by according greater freedom to the firm in carrying out new investments and hiring labor. Moreover, profitability becomes the sole measure of the firm's success and the source of incentive payments and of funds for new investment. These provisions are designed to improve efficiency in resource allocation and to contribute to technological improvements. There are various obstacles, however, which impede the realization of these goals. One of these is the continuing existence of sellers' markets in Hungarian industry.
The sellers had a privileged position in the system of physical planning since plan fulfillment depended on the completion of the product rather than its saleability and buyers had no choice among producers. Saleability becomes a condition of success under the new economic system, and thus the risk hitherto assumed by the state will be borne by the firms themselves. Nevertheless, buyers have an effective choice among producers in a limited number of cases only. To begin with, in the early sixties, the number of firms was greatly reduced through consolidation and far-reaching product-by-product specialization was introduced. Also, limitations on the imports of a number of industrial products continue. Finally, there is excess demand for many investment goods and intermediate products due to disproportions in aggregate demand and supply.

Various suggestions have been made to deal with the situation. It has been proposed that government authorities intervene in cases when a firm uses its monopoly power to attain high profits or that existing firms be broken up into smaller units. Neither of these proposals holds much promise. The former would lead to a reimposition of price controls in an indirect fashion; at the same time, it is difficult to distinguish between high profits due to efficient operation and to monopoly. In turn, apart from the separation of factories which do not form a natural unit, 1/ the

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1/ A recent publication notes that the number of independent legal entities was greatly reduced during the early fifties. Yet "the management of many factories, often located far from each other, in the framework of a single firm necessarily makes reaching operative decisions more difficult, it slows down and limits adaptation to local demand or to the relatively rapidly changing consumption needs." Central Statistical Office, Az ipar koncentracjoja (The Concentration of Industry), Budapest, 1967, p. 10.
breaking up of large firms would be counterproductive since in most industries concentration and specialization are preconditions of success in export markets. However, competition could be increased by freeing firms from the limitations presently imposed on the range of their productive activity, reducing pressures emanating from excessive aggregate demand, and introducing effective import competition. I shall consider the first issue here and will return to the latter two below.

The firm now needs the permission of the supervising ministry for changing its sphere of activity, and the establishment of subsidiaries is not foreseen. But, in a modern economy, the success of the firm depends on its flexibility in regard to its organization and activities. Allowing firms to enter into the manufacture of products where high profits can be obtained would not only increase competition but contribute to the more efficient use of resources. In turn, the establishment of subsidiaries for producing parts, components, and accessories would permit the rationalization of the productive process.

More generally, the role of the industrial ministries in the new economic mechanism needs to be reconsidered. Under the reform, the ministries lose their power of directing the firm's operations through plan directives and administrative action. They continue, however, to determine its sphere of activity, nominate the firm's director and his deputies, and have general supervisory authority over the firm. As regards the latter, it has been claimed that "although the firm's interest centers on its profitability, this cannot be the only criterion in judging the work of the
directors and the activities of the firm".\textsuperscript{1} Among criteria other than profitability, the utilization of fixed and variable capital, contributions to fulfilling social needs, technical progress, and readiness for meeting future demands are listed. Furthermore, in an important article of the official party organ, it is emphasized that while the director has sole responsibility for the management of the firm, he should not consider it undue interference if the supervising ministry exercises controls over him, and raises various demands concerning the operation of the firm.\textsuperscript{2}

It is difficult to see, however, that the firm's activities could be judged on a basis different from that designed to measure its success, i.e. profitability. At the same time, the industrial ministry's supervisory role, along with its right to nominate the director, creates the danger that the ministry's officials will try to reassert their authority in replacing administrative action by operative instructions. One of the students of the problem has indicated that such an intervention raises the question of the ministry's obligation to indemnify the firm in cases when intervention leads to a decrease in profitability, and called for the legal limitation of such interventions.\textsuperscript{3}

\begin{flushleft}
\textsuperscript{1} Gábor Revesz, \textit{A vallalatok az új gazdasági mechanizmusban} (The Firm in the New Economic Mechanism), Budapest, 1967, p.100. \\
\textsuperscript{2} \textit{Népszabadság} (Freedom of the People), June 21, 1968. \\
\end{flushleft}
Legal limitations can help to clarify the extent to which the supervising ministry has authority to interfere in the firm's operations. This may not suffice, however, since in the application of Parkinson's law, the industrial ministries will attempt to find a "champs d'action" for themselves. At the same time, the industrial ministries have been essentially a conservative force and their staff has a vested interest in the old system. The purposes of the new economic mechanism may better be served by replacing the industrial ministries with a single ministry of industry to deal chiefly with questions of industrial policy.

But who would then assume the task of supervising the firm's activities and nominating its director? An appropriate solution might be to set up a council consisting of the representatives of the government, management and workers for this purpose. In this way, the deficiencies of the Yugoslav system of workers' councils may be avoided while through its designated representatives the government can continue to exert its influence on the firm's activities.

**III Profit Maximization and Investment Decisions**

I have noted that monopoly positions on the part of the large majority of industrial firms impede the realization of the goal of efficient resource allocation in Hungary. A further question is whether the financial incentives provided under the new economic mechanism would lead to such a result if competition were ensured. The answer to this question will depend on the assumptions made in regard to the behavior of the decision-makers in
the firm. Ward has argued that if profits are made available for reinvestment and for distribution among workers, firms led by workers' councils will tend to maximize the sum of average wage payments and profits per worker. In dealing with the Hungarian case, Megyeri pointed out that such an objective would provide inducements for increasing the capital intensity of the production process and discourage multiple shift operations.

It is questionable, however, that the conclusions reached by Ward and Megyeri can be applied to Hungary where the workers have no direct influence on the firm's operations, responsibility for which is vested in the director. But even if the workers had a say in production decisions, this would provide only a minimum constraint for profit maximization since workers are limited to a bonus not exceeding 15 percent of the basic wage while managers can get as much as 80 percent. Nevertheless, in view of the government regulation of the allocation of profits between the distribution fund and the investment fund, the outcome will also depend on the decision-makers' horizon.

The allocation of profits to the distribution fund, used to finance increases in wages and bonuses, as well as cultural and social expenses, is determined industry by industry. There is a progressive tax on this portion of profit, the marginal rate of which rises from nil to 70

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percent. Another part of profits taxed at a rate of 60 percent, and three-fifths of depreciation can be used by the firm to make new investments. In 1968, 60 percent of investments come under governmental or local jurisdiction while the remainder is decided upon by the individual firms. But the proportion of the latter category is considerably larger in manufacturing industries since a substantial part of investments under governmental or local jurisdiction are in non-manufacturing activities, such as mining, the production and distribution of energy, afforestation, transportation, research institutes, education, housing, and tourism. The government also has authority over large industrial investments, including the establishment of new factories, capacity increases of 25-30 percent in a given branch of manufacturing or its major products, and expansion necessitating substantial imports.

Accordingly, the new economic mechanism gives considerable scope for investment decisions by the firm. Still, in most instances, the firms have to supplement their own funds by allocations from the government budget or loans from the state banking system. In 1968, the former provides about one-fifth, and the latter one-third, of financing while the remainder comes from the firm's investment fund. Loans from the government budget are repayable within ten years, interest rates vary according to the purpose of the loan, while the criteria of choice have not been specified. But, with expected increases in profits and the completion of investments which began prior to the introduction of the new mechanism, the share of the

\[1/\] In the case of investments where the degree of completion on January 1, 1968 was between 20 and 80 percent, two-fifths of financing for the remaining part is provided from the government budget. Above this limit, the budget's share is 100 percent, below it, nil.
government budget in the financing of investments by individual firms will decline to a considerable extent. Thus bank lending is of greater importance for our discussion.

Bank loans for investments are given for periods up to 6 years at an interest rate of 5 percent before the completion and 7 percent after the completion of the project. Moreover, medium-term loans are provided for supplementary investments up to 3 years at an interest rate of 8 percent. Finally, firms need short-term loans to carry out their day-to-day operations since at the time of the introduction of the reform they were supplied, on the average, with only three-fourths of their needs for short-term capital.

In granting short-term and medium-term credits, the bank examines chiefly the liquidity of the firm. In turn, in the case of long-term credits, the attainment of a minimum profit of 7 percent on the new investment (4 percent in the case of service industries) is a necessary condition for granting credits. Requests for credits by firms meeting these conditions are next scrutinized for their realism, technical level and correspondence with long-term plans, and are then ranked according to the geometrical average of the period of recoupment (the reciprocal of the rate of return) and the period of repayment. However, preferential treatment is given to investments which improve the balance of payments, meet regional criteria, or serve purposes such as saving in energy and the mechanization of transportation within the factory.
The need for bank credits for new investments as well as for normal operations of the firms put a powerful lever in the hands of the State banking system, which in Hungary amounts to a banking monopoly since the National Bank and the Investment Bank reach their decisions jointly. Theoretically, the bank will be able to make or break a firm by denying it funds for investments and/or day-to-day operations. For the time being, however, the impact of bank policy on the firms is hardly noticeable. Political constraints have not permitted the discontinuance of the operations of any firm, and hence short-term credits have been given more-or-less automatically. It will also take some time until bank personnel are trained to carry out their new tasks. In the past, apart from controls on investment credits, the banks had purely an accounting function.

As regards investment credit, questions arise concerning the inclusion of the repayment period in the formula used to determine the ranking of the investment projects. This provision may serve as a substitute for charging higher interest rates for investments which are repaid over a longer period. But a differentiated interest rate structure would provide a better solution since it would operate as a rationing device. Raising the level of interest rates, which is low in relation to the scarcity of capital in Hungary, would also have a rationing function, and it would permit greater automaticity in lending.

Still, discretionary decisions on the part of the bank cannot be avoided. At the same time, it is questionable whether the establishment of a banking monopoly will best serve the purposes of the reform. Such a system
may have a conservative bias which tends to preserve the existing industrial structure and hinder expansion in new directions by individual firms. An alternative solution would be to create several banks as in Yugoslavia. By providing for the transfer of funds among firms, the creation of a capital market would further contribute to the efficient use of capital resources.

IV The Determination of Prices

As in other countries engaged in physical planning, prices were used chiefly for accounting purposes on both the firm and the national economy level in Hungary. Nevertheless, prices influenced the actions taken by firm managers in multiple-product firms because the objective of plan fulfillment led managers to concentrate on products which had relatively favorable prices. Since prices did not reflect resource scarcities, such actions did not serve the objectives of the planners and often created shortages and surpluses in individual commodities. At the same time, the lack of scarcity prices interfered with a rational choice among investment projects and among exports.

Prices were generally based on average costs excluding interest and rent, with substantial deviations from this norm upward as well as

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1/ This bias is likely to be aggravated by reason of the advisory role of the industrial ministries on new investments.
There was no connection between domestic and foreign prices; price differences for export and import products were automatically compensated from a special fund. In turn, producer and consumer prices were separated by an intricate system of taxes and subsidies. Among major product groups, the prices of agricultural goods and services were kept low for social and income distributional reasons while prices of light industrial products were relatively high. But there were considerable differences even within relatively narrow product groups; differences between consumer and producer prices varied between nil and 57 percent for household textiles, -20 to +25 percent for linen, -21 to +33 percent for children's shoes, and -50 to +30 percent for sports goods made of wood.2/

The price reform carried out in conjunction with the introduction of the new economic mechanism brought about changes in producer as well as in consumer prices, and created a certain amount of flexibility in the process of price determination. The major principles of the price reform are

1/ In 1964, the deviations of actual prices from the norm calculated by adding an allowance for profits as a proportion of the wages bill were: mining -11 percent, electrical energy +25 percent, chemicals +45 percent, iron and steel +32 percent, machine building +50 percent, light industry +7 percent, food industry -12 percent, construction materials +25 percent, construction +6 percent, transportation and communications +4 percent. Large negative deviations are also shown for agriculture. The ranking changes, however, if allowance is made for the rate of return on capital. Among capital intensive industries, the deviations will be -7 percent for electrical energy and +22 percent for chemicals; in turn, for construction, the relevant figure will be +14 percent. See B. Csikós-Nagy, Zs. Esze and L. Rácz, "Ipari termelo arrendszerunk problémái" (Problems of our System of Industrial Producer Prices), Kozgazdasagi Szemle, 1965 (7-8), p. 789.

again indicated in the May 7, 1966 resolution of the Central Committee of the Hungarian Socialists Workers' Party. Having noted that prices should evolve as a result of the joint influences of the cost of production, valuation by the market, and state preferences, the document states:

"Valuation by the market will have to find expression in prices so that, on the one hand, the resulting differences in profitability should influence the structure of production (supply) and, on the other, these prices should help to reach market equilibrium through their effects on increasing or reducing the quantity demanded. For this purpose, it should be made possible in the new price system to determine market prices over a wide area through the agreement of buyers and sellers.

The price reform should bring about the correspondence of domestic prices with prices in foreign trade transactions. For this purpose a conversion ratio should be determined on the basis of the average domestic cost of foreign exchange, independently on the gold content of the forint [the Hungarian currency]."

In fact, following the introduction of the reform, central price determination has been abolished for 12 percent of agricultural goods, 28 percent of domestically produced materials and semifinished products, 78 percent of industrial end-products, and 23 percent of consumer goods and services.¹ But the Materials and Price Board has veto power over increases in prices on some products of this group, accounting for 5 to 8 percent of industrial production, and price increases are also restrained by limitations on the profits obtainable in the case of products where an agreement of the buyer and seller is required. Furthermore, prices are fixed centrally, or

are subject to an upper limit, in regard to 70 percent of the products in the first two categories, 20 percent in the third, and 50 percent in the fourth. In the remainder of the cases, prices can fluctuate within pre-determined limits.

In the event of central price determination, producer prices are equated to average costs, including (except for agriculture, mining and services) 25 percent social charges on the wage bill, an average 5 percent depreciation charge, a 5 percent interest on the gross value of fixed and variable capital, and an allowance for profit, expressed as a proportion of capital, which varies from industry to industry. Moreover, the prices of imported materials, intermediate products, and machinery are calculated by multiplying the import price by the foreign exchange conversion ratio\(^1\) and adding the duty to the result. The domestic prices of exports are determined in the same fashion except that subsidies are provided whenever the foreign price times the conversion ratio is less than the cost of production.\(^2\)

An effort has also been made to bring consumer prices nearer to producer prices within each product group, by reducing the number of turnover tax rates applied and eliminating differential taxes. But there are still about one thousand tax rates in effect,\(^3\) and average consumer prices for the individual product groups have not been aligned to producer prices.

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1/ There are two conversion ratios, depending on whether trade takes place with Western or Eastern countries.

2/ In turn, special taxes are levied on some export products which show especially large profits.

3/ There were 2500 before the reform and their number will be reduced to 300-400 in the coming years.
Thus, consumer prices exceed producer prices by nearly one-fifth in the case of industrial goods while they are 20 percent lower in the case of foodstuffs, 12 percent in the case of transportation and communication, and 58 percent in the case of services.\(^1\)

Changes in the system of producer prices bring these nearer to a system of scarcity prices. However, centrally fixed prices have been equated to average rather than marginal costs. This procedure gives rise to distortions especially in the case of materials and intermediate products where a weighted average of domestic and import prices has usually been taken, since domestic costs, and the cost of importing from Western and from socialist countries, may differ to a considerable extent.\(^2\) As a rule, prices are the lowest on material imports from socialist countries but the quantities available from these sources are limited by long-term trade agreements. In such instances, instead of valuing materials at the average cost of domestic and foreign procurement, their prices should be equated to procurement cost from the most expensive source.\(^3\)

Different considerations apply if domestic production is maintained for social reasons although its cost exceeds that of importing at the going world market price. Efficiency in resource allocation would now require subsidizing domestic production since otherwise the excess cost of this production burdens the user industries and reduces their competitiveness in

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1/ Edit Javorka, op. cit, p.43.

2/ Javorka gives the example of sulfite cellulose which costs 4360 forint per ton in case of imports from socialist countries, 9050 forint for imports from Western countries, and 6410 forint if produced domestically (op.cit, p.49).

3/ This method has in fact been applied in the case of ferroalloys and some textile materials.
foreign markets. This conclusion pertains especially to the case of coal and iron ore, the high prices of which discriminate against domestic industries using these materials.

Problems arise also in the case of commodities which are not subject to central price determination. As noted above, prices set by the seller or agreed upon between the seller and the buyer will often be above the competitive level because of the monopoly or quasi-monopoly position of the producer. In a country of Hungary's size, the freeing of firms from the limitations presently imposed on the range of their economic activity alone will not be sufficient to ensure effective competition, and needs to be supplemented by import liberalization. The liberalization of imports would also permit reducing the range of products subject to central price determination, which imposes a monumental task on the Materials and Price Board. With the large variety of commodities manufactured by modern industry, the Board will find it difficult to consider each case on its merits and to reach quickly to changes in supply and demand. It will also have to grapple with the problem of whether newly introduced products bring improvements in quality or disguised price increases.

More generally, in a small country, efficient resource allocation would require accepting world market prices and letting firms maximize profits in response to these prices. World price relations can be approximated by price-fixing based on the use of appropriate conversion ratios in regard to standardized products but the interplay of demand and supply at home and
Table 1
THE STRUCTURE OF HUNGARIAN FOREIGN TRADE, 1965

<table>
<thead>
<tr>
<th>SITC Group</th>
<th>Commodity Group</th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Socialist Countries</td>
<td>Developed Countries</td>
</tr>
<tr>
<td>0</td>
<td>Food and live animals</td>
<td>12.0</td>
<td>4.2</td>
</tr>
<tr>
<td>1</td>
<td>Beverages and tobacco</td>
<td>3.1</td>
<td>6.6</td>
</tr>
<tr>
<td>2</td>
<td>Crude materials</td>
<td>2.2</td>
<td>8.2</td>
</tr>
<tr>
<td>3</td>
<td>Fuels</td>
<td>1.1</td>
<td>2.9</td>
</tr>
<tr>
<td>4</td>
<td>Oils and fats</td>
<td>0.3</td>
<td>1.1</td>
</tr>
<tr>
<td>5</td>
<td>Chemicals</td>
<td>7.3</td>
<td>4.7</td>
</tr>
<tr>
<td>6</td>
<td>Basic manufactures</td>
<td>15.7</td>
<td>21.5</td>
</tr>
<tr>
<td>7</td>
<td>Machinery and transport equipment</td>
<td>43.5</td>
<td>1.5</td>
</tr>
<tr>
<td>8</td>
<td>Miscellaneous manufactured goods</td>
<td>11.8</td>
<td>12.5</td>
</tr>
<tr>
<td>5-8</td>
<td>Manufactured goods</td>
<td>81.3</td>
<td>63.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

abroad is necessary in the case of differentiated goods, such as machinery and instruments, which do not have a world price. In turn, state preferences can be implemented by subsidies to domestic producers and by a system of taxes and subsidies on consumer goods and services. Nevertheless, there is need for aligning consumer and producer prices in order to reduce the resource cost of satisfying consumer needs.¹/

V Foreign Trade

As an introduction to the discussion, it will be useful to provide information on the structure of Hungary's foreign trade. In 1966, the Soviet Union accounted for one-third of both exports and imports, while the relevant proportions were 32 and 29 percent for the other socialist countries, 28 and 29 percent for the Western developed countries (including Yugoslavia), and 7 and 9 percent for less developed areas.²/ At the same time, there are considerable differences in the commodity structure of Hungary's trade with these groups of countries. In 1965, manufactured goods other than basic manufactures accounted for two-thirds of Hungarian exports to socialist economies, but their share was only one-fifth in exports to the Western developed countries. The differences are the largest in the case of machinery and transport equipment: 43.5 percent as against 4.5 percent (Table 1).

¹/ This is a long-term objective, to be reached within 10-15 years, according to B. Csikós-Nagy, the President of the Materials and Price Board in Hungary, Cf. his "Az új magyar arrendszer", op. cit, p. 269.

The data show the dual character of Hungarian foreign trade:
while manufactured goods predominate in exports to the socialist countries, Hungary has had limited success in selling machinery and other technically advanced products to the West. The explanation lies in differences in technical requirements between the two markets; Hungarian producers could meet the higher technological standards in the developed Western countries only in relatively few products. 1/ Thus, whereas a large part of imports from the developed Western nations consisted of raw materials and intermediate products necessary to fully utilize domestic industrial capacity, these are said to have been "absorbed in the production of finished goods which are not sufficiently competitive in Western markets." 2/

The results reflect the shortcomings of this system of physical planning which were especially evident in the field of foreign trade. The lack of scarcity prices hindered a rational choice among exports and sufficient incentives were not provided for seeking Western outlets and raising

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1/ Exports of machinery and equipment had a larger share in Hungarian exports to the West during the thirties (7 to 8 percent) and much of it was in technically advanced products, such as the famous Ganz-Jendrassik motor and transport equipment employing it. Cf. Imre Vajda, "Muszaki fejlodes es kulkereskedelem" (Technological Development and Foreign Trade), Kulkereskedelem (Foreign Trade), 1966(1), p.13. Moreover, in the period 1960-66, Hungary fell behind the smaller countries of Western Europe in regard to the growth of exports of machinery and transport equipment, in large part because of its lack of success in technologically advanced products. Cf. K. Facsady, "Vilagpiaci tendenciak es a magyar gepkulkereskedelem" (World Market Tendencies and Hungary's Foreign Trade in Machinery), Kozgazdasagi Szemle, 1968(2), pp. 147-57.

the technical level of export products. For one thing, firms had assured outlets at home and in the sheltered markets of the socialist countries for another, there was no correspondence between domestic and export prices, and few firms had the right to direct trading abroad. In turn, given the objective of importing only commodities which are not available at home, there was virtually no competition from imports.

One of the main purposes of the reform is to change the situation in regard to foreign trade. According to the Party resolution cited above,

"The new economic mechanism should establish a close relationship between internal and external markets. It should increase the impact of influences originating in foreign markets on domestic production, sale, and consumption, as well as on the structure of exports and imports. It should reduce the excessive protection of domestic production, thereby eliminating the complacency to which it gave rise."

The economic reform aims at establishing a direct link between success in exportation and profitability. Foreign exchange conversion ratios have been unified for the two large groups of Hungary's trading partners, so that export (and import) prices can be directly translated into domestic prices. Moreover, a greater number of industrial firms have been given the right to trade abroad than heretofore; these firms now account for about 10-15 percent of exports.

The determination of the foreign exchange conversion ratio has been the subject of much discussion in Hungary. The discussion centered on the question whether this ratio should be equated to the marginal or to the

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1/ Vajda speaks of "conservative anti-innovation tendencies at home, while abroad a marathon race of innovations was taking place" (Ibid).

2/ See, however, the discussion in the previous section.
average cost of exports in the domestic economy. The choice was made for an average ratio, calculated on the basis of the 1964 trade structure. However, exports with a domestic cost exceeding this ratio receive a subsidy for an initial period of three years.

This decision invites criticism on several grounds. To begin with, the choice of an average ratio tends to freeze the pattern of exports which reflects past inefficiencies in resource allocation. Financial incentives for expanding exports are provided only in cases where costs are below the conversion ratio and such incentives are considerably smaller than they would be under a marginal rate. Moreover, in the absence of a differentiation among firms operating at costs exceeding the conversion ratio -- all of which receive compensation for the difference between production costs and the export price -- there are no incentives for expanding exports by firms with relatively lower costs and contracting exports by those with higher costs. Some firms may also be inclined to switch to production for domestic needs if this ensures higher profits than does production for exports where the subsidy includes only a minimum profit.

The situation is aggravated by reason of the fact that the average cost of exports in Hungary actually exceeds the conversion ratio in effect so that about four-fifths of exports require subsidies. The range of subsidies is rather wide; in some instances they exceed the domestic value of foreign exchange earnings. It is not inconceivable, therefore, that exports will continue in cases when net foreign exchange receipts are negative.
This will happen, for example, if the domestic cost of exports is double
the domestic value of export earnings calculated at the conversion ratio
while imported inputs account for more than one-half of the value of output.\(^1\)

In addition to its unfavorable effect on the expansion of exports,
the application of the relatively low conversion ratio stimulates imports
so that balance-of-payments equilibrium requires the maintenance of subsi-
dies to high cost exports and of restrictions on imports from the West.\(^2\)
Apart from consumer goods, these restrictions affect chiefly the imports
of machinery. Machinery imports are subject to high duties, often exceeding
50 percent; moreover, in the event that the purchase is financed from the
firm's investment fund, an advance deposit is required for a period of two
years in the amount of 150 percent of the purchase price. At an interest
rate of 8 percent, a 50 percent duty rises to 75 percent if account is
taken of the prepayment requirement. Now, since profits allocated to the
investment fund are subject to a 60 percent tax, an increase in profits of
over 4 million forints is needed to import machinery valued at 1 million
forints at the present foreign exchange conversion ratio. In turn, machinery
imports financed from bank credit are subject to authorization by the bank
while quantitative import restrictions continue on some raw materials and
intermediate products, as well as on all consumer goods.

\(^1\) By comparison, in 1964 the average direct and indirect import content of
production was 20 percent in machine building and 30 percent in the
chemical industry. Cf. Ferenc Nyitrai, "Népgazdaságunk importigenyészésege"
(The Import Requirements of our National Economy), Kozgazdasagi Szemle

\(^2\) Trade with socialist countries is regulated by long-term contracts and it
is not sensitive to price changes.
The continuing application of administrative measures on exports and imports introduces arbitrariness in the decision-making process when the difficulties of correctly evaluating the case of several thousand commodities are considerable. Neither are the proper incentives provided for choosing between production for export and for domestic markets, since the use of the average conversion ratio leads to deviations from the scarcity prices of both inputs and outputs. At the same time, firm managers will be tempted to give an incorrect appraisal of costs of export products in order to obtain subsidies.¹/

One of the principal arguments against the adoption of a marginal ratio has been that this would permit some exporters to make large profits. Yet, the logic of the new economic mechanism demands that one should not object to profits low cost firms would make because these profits would permit them to expand production capacity and exports.²/

¹/ Many of these points have been made by the supporters of marginal rates, especially Sándor Balázs, "A deviza arfolyam vitahoz" (On the Discussion Concerning the Conversion Ratio), Pénzügyi Szemle (Financial Review), 1965(8-9), Jeno Redei, "Devizaazorzo és kulkereskedelmi mechnizmus" (Conversion Ratio and the Mechanism of Foreign Trade), Kozgazdasagi Szemle, 1965(11), pp.1308-14, and Marten Tardos, "Hogyan mukodne a nyeresegerdekeltseg a kulkereskedelemben" (The Operation of Profit Incentives in Foreign Trade), Kozgazdasagi Szemle, 1965(12), pp.1457-69.

²/ In criticizing the position of those who favor an average conversion ratio, Nagy points out that this choice is based on the idea that producers "have nothing to do with the more favorable or less favorable profitability of their products, hence one should neither reward nor penalize them for it..." Andras Nagy, "A kulkereskedelem optimizalasa es az osztonzés" (The Optimization of Foreign Trade and Incentives), Kozgazdasagi Szemle, 1965(2), pp.204-17.
accept the argument that a marginal ratio would greatly exceed the purchasing power parity of the Hungarian currency. As I have elsewhere shown, the ratio of exchange rates to purchasing power parities is a function of disparities in per capita incomes. Thus, in 1960, this ratio was .93 in Canadian-US., 78 in French-U.S., and .63 in Japanese-U.S. relationships.1/

This is not to say that a truly marginal conversion ratio could have been chosen since the lack of scarcity prices permitted some high-cost exports in the past that would not be profitable in the event of efficient resource allocation. But a modified marginal ratio under which, for example, three-fourths of exports would be profitable, may provide a reasonable approximation of an equilibrium ratio. The choice of such a ratio would permit discontinuing export subsidies, liberalizing import restrictions, and reducing tariffs. Import duties are said to average 20 percent on imports from, and 13 percent on exports to, the West,2/ but the former are understated by their weighted average since tariffs on consumer goods are often prohibitive.

Reductions of the high tariffs on machinery are of especial importance. In most countries, these duties are among the lowest since it is recognized that machinery is an input into other industries. These considerations apply with especial force to Hungary where expanding the exports


of technically advanced products would require the imports of machinery embodying modern technology. Duties on consumer goods also need to be reduced to introduce foreign competition, although these duties may be set at levels higher than the average since they affect chiefly the choice between the domestic and imported varieties of the same commodity and there is a definite preference -- not always rational -- for foreign goods in Hungary.

While it will take some time until Hungary is able to expand the exports of technologically advanced products, there are other commodities that would have good short-term expansion possibilities if a higher conversion ratio were adopted. These include some standardized manufactured goods which presently account for over one-fifth of exports to the West, as well as processed fruits and vegetables. Further advances can be made if cooperation agreements are reached with foreign firms concerning subcontracting, commission work, and joint undertakings.

VI Macroeconomic Balances

Theoretically, equilibrium in macroeconomic balances -- the balances of consumer goods, investment goods, labor and foreign exchange -- may be ensured in a system of physical planning since the government can directly influence both demand and, with the partial exception of labor and foreign exchange, supply. In practice, this has not always happened. All socialist countries have experienced periods of inflation, discrepancies
between the amount of investment funds and the goods available for investment, labor shortages, and deficits in the balance of payments. Such imbalances have been explained by the shortcomings of planning or by deliberate action.¹/

Under the new economic mechanism, the task of avoiding disequilibria in macro-relationships becomes much more difficult. As the profits of firms rise, personal incomes will increase, thereby creating imbalances in the market for consumer goods. The rise in profits also augments the availability of funds for investments which affects directly the demand for investment goods and labor and indirectly the demand for consumer goods and foreign exchange.

In cognizance of these possibilities and having observed the inflation generated following the application of the new economic policy in Czechoslovakia, the authorities have used various direct measures aimed at avoiding inflation since the introduction of the new mechanism in Hungary. These include limiting increases of average wages in manufacturing in 1968 to 4 percent, fixing the prices of key materials and consumer goods, curbing the expansion of credit, and restricting imports.

The measures applied have been successful in restraining inflationary pressures; price increases have been negligible since the introduction of the reform. But the use of direct measures tends to perpetuate imbalances in particular markets since they deal with symptoms rather than the underlying cause of imbalances: the excess of aggregate demand over supply. The excess demand for labor will persist, for example, if wage increases are limited and such restraints hinder the movement of labor from low-productivity to high-productivity occupations.1/ In turn, price fixing gives rise to imbalances in commodity markets and necessitates rationing of materials and intermediate products as well as queuing in the case of consumer goods. Finally, the low interest rates applied create excess demand for funds, thereby leading to credit allocation among firms, while low exchange rates discourage exports and require the use of administrative measures to promote exports and allocate imports.

More generally, the application of direct measures to remedy macroeconomic imbalances reduces the effectiveness of the new economic mechanism by restricting the scope of the application of prices and weakening the incentives for improvements in the use of resources either within the firm or through reallocation among firms. The employment of direct measures also tends to conceal the interdependence of the various macroeconomic balances and it is questionable that they can successfully cope with inflation in a decentralized economy over a protracted period. The

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1/ In some instances, it has also given rise to hiring unskilled labor in order to offset increases in average wages due to adding more technical manpower.
experience of Yugoslavia is especially instructive in this regard; after
two years of experimenting with direct measures, the Yugoslavs have increasingly
turned to the use of macroeconomic instruments.

Among macroeconomic policy instruments, the interest rate on
long-term lending is below the marginal productivity of capital and hence
an increase in this rate would be necessary to equate the demand for, and
the supply of, investment credit. In turn, official sources call for
equilibrium in the government budget,¹/ although surpluses and deficits
could be used to ensure equilibrium in the markets for consumer goods.
Thus, credit and fiscal policy could be jointly applied to eliminate excess
demand in macro-relationships which appears as the underlying cause of im-
balances in particular markets. This is not to recommend a deflationary
policy but rather a reduction in the rate of expansion of demand. Such a
reduction would also contribute to efficiency in the use of economic re-
sources by promoting resource transfers among firms and industries.

VII Prospects for the Economic Reform

In this paper, I have indicated the major principles of the new
economic mechanism in Hungary and the extent to which these have been applied
in practice so far. The most important changes have been the discontinuation

¹/ Cf. e.g. Lajos Faluveci, "A penzügyi politika a reform kezdeten"
(Financial Policy at the Early Stages of the Reform), Kozgazdasagi
Szemle, April, 1968, pp.409-25. See, however, Ivan Dobrovits, "A
konzisztens gazdaságirányítás koltszegvetésesmeléti vonatkozásai" (The
Theoretical Budgetary Implications of the Indirect Management of the
of plan directives to the firm, the use of profit incentives, increased freedom for the managers to make investment decisions, greater flexibility in prices, and the linking of domestic and foreign prices through the use of uniform conversion ratios. Against these achievements one should set the use of administrative measures in a variety of areas. Such measures have been described as "brakes" the authorities applied in launching the new mechanism.

Various considerations explain the application of brakes. An important reason is the fear of inflation which has led to the use of direct measures in regard to wages, prices, material allocation, credit and foreign trade. There has further been a tendency to restrict the freedom of managers by limiting profits from exports, imposing a high profit tax, and maintaining the supervisory role of the industrial ministries. This has been done for conflicting reasons: it was feared that the managers would have difficulties in adjusting to the new mechanism and also that they might adjust only too well, but their actions create undesirable results for the national economy. Finally, social considerations have led the government to avoid creating large disparities in personal incomes as well as unemployment.

It is understandable that various sorts of brakes are applied in the period of changeover from the old to the new mechanism. One may wonder, however, if there has not been too much "braking" so that efforts to ensure a smooth transition from the old to the new system have in fact retarded the development of the new system by impeding the reallocation of resources
from low-productivity to high-productivity sectors which is the reform's major objective. The question now is whether these brakes become embedded in the system of policy making or they will be successively released. The continuing maintenance of brakes might well necessitate introducing further administrative measures and ultimately the success of the new economic mechanism could be jeopardized.

The authorities also have to face the problem that the reallocation of resources cannot proceed painlessly since the incentives provided for this reallocation have to encompass "pull" as well as "push" factors. Thus, one would have to accept closing-down uncompetitive firms and some unemployment in certain occupations. As the same time, the decision to close down firms becomes a political question and a test of will to accept the human cost of improvements in the allocation process. This question has been softpedalled so far in order to avoid resistance to the reform, but it has to be faced sooner or later.

There is further need to adapt industrial organization to the new mechanism and to carry out changes in personnel whenever these are required for attaining the objectives of the reform. Such changes have not yet been made, again for the sake of minimizing opposition. The consolidation of the industrial ministries may be part of the answer while on the firm level a certain changeover of managers is necessary to adequately carry out the new tasks.

I have considered here the preconditions which need to be fulfilled for the successful application of the new economic mechanism in
Hungary. A further question is the long-term policy to be followed. The general tendencies of industrial and agricultural development will continue to be decided by the state since it has authority over establishing new factories and substantially enlarging old ones as well as over the distribution of research funds.

In the past, investment and research funds have been spread rather thin over a large number of industries and their individual branches. Originally, this was done in an attempt to achieve "balanced growth" in the economy and to ensure the development of domestic energy and material sources irrespective of cost. Subsequently, the continuation of this policy reflected the power of vested interests. The allocation of investment and research funds was the result of a bargaining process between the planning office and the industrial ministries, with the latter having considerable influence on the outcome. As a result, a high degree of diversification is observed among as well as within industries. Thus, the extent of inter-industry diversification in Hungarian manufacturing is comparable to that in France and Germany and is greater than in countries of similar size. 1/

With the opening of the economy, it becomes necessary to develop a policy of investment and research that can ensure the best use of Hungary's economic potential through international specialization. While wages are

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1/ For 17 industries, the coefficient of concentration derived from the Lorenz-curve gives the following values for the year 1960: West Germany 36.7, Hungary 38.8, France 40.0, Netherlands 42.6, Italy 42.8, and Belgium 46.2. Cf. Tamás Szirma, "Az ipari agazati koncentráció kérdéséhez" (On the Question of Sectoral Concentration in Industry), Kozgazdasági Szemle, 1966 (7-8), p. 884.
too high to permit specialization in activities using unskilled labor, Hungary has an advantage in industries which rely on skilled labor: the educational level is relatively high and the wages of skilled labor are low by comparison to Western developed countries. Among the industries in question, special attention would have to be paid to those which have traditions in Hungary, such as telecommunication equipment but, even within such industries more specialization is needed than in the past. Another promising field is the processing of domestic agricultural products where considerable improvements could be made by improving quality, increasing the use of industrial inputs (fertilizers, machinery), and utilizing modern methods of processing. Finally, there are possibilities for the expansion of high quality tourism.

A precondition of the expansion of industrial exports to Western markets is the raising of the technical level of industry. Aside from providing incentives for technological improvements, the importation of modern technology would need to be stepped up through foreign investments or licensing arrangements. Furthermore, an effort would need to be made to participate in intraindustry specialization in the European area which has assumed considerable importance in the postwar period. Agreements with foreign companies for the production of parts, components, and accessories may serve this objective.

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1/ The example of Norway and Denmark is of interest in this connection; the postwar development of manufacturing industry in both countries has been chiefly in skill-intensive products. Cf. Bela Balassa, "Industrial Development in an Open Economy: The Case of Norway", August, 1968 (mimeo).