Reforming the New Economic Mechanism
in Hungary

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Bela Balassa

Introduction

On January 1, 1968, Hungary introduced the New Economic Mechanism (NEM), in order to respond to the needs of an increasingly sophisticated economy characterized by considerable reliance on foreign trade. The NEM aimed at replacing plan directives by market relations among firms; limiting the scope of central price determination; linking the domestic prices of exports and imports to world market prices; and decentralizing a major part of investment decisions.

At the time of the NEM's introduction, a variety of 'brakes' were applied, in part to smooth the transition from the old to the new mechanism and in part as a compromise between the supporters of the two. While several of these brakes were eased in the next few years, steps towards recentralization were subsequently taken in the wake of the Party resolution of November 1972. Furthermore, policy responses to external shocks, in the form of the inflationary 1972-73 world boom, the 1974-75 world recession, and the deterioration of Hungary's terms of trade after 1973, led to reduced use of market mechanisms and to increased central directions and interventions.

The measures employed weakened the link between domestic and world market prices, reduced the scope of application of the profit motive, and increased the role of governmental preferences in investment decisions. They aggravated

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1/ The author provided an early appraisal of the NEM (Balassa, 1970); examined its operation during the first decade (Balassa, 1978); and reviewed its practical implementation (Balassa, 1982) -- Unless otherwise noted, the data cited originate from the Statistical Yearbook and the Foreign Trade Statistical Yearbook, both published by the Hungarian Statistical Office. The former is available in Hungarian and in English; the latter only in Hungarian.

the problems resulting from the predominance of large firms, the maintenance

of the supervisory organizations established during the period of central

planning, and the fact that the firm had little to fear from bankruptcy and

could have recourse to the state in the event of financial difficulties

(Kornai, 1979 and 1980).

This situation could not fail to have adverse effects on the balance of

payments and on the efficiency of resource use in Hungary. As these adverse

effects came to be recognized, the October 1977 and the December 1978 Party

resolutions called for re-establishing the original directions of the NEM.

The newly-adopted guidelines envisaged the transformation of the price

structure to correspond to world market price relationships, the acceptance of

profits reflecting performance at these prices as the sole success criterion

for the firm, and reductions in the scope of government interventions in the

firm's operations and in its investment decisions.

This paper sets out to evaluate the reform measures taken in 1980 and in

1981 1/ and to examine possible future changes. It will examine price setting

(Section I), the exchange rate and protection (Section II), wage determination

and personal incomes (Section III), investment decisions (Section IV), and the

organizational structure (Section V).

I. The Price Reform

The lynchpin of the 1980-81 reforms was the introduction of 'competitive'

prices in much of the industrial sector. This involved equating the domestic

prices of raw materials, fuels, and basic intermediate products to the tariff-

inclusive import price in convertible currency trade; providing exporters with

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1/ A detailed description of the reforms is provided by Csikós-Nagy (1980)
and Horváth (1980).

the fob export price, supplemented by tax rebates; and setting prices for the domestic sales of the bulk of industrial products on the basis of profit margins reflecting the domestic cost of earning foreign exchange in exports.

Equating the domestic prices of raw materials, fuels, and basic intermediate products to import prices paid in convertible currency trade represents the application of the marginal cost principle, with differences vis-á-vis the prices of imports from socialist countries being compensated by taxes and subsidies. On January 1, 1980, the average prices of raw materials and basic intermediate products were raised by 30 percent while energy prices were increased by 57 percent (Rácz, 1980, p. 133). Following these adjustments, the domestic prices of raw materials and basic intermediates are free to vary with changes in prices paid in convertible currencies and in the exchange rate, while energy prices are fixed centrally and modified intermittently in response to changes in world market prices.

Industrial exporters receive the price obtained in convertible currencies, times the exchange rate, plus a rebate for imputed indirect taxes that is set at 10 percent of export value, except for light industrial products (originally 16 percent, but subsequently reduced to 13 percent) and for iron and steel (nil, but subsequently set at 5 percent). Exceptions have been made, however, in cases when the domestic cost of earning foreign exchange exceeds the sum of the exchange rate and the tax rebate. In such instances, compensation continues to be provided for a period of five years on a decreasing scale. Also, production taxes for individual firms have been

abolished and while firms may continue to receive budget support, this is done on a temporary basis.1/

As of January 1, 1980, firms that exported more than 5 percent of their output in convertible currency trade were required to set the prices of their domestic products by calculating with a profit margin based on the domestic cost of earning foreign exchange in exports. Firms where this ratio equalled the exchange rate, adjusted by the 10 percent tax rebate, could apply a profit margin of 6 percent on the sum of their fixed capital and the wage bill; the profit margin rose to 12 percent for firms that had a domestic cost ratio one-fourth lower than the exchange rate; and it declined to nil in the case of firms that earned foreign exchange through exports at a cost one-third higher than the exchange rate.2/ Also, firms may not subsequently raise their average domestic prices to an extent greater than the increase in their average export prices, and they are obligated to reduce domestic prices if export prices decline, with changes in the profitability of exports providing a further constraint to price setting. At the same time, firms are not supposed to charge domestic prices higher than the tariff-inclusive import price. Finally, firms that export less than 5 percent of their output but manufacture products similar to those produced by firms having an export share in excess of 5 percent are to follow the price setting procedures applied by the latter.

1/ Still, in 1981, the various subsidies will amount to 42 percent of the profits of industrial firms, compared to 58 percent in 1977 (Gadó, 1981, p. 9).

2/ At the same time, the payment of a charge on fixed assets was abolished and social security contributions were reduced from 35 percent to 24 percent of wages; the rate will be 27 percent starting on January 1, 1982.

The rules for competitive pricing have found application in about two-thirds of Hungarian industry, with the share varying between 75-80 percent in machine building, 50 percent in the chemical industry, and 15-20 percent in food processing. In turn, firms in the so-called noncompeting sphere were allowed to calculate with a profit margin of 6 percent in setting their domestic prices as of January 1, 1980, with subsequent changes in prices determined by changes in costs.

The regulations introduced on January 1, 1980 provided incentives to firms to raise their export prices, since they could increase their domestic prices accordingly. However, the regulations discouraged the expansion of export volume in cases when this would have involved lower than average export prices and/or export profitability. Moreover, inducements were provided to reduce the volume of exports when this permitted raising domestic prices.

In fact, the current price value of manufactured exports (excluding processed food) in convertible currency trade increased by only 1 percent in 1980 in terms of forints, representing a decline of 2 percent in volume terms, (Garamvölgyi, 1981). This followed increases of 29 percent in value terms and 17 percent in volume terms in 1979. It contrasts with trends in processed food exports, which are not subject to the same regulations and experienced an export increase of 13 percent in value and 9 percent in volume in 1980, nearly matching the results for 1979.

Within the manufacturing sector, the exports of steel, transport equipment, and clothing declined in current price terms as well, while machinery exports fell in volume terms and, among major product groups, only chemicals experienced an increase in export volume in 1980. These results cannot be explained by reference to the pressure of domestic demand since the domestic sales of industrial products declined by 1.5 percent in 1980. Nor do

unfavorable business conditions in Western Europe provide an adequate explanation, the principal exception being steel. In fact, the volume of manufactured exports from developing countries to the OECD increased by approximately 10 percent in 1980, following a rise of 15 percent in 1979.

A survey of 38 firms, representing 80 percent of manufactured exports in convertible currency trade (Fazekasné, 1981), and an investigation of the structure of machinery exports (Csobay, 1981), show that the expansion of exports was positively correlated with profits made in exporting. And while this involved in part reducing exports that were not socially profitable, both authors report that socially profitable exports, too, were foregone. Such is also the conclusion of a paper provocatively entitled: "The Firm's Export Dilemma: Only the Best -- or the Good as Well" (Garamvölgyi, 1981).

The observed adverse consequences led to changes in the regulations in 1981. As the changes did not have the desired effects, further modifications were made as of January 1982. If a firm is able to earn foreign exchange in convertible currency trade at less than the official exchange rate, while raising its exports by a predetermined percentage,[1] it does not have to lower domestic prices even if its average export prices or export profitability declined. Also, firms have to report increases in their domestic prices to the Material and Price Bureau in cases when their exports declined in terms of forints.

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[1] The value of exports in terms of forints has to rise by 8 percent for firms that export 5 to 12 percent of their production in convertible currency trade; the required export expansion is 6 percent for firms with an export share of 12 to 25 percent; and it is 4 percent for firms exporting more than one-fourth of their output. The required increases are 14 percent, 12 percent, and 10 percent, respectively, in the case of firms that earn foreign exchange in convertible currency trade at less than the official exchange rate, adjusted for the tax rebate.

Changes in the regulations can only alleviate, but not eliminate, the adverse effects of incentives on export volume. Fluctuations in export prices and in the profitability of exports due to events outside the firm's control also tend to discourage exports and may induce firms to reduce their exports below the 5 percent limit that triggers the application of competitive pricing rules. In general, firms may be inclined to play it safe, avoiding risky exports and the introduction of new export products or entry into new markets, where initial costs are high and/or price concessions need to be made to obtain a foothold. [1/]

Apart from variations in prices expressed in terms of foreign currency, fluctuations in export prices may result from changes in exchange rates among convertible currencies, exemplified by the gyrations of the dollar-mark relationship in recent years. Fluctuations in the foreign currency prices of industrial materials also led to variations in the profitability of exports. While firms may establish reserves in the event of variations in export and import prices, this is likely to be insufficient to cope with the actual magnitude of price fluctuations (Kováts, 1981).

The above considerations have led some observers to suggest replacing export-oriented pricing by import-oriented pricing, with domestic prices equated to the tariff-inclusive import price. This price presently represents a ceiling for domestically sold products, but a survey has shown that firms

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1/ Firms may also attempt to adjust their records to suit their interests, in particular in understating the cost of exports. This possibility was recognized by the authorities in deciding against the direct application of profit margins obtained in exporting in the formation of domestic prices (Csikós-Nagy 1980, p. 171). In fact, profits in the manufacturing sector exceeded calculated magnitudes by one-fourth, with a difference of over 100 percent shown for 180-200 industrial firms within a total of about 700 (Gálik, 1980).

often do not know the relevant import price (Réti, 1981). And while import prices are easily ascertainable in the case of raw materials, fuels, and basic intermediate products, which are standardized commodities, price comparisons encounter considerable difficulties in the case of differentiated products, owing to differences in product specifications and quality. Quality differences are of particular importance since the products Hungary does not export tend to be lower in quality. In the absence of import competition, then, import-oriented pricing would not have the desired effects.1/

The question remains as to how existing regulations may be modified in order to provide incentives for efficient export expansion in the present situation when the conditions of import competition have not been established. As far as new export products and export markets are concerned, this could be done by excluding them from the calculations for an initial period of, say, two years. For the remaining products, two-year averages may be used in the place of annual data, or, alternatively, firms may be allowed to establish a reserve to even out fluctuations in profits. 2/

It would further be desirable to adopt a single criterion of price setting for domestic sales in the place of the double criterion based on changes in the prices and in the profitability of exports. The price

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1/ It has been noted, for example, that, due to the higher quality of consumer goods imported in small quantities, the price of imports in no way limits increases in the prices of domestic products. The authors add: "our price mechanism presupposes the market mechanism, and much of our problems are due to this fact or to the situation that in practice we have a simulated rather than a real market. We can expect an appropriate solution only if steps are taken to establish a real market mechanism and competition" (Berényi-Holé, 1981, p. 4).

2/ For a similar proposal, see János Deák, 1980. -- Beginning in 1983, averaging will in fact be used in determining changes in the forint value of exports referred to above.

criterion has the disadvantage that it disregards differential changes in input prices between products destined for export and for domestic sales. Reliance placed on the profit motive under decentralized decision-making also favors the use of the profit criterion. But, this should be defined in terms of profit rates rather than the margin of profit on the sum of fixed capital and wages, which has no economic significance and conflicts with the use of the rate of profit on invested capital in decision-making on new investments. [1]

Apart from contributing to increased exports and improved efficiency, the proposed changes would lessen the possibility of intervention on the part of the authorities in price setting. This possibility has been acknowledged by László Rácz, Department Director at the Material and Price Bureau, according to whom "the firm will not have an interest in practicing a low price domestically when it can obtain a high price abroad, or vice versa. If it does so, it would not any more belong to the group of well-regarded firms and would lose all the advantages this entails" (1981, p. 4). Apart from the ambiguity of the reference to the advantages 'well-regarded' firms enjoy, this statement does not appear to recognize the need for lowering domestic prices in the event of excess supply. In turn, in the more frequent case in Hungary, when sufficient quantities are not available at the 'constructed' prices, imports should be permitted.

More generally, adjustments in prices or in import quantities need to be made whenever domestic supply and demand are not equated at the constructed

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[1] In fact, as of January 1982, the export price condition has been eliminated in the case of firms that earn foreign exchange in convertible currency trade at less than the official exchange rate adjusted for the tax rebate and increase the forint value of their exports in the proportions indicated above; however, the profit criterion continues to be defined in terms of profit margins rather than profit rates.

prices. The lack of market equilibrium, then, adds to the difficulties associated with constructed prices. Thus, while the new price regulations represent a step towards aligning producer prices in the manufacturing sector to world market prices, full alignment would require the freeing of imports. Although this could not be done overnight, steps would need to be taken to gradually free imports, with first priority given to raw materials, intermediate products and machinery.

The liberalization of imports would also encourage efficient import substitution. This is apparent in the case of industrial materials where alignment to world market prices has led to efforts to save on imported materials and to make increased use of substitutes. At the same time, as noted in Section II below, there is need to reduce import protection that discriminates against exports.

Consideration should finally be given to the relationship of consumer and producer prices. Disparities in the structure of consumer prices and producer prices were reduced through decreases in subsidies and the imposition of turnover taxes in 1979 and 1980. At the same time, tax rates vary among commodities, with higher taxes applying to products the consumption of which is to be discouraged (e.g. tobacco and alcoholic beverages), and tax exemptions (e.g. children's clothing and construction materials) or subsidies (e.g. certain drugs and services) provided for social reasons. The scope of subsidies is especially large for services, including housing, heating materials, and public utilities, which are not consumed by tourists.

Consumption subsidies continue to be applied to major agricultural staples where producer prices are determined on the basis of production costs, with certain adjustments made in accordance with world market price relations. Processed agricultural exports also receive higher tax rebates (28

percent) than manufactured exports.

Notwithstanding these changes, the system of consumer prices in effect does not ensure the satisfaction of consumer needs at least cost to the national economy, and consumer prices lack sufficient flexibility to transmit changes in demand to the producer (Gadó 1979, p. 75). Consumption subsidies are largest for heating materials (73 percent) and public utilities (41 percent) while, apart from luxuries and semi-luxuries, the highest taxes apply to clothing (19 percent) (Rácz, 1980, p. 141). At the same time, free price formation occurs in only 50 percent of retail trade, albeit representing an increase from a share of 37 percent in 1978 (Csikós-Nagy, 1980, p. 224). It would be desirable to further reduce differences between producer and consumer prices, while ensuring the flexibility of the latter, at a more rapid rate than it is now envisaged (Rácz, 1980, p. 141).

II. The Exchange Rate and Protection

Prior to, and immediately after, the introduction of the NEM, the debate raged as to whether the commercial exchange rate (then called 'the foreign exchange conversion ratio') should be equated to the average cost or to the marginal cost of exports, which was defined as the domestic cost of earning foreign exchange in 10-15 percent of the highest cost exports. In the event, the average cost principle was applied, necessitating the subsidization of about four-fifths of exports (Balassa, 1970, p. 16).

Data exists for the period 1970-80 on changes in export prices in convertible currency trade for Hungary that are comparable to export price data for other countries. The calculations show that changes in relative prices in Hungary and in its major trade partners exactly matched the appreciation of the exchange rate from 60 forints to the U.S. dollar in 1970 to an average of 32.5 forints to the dollar in 1980, thus maintaining the

exchange rate constant in real terms.[1]/ And while the introduction of

indirect tax rebates in 1980 benefited exports, a substantial part of exports

in convertible currency trade continue to require compensation payments.

At the same time, the focus of the debate has shifted, with the holders

of opposing views suggesting that the exchange rate be used to combat imported

inflation or that its main function be to equilibrate the balance of

payments. The first view, prominently held by János Fekete, First Deputy

President of the National Bank,[2]/ is based on the relative version of the

purchasing power parity doctrine[3]/ and it assumes low import and export

elasticities.[4]/

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[1]/ This result represents a devaluation in real terms vis-á-vis the French
franc and the West German mark, an appreciation vis-á-vis the U.S. dollar and
the Italian lira, and no change vis-á-vis the Austrian shilling (Hungarian
exports to these countries were used as weights in the calculations, with the
West German mark taken to be representative of the currencies of the smaller
Common Market countries participating in the snake).

[2]/ Fekete expressed the view that "the forint exchange rates of foreign
currencies should correctly reflect -- individually and in their totality --
domestic and foreign price ratios; in other words, they should provide a
realistic picture of the relationship between the purchasing power of the
forint and that of the foreign currencies and they should adequately keep up
with changes in these relationships, thus ensuring the stability of the
forint." (1976, p. 58; cited in Marer, 1981, p. 538).

[3]/ The relative version of the purchasing power parity doctrine requires the
exchange rate to parallel changes in relative prices at home and abroad. (For
a critical appraisal, see Balassa, 1964.)

[4]/ Béla Csikós-Nagy (1980, p. 92) also makes reference to the experience of
West Germany, Japan and Switzerland that revalued their exchange rate for the
sake of keeping the prices of imported inputs low. As Csikós-Nagy notes,
however, these countries have a particular export pattern dominated by
products that have few substitutes, at least in the short run, which is not
the case in Hungary. Furthermore, following the quadrupling of oil prices in
1973-74, these countries initially revalued their exchange rate in nominal but
not in real terms and, once revaluation occurred in real terms, their balance-
of-payments were adversely affected.

As to the relevant elasticities, Paul Marer explicits the view that "the elasticity conditons were unlikely to be satisfied for a devaluation to improve the BOP" in Hungary (1981, p. 539). However, the empirical basis for this conclusion, cited by Tarafás (1980, pp. 914-16), is weak. Also, questions arise regarding the relevance of the customary justification, or rationalization, of estimated or assumed low elasticity values to the conditions existing after the 1980-81 reforms.

It has been suggested that the import demand elasticity is low because in convertible currency trade Hungary imports mostly material inputs that have no domestic substitutes. However, 15 percent of imports in convertible currency trade are producer goods, 6 percent industrial consumer goods, and 13 percent foodstuffs. Also, the estimates have been derived by the use of least-squares techniques that are known to have a downward bias. Finally, the low elasticity of import demand in the past may reflect the large profits made in transforming imported inputs into goods sold domestically, in ruble trade, and in convertible currency trade as the prices of these inputs were kept artificially low 1/, as well as the fact that the operation of the profit motive was hampered by the pervasiveness of taxes and subsidies in the second half of the seventies.

There is evidence that firms have attempted to reduce their demand for imported materials in response to the rise of material prices and the increased importance of the profit motive after January 1, 1980. Furthermore, consumers have economized with the use of energy as increases in world market

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1/ Marer refers to Hungarian press reports, according to which it was profitable to export in convertible currency trade even if net foreign exchange earnings were small and, in extreme cases, negative (1981, p. 532).