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Policy Responses to External Disequilibria in the
Planned Economies: Factors Affecting Pricing
and Exchange Rate Policies

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Summary

This paper provides arguments in favor of greater use of equilibrium pricing and exchange rate policies in planned economies (PEs). It shows how policies of distorted factor and goods prices, an appreciated exchange rate, and multiple rate practices are perceived by the authorities in these countries to be justified by (i) alleged longer-term gains from an activist development strategy, (ii) distributional benefits from price regulation, and (iii) social and political advantages from institutional arrangements associated with such policies. Against this, greater use of equilibrium pricing and exchange rates result in (iv) the reduction of domestic and external imbalances and (v) an increase in short-term microeconomic efficiency.

The analysis demonstrates why a policy mix of an appreciated exchange rate, multiple exchange rates, and import restrictions has proved inherently ineffective in achieving objectives (i), (ii), and (iii), so that the apparent trade-off with objectives (iv) and (v) is misconceived. It is shown that pervasive protection of import-substituting industries and heavy subsidy of exports from "new" industries lead PEs to a structural disequilibrium and poor factor terms of trade; and that adverse consequences of price and trade distortions become more visible--and policy options, more restricted--because the authorities' capacity to force saving through the use of such distortions is eventually eliminated.

The rate of growth and the real wage can ultimately be sustained only by policies that will reduce income losses from allocative inefficiencies and increase saving by protected sectors. These adjustments can be pursued by a variety of instruments such as: (a) revision of the plan and directives for its implementation, (b) reform in the structure of taxes and subsidies, (c) revised incomes policies, and (d) adjustments in domestic prices and the exchange rate, accompanied by a reduction in distortions to foreign trade. The paper concludes that such policies can enhance both the short- and long-term economic objectives of the authorities, and are therefore necessary constituents of adjustment policies in partly decentralized PEs. To be effective, these policies must be supported by strengthening both the financial responsibility and the decisionmaking autonomy of individual enterprises, in order to induce them to reallocate resources in response to altered price signals.

I. Introduction

This paper deals with pricing and exchange rate policies in planned economies (PEs), a category comprising economies that vary widely with regard to the extent of centralization and direct control over economic processes. All PEs, however, are characterized by the central role of the economic plan and the importance of other arrangements under which a wide range of incentives for decisionmaking at the micro level differ significantly from ones that would reflect relative prices in the world market.

The purpose of this paper is to develop a framework for analyzing, within the institutional setting of PEs, the appropriate role of adjustments of relative prices and the exchange rate in economic programs designed to correct unsustainable external deficits. While the discussion is intended to be relevant to the reasoning underlying the formulation and outcome of allocative policies in PEs in general, a number of statements reflect the author's familiarity with experiences in Eastern European economies, and are more closely related to adjustment problems of these economies than to those of other PEs.

First, certain political and macroeconomic assumptions underlying the approach of the authorities in PEs to making economic choices are outlined. The pattern of relative prices in PEs is derived from the plan objectives of the plan. These objectives are shown to be based on a model of economic growth that relies predominantly on development processes that can be generated internally. The typical method of pursuing these objectives is a redistribution of resources through created and manipulated sectoral imbalances that are observable as scarcities and intentionally distorted prices. For this reason, it is helpful to consider the objectives and methods for resource allocation in a closed PE as an introduction to the later analysis of price and exchange rate policies in the setting of an open PE.

The discussion then points to the elements of a dynamic framework that could provide a plausible rationale for the interventionist policies (the plan, relative prices, trade and exchange rate systems) typically followed in PEs. With such a rationale as a reference point, it is possible to analyze the sources of external imbalances, obstacles to adjustment and possible remedies in a framework that describes how the authorities perceive the trade-offs involved in their choice of adjustment policy.

Next, there is an examination of the appropriateness of the critical assumptions underlying the PEs' policies of an appreciated exchange rate with restricted imports and subsidized exports. In reappraising these assumptions, attention is drawn to the inconsistency between PEs' price and exchange rate policies and the requirements for their external adjustment and sustained growth.

Finally, the implications of the analysis for the nature of the policy choices facing PEs are discussed. It is argued that in adjustment efforts of PEs, a greater role should be assigned to establishing equilibrium prices and exchange rates.

II. General Framework

The absence of a macro-theory of PEs formulated in terms of "mainstream" economic theory makes it impossible to carry out an analysis that synthesizes the real and monetary consequences of an external disturbance and the measures to cope with it in the institutional environment of PEs. ^{1/} While the following discussion is pursued in nontechnical terms and is not intended to provide a full description of the interrelationships between the external and domestic variables and instruments, it does attempt to treat the role of relative prices and the exchange rate within a PE macroeconomic environment. The social and institutional characteristics of this environment, as well as the specific development strategy and closed-economy policies for resource allocation, provide the framework for our analysis of the roles of open-economy price policy and of the exchange rate in the reduction of external deficits.

1. Social and institutional environment

The social objectives of the party in power are implemented by shaping economic institutions and arrangements, which in turn have an important bearing on the authorities' perception of the suitability of various economic instruments. In a pure market economy (ME) setting, private ownership of capital, the ideological association between the owners of the capital and the political leadership, and the concomitant institutional arrangements allow political parties with broadly similar platforms to carry out an economic policy that ensures a dominant role for the market. In practice, no industrial country has a pure market system, because over time the authorities become obliged to intervene in order to correct at least the most obvious socially unacceptable consequences of the unrestricted operation of market forces. By contrast, in the PEs, the ruling party attaches a high priority to certain social and economic objectives that, they believe, would not ensue from a free operation of market forces. To pursue these objectives, they manage the economy according to an economic plan and use various direct controls over economic processes. In practice, however, it is impossible for the authorities to maintain direct economic controls so tight as to make the implicit relative prices economically irrelevant. Hence, the extent to which market forces are suppressed or modified by various social arrangements and economic policies becomes a matter of degree.

^{1/} See Brada (1980), and Portes (1981).

Still, a specification of the objective function of the authorities in PEs would reveal distinctive features giving rise to their social and macroeconomic policies. These features include, principally: state ownership of most natural resources and the capital stock; compared with MEs, a relatively important role for the plan and centralized distributive arrangements; and certain basic distributional rules affecting inter alia the system of taxation and the level and structure of wages. These institutional characteristics of the economy, sometimes referred to as ideological constraints, are best regarded as the parameters of the economic system within which economic objectives are pursued.

A more detailed discussion of the role for various instruments of resource allocation in the PEs requires recognition of important differences among these economies with respect to the role of specific mechanisms of economic management. While detailed central planning and physical distributional arrangements are characteristic of the most orthodox PEs, in the so-called modified PEs the authorities have introduced reforms that result in economic objectives being pursued in a market-like framework through partly decentralized microeconomic decisions shaped by regulated prices. Finally, there are some PEs with indicative planning, partial price liberalization and broad application of market-type economic instruments to guide decentralized economic decisions.

A close association between political and economic functions is typical for PEs, and the form of the interrelationship of these functions is important for the relative roles of discrete political decisions and market-like decentralized decisionmaking in managing these economies. By definition, however, economic management of even the most market-like PE typically entails significant, if concealed, elements of nonprice resource allocation policies, such as involvement of political leadership in the selection of priority projects, allocation of cheap but rationed credit and critical inputs, and the regional allocation of resources.

2. Development strategy and sectoral priorities

Another essential feature of the PEs is that the authorities have a preconceived view of the desirable pattern of economic development and consider that its pursuit requires a significant suspension or distortion of the economic signals that would otherwise emanate from the market. In practice, this view has been that the country should develop an economic structure that resembles rather than complements that in the industrialized countries; in most of these countries, however, the present relative availabilities of factors of production are more similar to those in developing countries than those in industrial countries.

The notion that the pursuit of a preconceived development strategy can merit the suspension or significant modification of market signals implies that the authorities are in some way aware of the costs of such

policies. The economic rationale for such policies is based on a dynamic framework of analysis that allows present consumption and efficiency losses to be more than compensated by future gains arising from the development strategy being followed.

In those PEs where the economic philosophy is associated with Marxist thought, the development strategy is drawn substantially from the Soviet model of extended reproduction, which attaches special importance to the growing share of the capital goods sector as a condition for the transformation of saving into investment. Trade and exchange rate policies in PEs draw also from the Marxist notion of the exchange of unequal values in international trade and from R. Prebisch's views on secular movements in the terms of trade.

These beliefs underlie a development strategy which, through forced saving, 1/ ensures a higher level of investment than would be financed by voluntary saving. The government actively supports the expansion of economic activities believed to have important externalities in terms of their contribution to and dissemination of technical progress throughout the economy. The requirements of a given economic activity for skilled labor, research and development, and complex equipment and technology are taken to indicate the measure of its potential dynamic contribution to the supply of these factors. In other words, the strategy is to aim at attaining the economic structure and the composition of factors of production deemed dynamically advantageous by subsidizing industries that are intensive in capital and skilled labor. This is accomplished by instruments that range from preferential allocation of inputs to multiple exchange rate practices, depending on the emphasis given to detailed physical planning. The common effect of these measures can be interpreted as a significant distortion of resource allocation compared to that which would prevail with market-determined relative prices.

In addition to forcing savings, the authorities gear the development of the economy toward a more advantageous economic structure by making use of the spin-off effects of the technical progress, externalities, and linkage effects arising from the plan. 2/ It will be argued later that these intermediate objectives are pursued by policy-created imbalances

1/ Unlike MEs, where this implies inflationary financing of government deficits, in PEs it is typically accomplished by the separation of consumer from producer prices (a substantial retail purchase tax) and permanent scarcity of consumer goods.

2/ Forward and backward, as well as horizontal and vertical, linkages, which are discussed in Hirschman (1967), are means by which the growth of one activity stimulates the growth of others, either through the increased supply of inputs required in, or the increased demand for the output of, other activities. Such linkages can thus be regarded as specific externalities pertaining to the unbalanced development processes.

that appear either as persistent scarcities (when direct physical allocation is used for allocating goods) or as distorted relative prices (when regulated markets are used).

In discussing resource allocation policies within the context of this development strategy, it is convenient to consider the economy as consisting of three sectors: a traditional, a modern manufacturing and a nontradables sector.

The traditional sector typically ranks low in planners' priorities. The output of this sector consists of traditional exportables and goods that are traded only occasionally, because the country is normally self-sufficient in them. Raw materials, semiprocessed goods based on local raw materials, and processed goods intensive in using traditional labor skills make up one subcategory of traditional sector goods; staple food products constitute another.

The traditional sector is considered to have a poor potential for growth because of its alleged vulnerability to secular changes in the pattern of demand and technology, owing to poor adaptability of its production factors. A segment of this sector--natural resource extraction--which uses modern technology, is considered to have few linkages, not to disseminate technical progress, and to be oversensitive to fluctuations in export prices.

The modern manufacturing sector typically ranks high in planners' priorities for both economic and political reasons. It consists of new processing industries that produce import substitutes and/or nontraditional exports (pharmaceuticals and other chemicals, durable consumer goods, processed metal and electrical products). This sector is favored because of its relative flexibility to changes in demand and technology and to external shocks, and to its contribution to overall technical progress in the economy. This contribution stems from the high research and development content of its inputs, which induces an increase in local supply, and the nature of its output (intermediate technical inputs and machinery), which gives rise to positive linkage effects.

In addition, the modern manufacturing sector is favored for political reasons, because workers and technical intelligentsia employed in, and being educated for, this state-owned sector are the most easily organized part of the working class, from which the authorities seek support for their policies. In contrast, individual farmers, small-scale producers, craftsmen, and operators in services sector (tourism, trade) are often considered to be potential opponents of social change and PE policies. Private ownership of fixed assets gives them a potential for extraction of surplus through employment of others or from trade. Higher earnings in the private sector can undermine the incomes policy in the state sector, even if the difference could be fully explained by the higher efficiency and greater work effort in private activities. These considerations give rise to the scrutiny of the authorities over these activities, which often results in unfavorable relative prices for their products and services.

The state-operated nontradables sector typically enjoys a favored position in PEs. It includes services such as education, culture, health and administration. The satisfaction of the population's demand for these services ranks high among the priorities of the authorities. The services provided by this sector raise the quality of the labor force thus contributing to productivity growth and defense capacity, and since they are relatively labor-intensive, provide an outlet for residual employment of educated labor. 1/

3. Nonprice allocation policies

In PEs, the planners first elaborate a series of material balances and uses of products, which are functionally equivalent to an ex ante input-output model of the economy. Secondly, this model is translated into compulsory tasks for individual managers. Precise specification of input entitlements and output tasks in physical terms substitutes for both relative prices and the microeconomic decisionmaking that would have taken place in a market economy. 2/

Even in such circumstances, wages are usually paid in money and distribution of consumer goods is generally effected through the market. 3/ For enterprises, money serves an accounting purpose, which substitutes for physical specification and control beyond a certain level of detail. Surveillance of the accounts of enterprises makes it unnecessary to process detailed technical information on the functioning of each enterprise. Accounting prices and costs have little impact on the allocation process, however, since fulfillment of physical targets is the paramount criterion of success. It is thus the effective prices implicit in the distribution of inputs and outputs, rather than regulated prices, that determine the allocation of resources; relative prices are also implicit in directly regulated real wages and net investment. In a comprehensive model, one could equally well analyze the operation of a PE by following the changes in physical allocations determined by the planners and households, or by deducing sets of underlying effective prices--the "dual" to the physical coefficients and the material constraints. The former approach is typical for nonprice methods of determining resource allocation.

In orthodox PEs, where prices remain fixed for long periods, a correction in the allocation of resources is initiated by directives originating from the revised economic plan, i.e., from planners' responses to severe quality imbalances. Recent analytical attempts to model such responses in a general equilibrium framework attach particular importance

1/ For unskilled labor, traditional agriculture and processing perform the same function.

2/ See Allen (1976), (1982).

3/ Labor in agricultural cooperatives may receive most of wages in farm produce.

to the spillover effect of the disequilibrium in the consumer goods market on the supply of labor. These models 1/ assume that planners are obliged to avoid the risks of negative consequences of unsatisfied demand in consumer goods markets on the productivity of labor, and conclude that planners' responses to indicators of quantity disequilibrium must serve as an equilibrating mechanism.

This conclusion about planners' behavior depends critically on the assumption that economic behavior in PEs is of a voluntary nature and thereby underestimates the scope for coercing the desired behavior through social and institutional arrangements. For example, the supply of labor in PEs cannot be withheld beyond a limited degree. The possibilities for strikes and individual withdrawals from the working force are reduced by social and political arrangements. 2/ The productivity of labor can be thus regarded as subject to a floor determined by the minimum utilization of capital equipment on a plant level, i.e., the maximum output of given equipment that can be achieved with a given degree of coercion and without raising the real wage.

Nevertheless, the authorities' capacity to raise the supply of consumer goods does affect their ability to raise productivity above that floor. The frequently attempted policy of exhorting workers to raise their productivity, while doing little to reduce scarcities or to increase the real wage, has proved ineffective. When individual consumption falls far below the established social standards, the quiet resignation of professionals and workers in positions not subject to direct political surveillance often finds expression in their increased involvement in "the second economy"---e.g., backyard agriculture, the exchange of "hobby" services and absenteeism for the purpose of moonlighting. At the same time, the efforts of the labor force are increasingly devoted to such activities as seeking or dispensing personal favors in connection with acquiring subsidized but scarce items (housing, certain types of education and jobs, certain types of health and recreation services); private transactions in foreign exchange; black or gray markets in highly demanded imported or quality domestic consumables; hoarding import-intensive consumer goods; and engaging in barter transactions. 3/ Widespread popular involvement in these activities can affect the efficiency of some segments of "the first economy" to the extent that the planners cease to have some of the assumed controls over the socialized sector.

1/ Portes (1979) and (1981).

2/ Generally, there is little dropping out of school, graduates do apply for jobs and strikes are rare.

3/ The latter two activities also illustrate that the domestic currency is being treated by the public as an inferior store of value and medium of exchange.

Persistence of severe sectoral imbalances in PEs supports our proposition that the authorities implement their development strategy by directing resources in ways that systematically differ from equilibrium requirements. Far from being an accidental by-product of imperfect planning, the imbalances are actually perpetuated by the repeated inconsistency of the plan targets and by subsequent strictness in implementing some of them. While some imbalances may be reduced in order to ease the most pronounced economic and social frictions and politically harmful consumer dissatisfaction, the planners' main role is to design and manipulate a pattern of sectoral and sub-sectoral imbalances favoring the priorities of the plan.

Typically, the planners' preferences for a higher investment ratio is reflected in the total supply of consumer goods. The composition of consumer goods is affected by the planners' perception of the developmental roles of the modern manufacturing and traditional sectors, most frequently with adverse implications for agriculture compared with industry. Within the consumer goods industries the same considerations favor the production of machines, mechanical and electrical appliances, and photographic equipment rather than that of textiles, footwear, and furniture. Although more subtle, such differences also occur within the producer goods sector. While this differentiation is pursued by nonprice instruments (allocation of inputs and equipment), their impact on the observable allocation of resources can be viewed in its dual representation as a set of prevailing effective prices, i.e., the intentionally distorted prices that would be necessary, given the actual scarcities and popular preferences, to produce the same allocative effect through the voluntary market behavior of economic agents.

Except in wartime situations or in the immediate aftermath of a revolution, it has been found necessary to employ material incentives, such as variable bonuses, for fulfillment and overfulfillment of targets in order to implement the economic plan. The system of bonuses and the introduction of profits, based on fixed prices, as a supplementary criterion for the success of enterprises gave rise to interesting attempts to use analytical tools normally applied to market economies to explain and rationalize the microeconomic behavior in PEs. To the extent that company profit was allowed to determine the managers' income, political standing and prospects for promotion, the analysis could proceed very much like that for the market economy. However, the introduction of profit incentives in an otherwise unchanged PE setting may leave the basic features of the central planning system unchanged. 1/

1/ See Balassa (1981).

The nature of timid decentralization and reform is better captured by models which treat "quantity targets as a coaxing tool of the visible hand." ^{1/} Optimal production decisions are characterized here by a manager maximizing some combination of current profits and sales, adjusted for penalties when quantity targets are not fulfilled. In this context "the traditional goal of *ex ante* paper consistency of the production plan is not essential." Rather, "the center constructs a deliberately inconsistent and generally not feasible final production plan and uses the visible hands, quantity targets, to coax rather than command" ^{2/} the output level, composition and allocation of commodities. Much central control is maintained but managers are motivated by self-interest to achieve the center's goal. This change in the form of the plan and the method of its implementation, from prescribing a mandatory specification to formulating a more indicative, manipulatory structure, suggests a transition to a system that can rely more extensively on pricing policies.

4. Price determination in PEs

In order to avoid the rigidities and inefficiencies associated with formulation and implementation of the plan in terms of detailed specifications of input entitlements and delivery tasks, most PEs have moved to a system where an important share of economic life is shaped by regulating and otherwise manipulating the market and letting basic economic agents respond to such modified incentives. This is done by extensive use of selective price, fiscal, credit, and incomes policies that aim at inducing decentralized microeconomic units to act in accordance with the plan objectives. The authorities still consider it appropriate, however, to maintain direct control over certain economic processes.

The procedure for determining regulated prices in PEs encompasses: (a) formulation of the targets of the economic plan; (b) estimation of the relative prices of the factors of production and of the producer and consumer goods required for achieving the targets; (c) estimation of the differences between the relative prices required by the plan and those which would prevail in a free market; and (d) design and implementation of various policy instruments, including a set of regulated prices, that achieve the objectives of the plan in the same way as the shadow prices that would result from a system of physical allocations.

The fact that price-fixing practices in PEs can be rationalized by the procedure outlined above does not in itself explain the reasons for, or the direction of, the differences between the regulated prices and those which would be formed in a nonmanipulated market. It is assumed here that the authorities establish relative prices that will induce the supply responses of output and production factors that are targeted in

^{1/} Bonin (1977).

^{2/} *Ibid.*, p. 289.

the plan. For price policy to be an effective instrument in achieving the plan objectives, the operations of the economy must be characterized by: (1) a degree of economic decentralization that allows enterprises to pursue maximization of net income, given relative prices, and (2) a degree of financial discipline and accountability that makes enterprise survival dependent on financial results. If these requirements are met only partly and the authorities continue to interfere extensively in economic processes, the effectiveness of price instruments in inducing adjustment will be jeopardized.

In principle, the institutional environment and economic organization of PEs "allows scope for a large variety of price-setting methods, fully as sophisticated in theoretical insight and policy orientation as any that have been devised in the West." ^{1/} This has been illustrated by the practice of Hungarian mathematical planners to expressly formulate or alter their objective function in such a way as to keep the deviation of their optima from the officially sponsored plan within preassigned bounds. In addition, the recognition of uncertainties and incomplete separability between means and ends, which are political reality, "may restore the diagnostic or similarly systematized prices ^{2/} to the status of 'rational' planning parameters." ^{3/} These developments in pricing techniques imply that Marxist ideology and connotations do not change the economic substance of considerations pertaining to the determination of relative prices. The economic rationale for selective preferential treatment or controls (which can always be interpreted as a distortion of equilibrium prices) ought to be equally well demonstrable by the conceptual framework of "mainstream" economics.

One approach to evaluating the pricing of PEs would be to assess the pricing policy in terms of its allocative efficiency, positing the competitive market, full employment, and a short-term model of the economy as the standard of efficiency. Persistent deviations from this standard would then be explained by "inefficient" policies that suppress or even skew the "rational" allocation process available through the market.

Another approach would be to assess the economic impact of institutional arrangements, development strategy, and departures from market pricing in PEs against a modified standard of allocative efficiency that would permit certain structural changes, produced by violating market allocative criteria, for the sake of long-term economic advantages. This latter approach is consistent with the basic premise of economic planning that active manipulation of variables that enter microeconomic decisions can improve macroeconomic performance by guarding the economy from conse-

^{1/} Seton (1977), p. 35.

^{2/} Which serve primarily to describe a given state of social relationships, like Marxist labor value prices.

^{3/} Ibid., Seton.

quences of the allegedly myopic time-horizon of individual economic agents. An effort along these lines seems necessary in order to analyze PE price, trade, and exchange rate policies and formulate policy advice in a framework pertinent to the authorities' view of their role in shaping the economy.

In a quasi-market setting, state intervention in the economy is expressed as a deviation of regulated prices from market opportunity costs. In a comparative static equilibrium analysis, the results of this deviation can be assessed in terms of a "supply bias" toward the commodity with an upwardly distorted price and a "demand elasticity bias" toward the commodity with a downwardly distorted price, forced on producers and consumers respectively. ^{1/} The rationale for and the direction of these biases are provided by distributional considerations, the prevailing development strategy, and by other arguments, based on mainstream economics, for official intervention in the market. Such arguments may justify official intervention by imperfect market structure (monopoly, oligopoly, narrowness of decisionmakers' horizon and/or incomplete information), economies of scale, and externalities. In a dynamic framework, intervention may be rational depending upon assumptions regarding capital accumulation, the supply and quality of labor skills, and the generation and dissemination of technical progress.

It is a typical characteristic of PEs that prices are systematically distorted to ensure higher profitability in the modern manufacturing sector, whose production is deemed to incorporate the desired characteristics of production factors and externalities. This strategy counts on the "effects of derived net supply." These are the effects derived from the price elasticity of supply of a factor or output, that ensue after other output and input markets are allowed to adjust to the initial change in the relative price of that factor or output. ^{2/}

III. The Roles of Prices and Exchange Rates in Open PEs

One approach to analyzing the role of adjustment of domestic prices to world market prices, and the use of the exchange rate as a policy tool in PEs, would be to adopt, as a norm, a set of equilibrium prices as they could be generated in a market economy with a unified equilibrium exchange rate and reasonably protective tariff, and to interpret PE policies as deviations from this norm. However, this approach would disregard the institutional setting of PEs described above, in which economic planning and price regulation are important. Instead, the discussion here will first focus on the attitude of the authorities towards the role of prices and the exchange rate in pursuing their developmental and distributional objectives in the context of an open economy.

^{1/} Seton (1977), pp. 27-28.

^{2/} See Diewert (1981), p. 63.

In the discussion that follows, the monetary effects of pricing and exchange rate policies are neglected. This is a plausible simplification because in PEs the operations of financial institutions are closely regulated to ensure support for the plan objectives. Price and exchange rate policies and the role of the budget are discussed in a sequence that seems historically relevant for those PEs that started with an orthodox system of detailed central planning, characterized by quantitative trade directives and full budgetary "price equalization" for each transaction, and later moved toward a modified system where enterprises have some freedom to engage in foreign trade, and foreign trade taxes and/or subsidies, resulting in multiple effective exchange rates, compensate for sectoral price distortions.

1. Trade and exchange rate policies in orthodox PEs

In orthodox PEs, foreign trade is a state monopoly and serves the planners by providing essential production inputs and consumption goods that must be imported. When a domestic enterprise produces a good as part of the export plan, the good is sold to the foreign trade enterprise at the prevailing domestic wholesale price. The foreign trade enterprise sells the good abroad and promptly surrenders the foreign exchange receipts to the state bank in return for the domestic currency equivalent at the official exchange rate. The loss or gain of the foreign trade enterprise on the transaction is routinely covered by a payment to or from a price equalization fund. The application of the official exchange rate is thus limited to settlement of accounts between the budget and the foreign trade enterprise. "This system serves to isolate the domestic market from the foreign market. Since losses and gains from foreign trade are concentrated in the foreign trade enterprise and directly subsidized or taxed, changes in foreign prices can have no direct effect on domestic prices or on the activities of domestic enterprises." 1/

The state monopoly of foreign trade may be abolished, with export tasks and import licenses derived from the plan being assigned to enterprises, but the exchange rate may still serve only as a reference point for settling of accounts between the state budget and the banking system acting for exporters and importers.

It is thus inherent in the system of detailed physical central planning to encompass export tasks and import entitlements for enterprises, which are the equivalent of a comprehensive system of export and import quotas. Whatever modest role may be assigned to the financial performance of enterprises as an allocative criterion, it is confined to closed-economy considerations, since export and import prices are automatically equalized with those for domestic deliveries. This procedure implies

1/ Allen, (1976) p. 4.

not only a wide range of effective exchange rates from commodity to commodity, but also different effective exchange rates for the same commodity, depending on the foreign exchange price obtained in each transaction. We may conclude that in orthodox PEs, both the official exchange rate and any tariff, introduced for administrative purposes, are irrelevant in terms of their impact on either foreign trade or domestic prices, i.e., that open-economy price considerations are disregarded.

As the authorities attempt to improve efficiency by increasing the role of net income or profit as a performance criterion, this reform has to include some decentralization, i.e., a relaxation of the strictness of the plan's specification and the monitoring of its implementation. With domestic effective relative prices remaining distorted in favor of the modern manufacturing sector, this relaxation in the command mechanism makes it immediately obvious that the desired commodity composition of foreign trade, favoring expansion of technology- and skill-intensive exports, 1/ cannot be sustained at a uniform exchange rate.

In order to avoid the major restructuring of the composition of foreign trade that would result from the change in domestic relative prices following the liberalization of international trade, the authorities often proceed cautiously, by transforming export subsidies and import taxes into multiple effective exchange rates with the same economic impact. Explicit and implicit subsidies and taxes contained in the effective exchange rates vary in both form 2/ and impact according to the degree to which the authorities allow domestic prices and development patterns to be influenced by world market prices.

2. Multiple exchange rates, differentiated by commodity

In the initial stages of decentralization of foreign trade in PEs, the authorities attempt to preserve the existing allocation of resources by introducing administrative techniques that shield the enterprises from exposure to foreign competition. Enterprises are encouraged to expand exports and to compete for plan-determined import licenses, but their net income is not affected by foreign trade activity, since the

1/ Analysis of "the embodied factor content of Soviet foreign trade," by comparing domestic opportunity costs with the international terms of trade, found that "Soviets are net exporters of embodied capital, but net importers of embodied labor" even with the German Democratic Republic, and much more so with the rest of the world as a whole. See Gardiner (1981), pp. 92-93.

2/ E.g., "price supplements," "exchange rate coefficients," and drawbacks for tariff and indirect tax payments (even when these payments have not been made).

export subsidies and import taxes still fully compensate for the difference between the obtained export or import price, converted at official exchange rates (which still differ among commodities and sources of trade), and the fixed domestic wholesale price.

The first step in simplifying the system is typically associated with the authorities' attempt to increase the motivation of exporters and importers for gaining the best attainable foreign exchange price. Their interest in optimizing the foreign exchange outcome of individual transactions would be enhanced if the effective exchange rates for the same, or similar, goods were equalized.

Even such one-commodity unification of the exchange rate is generally found insufficiently selective to serve the authorities' objectives. First, there is a genuine economic justification for distinguishing between the price structure and liquidity implications of trade with convertible currency partners and those pertaining to trade with bilateral partners. The distinction between convertible and bilateral trade leads to different foreign exchange coefficients between convertible currency and bilateral (or transferable ruble) balances arising from export or import of the same commodity. 1/ In addition, the authorities may subsidize exports to and imports from certain countries for political reasons. This gives rise to taxes and subsidies related to the specific geographical destination or source of exports or imports, respectively. Such subsidies are disguised in the form of compensation for additional costs of the special (tropical) variant of the machinery or durable consumer good exported or for differences in transportation costs. 2/

The desirability of even this modest a departure from the direct control of foreign trade can be questioned by the authorities in a small PE characterized by an oligopolistic structure in manufacturing industries. This is well illustrated by Balassa's description of Hungary's experience of moving first from "firm-by-firm" to "product-by-product" foreign trade taxes and subsidies in the 1968-73 period, and back to a "firm-by-firm" intervention basis in the late seventies. 3/

The attitude of the authorities toward the disparities between domestic and world market prices can, in principle, be equally well reflected in information on either relative prices through time or the range and the pattern of deviations of effective exchange rates from the official exchange rate. There are numerous examples of differing economic significance and duration when subsidies and taxes on exports and imports are not smoothly adjusted to changes in the discrepancies between the domestic and world market prices. In countries where enterprises were free to engage in foreign trade, particularly in exporting, such situations have

1/ See Polaczek (1978), p. 196.

2/ See Trembl (1981).

3/ Balassa (1981), p. 15.

usually been resolved by an increase in the domestic price of exportable goods, only after "massive arbitrage by foreigners." 1/ Temporarily, the same commodity is first exported by the domestic producer and then imported by the domestic user, with the exporter sharing with the foreign re-exporter the differential between the higher export price in domestic currency at the effective exchange rate for exports and the lower domestic wholesale price. Whether the domestic user objects to or favors the discrepancy depends on whether the effective exchange rate for import of the same commodity makes its domestic currency import price higher or lower than the domestic wholesale price would be if raised to the domestic currency export price. In cases where the commodity is an important input for which the effective exchange rate for the importer is low, 2/ the irregularity persists until the authorities respond to the skewed flow of domestic supply or the loss of foreign exchange.

Multiplicity of commodities, permanent and often significant changes in world market prices, and the political cost of introducing and increasing export taxes 3/ make constant adjustments in foreign trade taxes and subsidies unwieldy. Even some proponents of plan-determined regulation of markets admit the poor performance of this system in ensuring efficient foreign trade, i.e., in Marxist terms, in optimizing the country's participation in the international division of labor. 4/

3. Sectoral priorities: relative prices and effective exchange rates

Inefficiencies and administrative difficulties inherent in comprehensive price and trade intervention have prompted the authorities in a number of PEs to undertake the partial liberalization of prices and foreign trade. A modified PE is characterized, inter alia, by the freeing of prices of some traded goods from central control, thereby permitting a linkage between the world market and domestic prices for a subset of traded goods, and continued control with "price equalization" taxes (subsidies) on fixed-price traded goods. 5/

The very existence of a fixed-price traded good (TA) reduces the effectiveness of adjustment in modified PEs. Indeed, the greater is the share of TA in traded goods, the less is the scope for devaluation to induce a change in relative prices between nontraded and traded goods and to assist in adjustment. However, the introduction of flexible-price goods (TB), and the reduction in the number and range of deviations between domestic and world market prices for TA goods, can be viewed as a

1/ Allen (1976), p. 10.

2/ This refers to the quantity of domestic currency for a unit of foreign exchange.

3/ Relative prices are comprehensively discussed on the political level when the medium-term plan is being adopted. Subsequent official intervention, particularly taxation of income earned abroad, is resented.

4/ See Csikos-Nagy (1973), p. 57 and, Polaczek (1978), p. 188.

5/ See Wolf (1978) pp. 232, 233.

compromise between inward- and outward-looking development strategies, characterized respectively by distorted prices supported by trade restrictions and by realistic prices and exchange rates with foreign trade liberalization. In terms of the general approach of this paper, this compromise can also be viewed as reflecting a balance between (1) the social and economic losses perceived by the authorities as resulting from opening the economy to international market forces and (2) the economic and political gains from improving allocative efficiency and reducing the external deficit. These gains are well known and will be referred to in the last section. The perceived losses are related to the degree of control over the domestic economy and the developmental advantages from trade intervention believed to derive from Marxist "structuralist" and "dependency" theories of international trade. 1/

The theoretical background to the PE development strategy discussed above suggests that the adjustment problem and policy alternatives be considered in terms of the relative positions of the PEs' three sectors. 2/

1/ The Marxist theory of labor value asserts that international trade involves the exchange of unequal labor values, namely, that less developed countries trade goods of greater labor value with more developed countries in exchange for goods of less labor value. (Labor value of a commodity is the sum of labor of standard productivity necessary to manufacture it; the labor value consists of the current labor plus the labor embodied in capital and materials used, required by prevailing technology.) This unequal exchange is attributed to higher wages in developed countries, after appropriately discounting wages for differences in productivity between the developed and less developed countries. The wage differential results from climatic, historical and political factors that are not eliminated by trade because of restrictions to the mobility of labor. This view is thought to justify intervention in favor of the production and export of commodity groups whose domestic and export prices in developed countries appear to sustain high real wages. This is referred to as a "structuralist" interpretation of international trade, where benefits from trade are associated with a certain commodity composition of exports and imports. (See Emmanuel (1972), Mainwaring (1980), and Gibson (1980).)

The dependency theory of development and trade was developed in order to explain underdevelopment in Latin America (the "periphery") as a consequence of the extraction and transfer of surplus to dominant partner countries (the "center") by domestic elites and foreign capitalists who operate through the state and transnational corporations respectively. (For a review of these theories, see Dietz (1980).) The sketchy analytical basis of this theory derives from Myrdal's view that, migration, capital movements and trade, far from being vehicles for the equalization of factor prices, are media through which market forces, unless brought under control and regulated, act as a cumulative process that results in even greater inequities between regions and countries with initially different levels of development. (See Myrdal (1965).)

2/ For definitions see Section II, pp. 6 - 7.

Domestic relative prices for the traditional sector are typically depressed by taxes and low effective exchange rates. In terms of the country's comparative advantage, however, the sector is a major earner of foreign currency and a natural forerunner in price and trade liberalization. The liberalization will result first in greater flexibility in prices for goods of this sector, flexibility meaning that the domestic price is allowed to adjust to the international market price multiplied by the exchange rate and adjusted for the tariff.

The modern manufacturing sector obtains favorable treatment through the low prices it pays for inputs (raw materials and capital) and the high domestic price of its output. These distortions are designed to make the sector successful in an accounting sense, in spite of a real wage that is too high for international competitiveness.

The nontraded sector often becomes too expensive in terms of the resources it absorbs. The price of some services may seem very low, because it contains none or very little remuneration for the capital spent for infrastructure and for the cost of education of professionals. The full costs of this sector--i.e., the effective price of its services, including the opportunity cost of its inputs--is disguised through the budgetary process or the selective allocation of cheap credit. A correct calculation would reveal that the effective costs of the output of this sector are often at least as high relative to costs in the traditional sector as those of the modern manufacturing sector. Competition for employment in this sector is evidence of its favorable relative real wage.^{1/} It is, therefore, often appropriate to assume that the adjustment process in PEs starts from a situation where the modern manufacturing and nontraded sectors enjoy upwardly distorted relative prices.

When the economy is open to some degree of foreign competition, the authorities support the prices of import substitutes by import surcharges or other restrictions on foreign trade or exchange, in addition to tariff rates that already increase protection with the degree of processing. Eventually, certain maturing "infant" industries engage in exporting. Owing to import-substituting industrialization, such nontraditional exports evolve from excess outputs of heavily protected production for the domestic market. To be viable, nontraditional exports require a significantly undervalued effective exchange rate, which is provided through explicit or implicit export subsidies and/or retention quotas. Retention quotas indirectly raise the effective exchange rate for export, because import restrictions ensure a high domestic price for imported goods.

^{1/} While many artists, medical doctors and other highly skilled professionals may be underpaid, overstaffing and inadequate differentiation in pay by performance make the cost of the sector (above all its wage bill) excessive in terms of foregone alternatives and consumer preferences.

These distortions of trade support a pattern of domestic relative prices that result in the transfer of resources from the surplus of the comparatively competitive traditional sector to infant industries. The authorities extract surplus by fixing prices for the output of the traditional sector at a level that depresses the real wage and internal saving below the level which that sector could achieve at international market prices. This situation invites arbitrage by foreigners, and the authorities must either let domestic relative prices adjust or retreat from the previous policy of liberalizing trade and prices for the traditional sector.

An appreciated exchange rate and the accompanying policies are instrumental in raising real wages in the modern manufacturing and nontradable sectors. In the modern manufacturing sector, the unfavorable impact on export competitiveness is more than offset by adjustments in export subsidies and/or retention quotas, by import restrictions, and by prices of material inputs that are depressed through an appreciated effective exchange rate for imported inputs and low prices of local inputs. Moreover, the pressure to raise nominal wages is eased by depressed prices of imported staple consumer goods (food, transportation, energy), thereby supporting the real wage for the urban population employed in the non-traded and modern manufacturing sectors.

4. Fiscal proxies for exchange rate measures

In 1968 Hungary introduced changes in the management of foreign trade that relied on manipulating profit incentives through exchange rate adjustments. Similar changes were introduced in Poland in 1971. These changes were intended to promote allocative efficiency by a more active role for relative prices and foreign trade opportunities in decisionmaking at the enterprise level, thereby making exporters and importers more sensitive to prices, consumer tastes, and technical developments abroad.

Nevertheless, the transmission of worldwide inflation, particularly the sharp rises in raw material prices in the early 1970s, was considered politically unacceptable. The authorities' response was to subsidize imports of essential production inputs and consumption goods. Higher prices on the export side increased revenue and the purchasing power of exporters; to suppress the resulting distributional impact, the authorities introduced various export taxes. Economists in PEs criticized these policies and argued that the appropriate response would have been to revalue the domestic currency according to the pace at which prices abroad rose faster than at home. 1/

1/ Polaczek (1978) p. 187.

The loss to an economy from a deterioration in the terms of trade cannot be conjured away by fiscal measures, but the distribution of the loss in income is an economic policy issue that can be dealt with through the budget. Assuming inflexible nonsubsidy expenditures, the state can either (i) raise more tax revenue by increasing the extent of centralization in resource allocation and reducing the amount at the disposal of enterprises and households, or (ii) borrow from the central bank, in which case the nominal disposable incomes of enterprises and households remain unchanged but the real resources for subsidy are extracted through inflation. 1/

What is the implication for foreign exchange reserves of an import subsidy as a response to a deterioration in the terms of trade? Assuming that external balance has to be restored, more resources have to be diverted to exports. An equilibrium between a reduced domestic supply and an unchanged domestic nominal demand can come about only through an increase in prices or, if the prices are not allowed to rise, through a sterilization (forced saving) of a portion of incomes; either way, the actual purchasing power of domestic economic sectors is reduced. 2/

In spite of the authorities' emphasis on the effect of imported inflation, the effective exchange rate policy seems to have respected the adjustment requirements more than publicly admitted. Adjustments in effective exchange rates resulted in a decline in the price of the dollar by roughly 30 per cent in Hungary and Poland from 1971 to 1976. However, whereas in CPEs prices rose at most by 10 or 15 per cent, in the West they almost doubled. Thus from the point of view of real purchasing power the adjustment meant a depreciation rather than appreciation of the Eastern European currencies. 3/ In Polaczek's view the divergence between the rate of appreciation and the difference in inflation rates illustrates the lack of an active exchange rate policy, responsible for the renewed importance of export-import taxes and subsidies. However, given the deterioration in the terms of trade with convertible currency partners, the alleged disguised depreciation was in effect an active exchange rate policy that reduced the amount of the budget intervention that would otherwise have been required.

Promotion of exports of the modern manufacturing sector, intensive in scarce resources (capital and technically skilled labor), will typically require substantial subsidization, i.e., an effective exchange rate

1/ See Hagelmayer (1978) p. 203.

2/ Ibid., pp. 204-205.

3/ See Polaczek (1978), p. 192.

that is undervalued in relation to the official exchange rate. ^{1/} The traditional sector will, consistent with the relative domestic price, receive no subsidy and will be a candidate for an export tax. As the supply of traditional sector exports lags, owing either to increased domestic absorption of raw materials by processing industries or to low investment in response to unfavorable relative prices, the nontraditional exports will make up an increasing share of total exports. Unless the authorities undertake a comprehensive reform encompassing the open depreciation of the official rate and a narrowing of the range of effective exchange rates, the margin between the official exchange rate and the weighted average effective exchange rate for exports will continue to widen.

On the import side there are surcharges and taxes, in addition to the tariff, typically structured so as to provide a relatively appreciated effective exchange rate for important inputs (e.g., technically nonsubstitutable semi-processed materials and parts, equipment allocated to priority projects embodying new technology, and essential agricultural inputs) and an extremely depreciated effective exchange rates for nonessential imports. As the availability of foreign exchange becomes an important constraint to the overall rate of growth, nonessential imports become almost totally eliminated. With the preponderant share of imports consisting of subsidized essential imports, the depreciation of the effective exchange rate for imports lags behind the depreciation of the effective exchange rate for exports. The foreign trade sector's contribution to the financing of the budget can thus be severely reduced even though the trade deficit is widening. Paradoxically, at a time of serious foreign exchange shortages the pattern of effective exchange rates and the resulting change in the composition of foreign trade may provide a net import subsidy. Unlike many other departures from market-determined outcomes, when such situations have arisen the PE authorities offer no justification for the policy mix just described. Aware that resulting distortions lead to an unsustainable deterioration in the country's external position, they have reacted accordingly, although with lags that reflect the timeliness with which information is received and interpreted, and the speed with which the correction can be implemented. A typical response has been a depreciation of the currency coupled with narrowing the range of different effective exchange rates. This solution, however, may lead to only temporary improvements, if there is no change in development strategy and other objectives underlying the practices of manipulating relative prices and effective exchange rates.

^{1/} "Effective exchange rate" means the full local currency equivalent of a unit of foreign currency in a given transaction, i.e., when export drawbacks and other subsidies, import surcharges and other taxes are added to the official rate.

IV. Arguments for More Active Use of Exchange Rate Policy

The attitude of the authorities to the adjustment and gradual unification of the exchange rate depends on their perception of the costs and benefits involved. 1/ On the cost side, they perceive (i) the dynamic economic loss from reversing the long-term development strategy; (ii) the economic and political cost of foregoing certain distributional and social objectives; and (iii) the political cost of associated institutional changes. On the benefit side they take into account (i) the short-term economic gain from raising allocative efficiency and income; and (ii) the economic and political gain from a reduction of imbalances, which makes it possible to relax coercive redistribution. While the political cost and gain cited here clearly involve value judgments, 2/ the other costs and gains are susceptible to economic analysis.

Some authors point to the indiscriminate import substitution, supported by extreme protectionism, that characterizes PE development strategy and dooms it to failure. 3/ Others do not consider the concept of import substitution to be the most useful one for distinguishing between good and bad industrialization strategies. They point out that a number of PEs experienced periods of economic isolation, when there was no alternative to industrialization based on import substitution. More important, it is possible, in their view, for the efficiency cost of an overvalued effective exchange rate to be outweighed by benefits from faster growth resulting from a more rapid industrialization than would otherwise ensue. 4/

This section argues that the pervasive distortions to relative prices and foreign trade tend to lead to an unsustainable external deficit. The emergence of such a deficit is characterized by weakened export competitiveness, increased dependence on imports, 5/ a high debt service burden, and retarded economic growth. It is contended that this policy failure arises principally from the invalidity of certain key assumptions underlying the foreign trade strategy of the authorities. These assumptions are: (1) the equal international availability of techniques of production; (2) uniform and stable consumption patterns among countries and the law of one price; (3) the possibility of achieving allocative efficiency through distortions in trade and exchange rates; and (4) the large scope for forced saving through depressing factor remunerations in the low-priority sector. To be sure, adherence to these assumptions is not limited to planners in PEs; indeed, it underlies interventionist development strategies in many developing market economies. The special

1/ This perception is formed by the political, social and developmental considerations discussed in Section II.

2/ Experience offers numerous examples when the political cost was weighted more heavily than the political gain.

3/ Marer (1981).

4/ Brada (1981).

5/ Reduced dependence on imports is an important initial objective of import-substituting industrialization.

relevance of discussing these assumptions in the context of policies in PEs is that the successful operation of the specific mechanisms chosen to achieve their foreign trade objectives depends critically on whether or not the assumptions are valid.

1. International differences and changes in production functions:
the technology gap and the product life cycle

Planners in some PEs seem to assume that the cost of obtaining new technology (by importing modern equipment) is lower than the benefit expected to result from reduced dependence on imports and greater competitiveness of exports. ^{1/} This assumption underlies the policy of heavily subsidizing the production and export of technically sophisticated products developed through purchase of license or imitation by imported equipment--a policy followed by some PEs in the 1970s and supported by large external borrowing. In essence, the assumption is close to the premise of the neoclassical theory of international trade that countries have the same technical options, with actual differences in technique due to different factor proportions. This assumption, however, has proved to be an illusion. Even with labor productivity and marketing effectiveness equal to those in advanced countries, the latecomer producing a given line of manufactured goods has little chance to obtain an export price that would cover returns to factors of production equal to those achieved by the technical leader. This is the consequence of (i) the technological gap and imitation lag, extended by restricted access to the latest technology, and (ii) the product life-cycle. Both of these phenomena raise the risk that the PE's output of manufactured goods will prove to be inferior and of only marginal importance in advanced economy markets.

The advantages to the innovating country that come from the possession of the newest products as opposed to advantages accruing from lower costs have given rise to explanations of international trade flows in terms of technological gaps, and imitation lags--a notion that assumes that technology is not freely accessible and that a time period has to elapse before other countries obtain new know-how from the innovating country.

The product life-cycle approach to trade assumes that "products undergo predictable changes in their production and marketing characteristics over time." The existence of information costs implies that the commercial introduction of new products is more likely to occur in response to demand in the domestic market, where the producer has lower costs of transferring market knowledge into product design. For a time, the manufacturer of a new product has a virtual monopoly; cost-competitiveness is not a factor determining sales. At this early stage the production will be located in the advanced country. The entrepreneur faces little pressure to

^{1/} The discussion of the effects of technology imports on trade with more advanced economies is limited here to instances where such imports occur through the purchase of licenses or equipment; effects of technology import through equity investment may differ significantly.

reduce cost by using cheaper foreign labor but needs quick communication with the market in order to reduce the cost of product adjustment, frequently necessary for new products. 1/

At the time when the product is produced in a country which imported the technology, buyers in advanced countries are in a position to compare the performance and price, and the producer (exporter from the follower country) faces price-elastic demand. In addition, "when a country was once a leader, that country would have a continuing advantage in related innovations, because one innovation in a sector creates a demand for improvements in related products." 2/

Thus, the technological gap and the product life cycle ensure perpetuation of differences in product design and performance that can be interpreted as international differences in the available production function. These differences ensure trade advantages to more advanced economies and frustrate the PE policy of forcing exports from the highly protected, technologically lagging modern manufacturing sector. As long as the product undergoes rapid technical improvements, an imitator can supply only an inferior product. 3/ When a product reaches maturity in its life cycle, the design and production techniques stabilize, and competitiveness becomes dependent on comparative costs. While the follower may become very competitive in this segment of the manufacturing sector, the price that it can obtain will not support the level of factor returns enjoyed by the leader in an early stage of the life cycle of the same product.

2. Differences and changes in patterns of demand--
limits to the law of one price

The typical PE strategy of competing internationally with a product pattern resembling that of industrially advanced economies is based on the authorities' expectation that the PE will eventually have a pattern of final demand similar to that in industrially advanced economies. This is an unfeasible and misleading objective. Even for a PE capable of rapidly closing the gap in per capita income, it is inconceivable that it could have the same income distribution as industrially advanced market economies and still remain a PE. Since the pattern of demand depends on both the level and distribution of income, the introduction of new products will have an impact on the evolution of the pattern of demand,

1/ Wells (1972) p. 24.

2/ Ibid., p. 25.

3/ Unless the company is owned by the technical leader and allowed to apply the latest technology, thereby raising the profit margin for the leader.

which is different in PEs from that in more developed market economies. Perpetuation of differences in the demand pattern affects international trade in a manner that renders inward-looking trade policies ineffective in reducing dependence on imports, in addition to being detrimental to export competitiveness.

There are at least four ways in which the latter development occurs: (i) the introduction of new products into industrially more advanced economies changes the pattern of final demand in PEs (the demonstration effect); (ii) changes in final demand and technology in the PE change the PE's demand for inputs, thereby increasing dependence on imports (whereas the objective of import substitution is to reduce it); (iii) the introduction of new products and changes in final demand in advanced economies reduce the elasticity of their demand for PEs' nontraditional exports (the inferior-goods effect); and (iv) changes in final demand and technology in advanced countries change the pattern of their demand for inputs, thereby reducing the income elasticity of demand for traditional exports of developing countries.

Generally, therefore import-substituting industrialization cannot exhaust the range of new products developed to satisfy the needs of more advanced countries. As a result, import-substituting industrialization is not likely to reduce the PE's dependence on imports. In addition, important economies of scale in the production and marketing of new products make it worthwhile for the innovator to create and exploit the gap between efficient and actual consumption patterns in the follower country. This gap results from incomplete consumer knowledge, which is nurtured by large expenditures for promotion of new products, cultural dependence and the demonstration effect; indivisibilities and complementarities in consumption reinforce this phenomenon. 1/

Differences in production functions and demand patterns among countries give rise to product differentiation even for the most narrowly defined domestic and foreign goods, which renders invalid the standard assumption of trade theory that domestically produced and imported goods are perfect substitutes in use. Measurement of sectoral substitution elasticities suggests that "agricultural and petroleum products are most homogenous, along with the more traditional nondurable consumer goods..." which seem to be "more substitutable in use than other manufactures." 2/

Final demand for manufactured goods in industrially developed economies changes in response to a rise in income and the introduction of new products; the latter both responds to and creates changes in tastes. In contrast, the supply of manufactured exports from less developed PEs

1/ See James (1981).

2/ de Melo (1981) p. 176.

is a residual of import-substituting production, lagging in design and performance behind the products that meet the same need in more developed economies. Deliberate development of export supply in manufactured goods to fit the demand pattern in more sophisticated markets would require the authorities to shift toward outward-looking industrialization and trade policies, and create greater motivation and exert pressure to upgrade the quality and marketing of products. Short of that, PEs face inferior status and price for their manufactured goods in developed market economy markets. Hence, the assumption of equal price, which underlies the policy of subsidized development of export supply of manufactured goods, has to be significantly modified or dropped altogether.

3. Allocative inefficiency of trade and exchange restrictions

Trade distortions and overvalued exchange rates with foreign exchange restrictions can be viewed as inefficient instruments intended to deal with a sometimes valid need for interference with resource allocation. The rationale for official intervention in trade and exchange rates in PEs rests on the likelihood that free trade would result in a suboptimal allocative outcome with respect to certain important economic objectives. While the argument may justify a departure from unified exchange rates, 1/ it does not provide guidance as to the choice of the most efficient instruments for achieving this. Available instruments include "(1) trade tariffs, subsidies, and quantitative restrictions, (2) production and consumption taxes and subsidies, (3) taxes and subsidies on factor use, or (4) exchange control combined with overvaluation of the exchange rate." 2/

In dealing with policy choices for developing countries, the theory of commercial policy in market economies has encompassed most considerations relevant to planners in PEs. The issue has been treated exhaustively in (i) a partial and general equilibrium framework and (ii) a comparative static and dynamic context. It has been amply demonstrated that, while intervention in the form of domestic tax-cum-subsidy measures on factor use, production, or consumption may improve economic efficiency, trade intervention and exchange restrictions, coupled with an overvalued exchange rate, are inefficient policies; whether to achieve externalities in production attributed to the modern manufacturing sector or to accommodate social objectives such as income distribution, maintenance of certain types of production at specific levels, and maintenance of employment in certain activities. 3/

1/ "Unified exchange rates are defined to mean that (1) all exports occur at the same effective rate as all imports (where the 'effective rate' includes tariffs, trade subsidies and premia); and (2) the domestic incentives to produce and consume are not, in turn, distorted (by taxes or subsidies on domestic production, consumption and factor use) away from those provided by the structure of international prices." Bhagwati (1968) p. 1.

2/ Ibid., p. 15.

3/ Ibid., p. 15.

4. Limits to the capacity for forced saving

A policy of widespread and large price distortions--benefiting the modern manufacturing sector at the expense of the traditional sector--assumes that the potential for forced saving through a depressed real wage is greater than it really is. Microeconomic responses to depressed factor incomes will affect the supply in ways that seriously limit the effectiveness of distortions, in spite of the various ways in which the government is able to control economic life.

Unfavorably distorted prices for the output of the traditional sector are first reflected in depressed earnings, which result in investment away from the sector. If the redistributive effect prevails over the medium term, it will result in relative and possibly absolute shrinkage of the traditional sector. This will adversely affect the supply of most competitive export products ^{1/} and cause increasing dependence on imports of traditional (agricultural) products in which the country was self-sufficient. Depressed real wages in the sector will encourage labor movement from the country into urban centers. If administrative measures suppress this process, depressed wages will be followed by reduced labor supply, affecting productivity. Ultimately, depressed T-sector prices will give rise to various forms of the "second economy," thereby reducing the effectiveness of redistribution by weakening the authorities' control over the economy (Section II).

The PE authorities' capacity to force saving by depressed real wages is further limited by the prospect of "brain drain," i.e., the departure of skilled professionals to more advanced countries. According to internationalist criteria, the brain drain is a natural outcome of the process of income maximization by individuals. However, by nationalist criteria, the process involves a transfer of resources from less developed to more developed economies. Two essential features of the brain drain are that (i) it involves highly skilled personnel who could contribute to the development of the home country, and (ii) the price for human capital is paid to the individual and not to the country that financed education. ^{2/}

International policies to avoid the perverse transfer of resources would involve a scheme which taxes incomes of aliens working in developed countries and transfers the revenue to source countries. ^{3/} Short of such a solution, the authorities in a less developed economy can reduce the incentive for brain drain by encouraging individual initiative, by differentiation in rewards on the basis of performance, and by sustaining a generally favorable social climate. Since the reward differentiation

^{1/} The assumption is maintained here that depressed domestic sectoral prices are supported by appreciated exchange rates without export subsidies or retention quotas, or by realistic exchange rates with export taxes.

^{2/} See Ghosh (1981) p. 357.

^{3/} See Bhagwati (1977) pp. 16-17.

has to start from a relatively high floor wage in the modern manufacturing and nontradable sectors, this seriously limits the potential for forced saving overall.

The tendency of real wages in PEs to rise, following an opening towards high-wage countries, is consistent with the Marxist definition of the subsistence wage. ^{1/} In PEs, this is the wage at which wage-labor reproduces itself as willing wage-labor for the state-owned capital, ^{2/} so that planners are able to sustain expansion of output through rational allocation of resources without frequent recourse to direct coercion. ^{3/} Opening the economy to foreign trade improves communication with high wage countries, which in turn raises the socially acceptable real wage in PEs.

By reducing the potential for forced saving, economic and political pressures to raise real wages reduce the overall freedom of the PE authorities to pursue economic policies different from those pursued by their most important economic partners. In terms of a model that relates instruments to objectives, a closed PE can be considered as a system with several degrees of freedom, because various combinations of instruments (technologies and prices) can be made compatible with a variety of objectives (outputs and distributions). Opening of the economy implies that technology and prices tend to equalize with those available internationally. ^{4/} Consequently, the degree of freedom that the planners consider available in selecting instrumental variables is reduced to one, i.e., the real wage. However, improved communication with high-wage countries raises consumer aspirations and demand, thereby raising the level of the acceptable real wage. The reduced potential for forced saving simply reflects the reduced scope for a policy of depressed real wages. Once the only free variable in the system ceases to be free, values of all other instrumental variables become predetermined within relatively narrow margins.

^{1/} For social and historical determination of the concept, see Ong, (1981) p. 268.

^{2/} Worker participation in company decisionmaking and in future gains from investment partially transforms their relation to capital and may relieve the pressure for increases in real wages in the short term.

^{3/} See Ong (1981) p. 276.

^{4/} Managers press harder to obtain advanced imported equipment and consumers press to obtain more consumables that are in demand in wealthier countries. Improved transportation makes some segments of the nontradable sector tradable. These developments reduce the share of the economy which can be regarded as nontradable and the role of the nontradable sector in adjustment.

With the difference in real wages between PEs and high wage market economies reduced, ^{1/} any significant deviation from a "rational" policy mix in market economies is reflected in the rate of saving (profit) and the rate of growth. Any attempt by PE authorities to avoid this consequence and sustain a high rate of investment becomes reflected in growing current account deficits and a deteriorating net reserve position.

5. Policy implications

This section draws upon arguments from the theories of production (IV-1), demand (IV-2), and trade and exchange rate policies (IV-3), all of which tend to contradict the assumptions underlying the PE strategy of import-substituting industrialization supported by policies of distorted prices, import restrictions, and an overvalued exchange rate with multiple rate practices. In addition, the discussion indicates (i) why PE authorities tend to overestimate their capacity to extract additional forced savings from low priority sectors (IV-4) and (ii) how that tends to reduce the actual degree of freedom that authorities have in their policy choices.

The perpetuation of differences in available production techniques, due to persistence of a "technological gap" and the effects of the "product life-cycle," explain why forced industrialization need not enable a less developed economy to share the favorable factor terms of trade in the modern manufacturing sector enjoyed by the technological leader. The perpetuation of differences in patterns of demand, associated with differences in levels and distribution of income between PEs and more developed market economies, explains why import substitution supported by restrictions on nonessential imports is not likely to reduce a PE's dependence on imports. Finally, allocative inefficiencies that result from distortions in trade and exchange rate systems explain why a dramatic growth of sectors deemed to incorporate favorable dynamic features fails to ensure a sustained rapid growth or to improve the PE's factor terms of trade vis-a-vis advanced market economies.

The adverse consequences of pervasive price and trade distortions for allocative efficiency and growth can be obscured as long as redistributive mechanisms--restricted supply of consumables and/or budget surpluses--enable the authorities to extract, and dispose of, substantial forced savings. It has been shown how international trade and factor movements tend to reduce the effectiveness of redistributing mechanisms, thereby diminishing the potential for forced saving. This development adds to pressures on the authorities to alter their economic policies in the direction of reducing imbalances and raising allocative efficiency.

^{1/} Discounted for differences in productivity.

A more realistic appraisal of the economic environment thus suggests that policies of price and trade distortions, overvalued exchange rates, and multiple exchange rate practices are inherently ineffective in achieving the developmental and trade objectives in PEs. Such a conclusion fundamentally challenges the authorities' perception of trade-offs involved in alternative policy responses to external and internal imbalances.

Large external deficits and serious liquidity problems make it imperative for the PE authorities to alter the weights attached to conflicting economic objectives, emphasizing economic efficiency versus economic security, and immediate reduction of imbalances versus achieving certain preconceived sectoral and factor proportions in the long term. This may prompt the authorities to undertake temporary measures deemed unavoidable, but need not indicate a need to revise more fundamentally the development strategy and associated allocative policies which led to the imbalances. The analysis undertaken in this section suggests, however, that a reduction in price distortions supported both by a reduction in trade restrictions and by adjustment and unification of the exchange rate would simultaneously enhance both short- and long-term allocative efficiency, growth and factor returns in PEs. These results make a shift to the policy of equilibrium exchange rate, accompanied by a reduction in trade distortions and an adjustment in domestic prices, a necessary part of policies for structural adjustment in PEs.

V. Summary and Conclusions

This paper presents arguments in favor of the greater use of equilibrium pricing and exchange rate policies in the balance of payments adjustment of PEs. These policy implications follow from a critical reappraisal of the assumptions essential to the rationale for the interventionist price, trade, and exchange rate policies typically pursued in PEs (Section IV). These assumptions are deduced from an analysis of the ways in which the institutional environment, development, and trade strategies of PEs influence their pricing and exchange rate policies (Sections II and III).

In order to establish a reference point for discussing the sources of balance-of-payments problems in PEs in a framework relevant to the concerns of the authorities, the paper first outlines the development objectives and strategies that provide the dynamic rationale for price distortions and multiple exchange rate practices. Economic development is perceived as a process of obtaining an economic structure resembling that of the most advanced industrial countries. Promotion of the output composition and production factors characteristic of advanced industrial countries is perceived by the authorities as a means of capturing the externalities that aid the development process and future international competitiveness. Given the initial relative factor endowment, the strategy

consists of manipulating sectoral imbalances and distortions of factor returns and goods prices designed to force savings and promote the supply of factors of production, techniques, and products that have the desired dynamic effects on the economy through the spin-off of technical progress, linkages, and other favorable externalities. The level of requirements of a given economic activity for skilled labor, research and development, complex equipment, and technology is taken as the measure of its potential dynamic contribution to the supply of these factors.

It is argued that, given the existing factor endowment, the economic and social preferences embodied in the targeted configuration of production factors and output provide a fundamental incentive for the authorities to engineer plan-implicit deviations from equilibrium. It follows that the most important economic imbalances in PEs are persistent, systematic and policy-engineered tools for redistributing resources to achieve the desired economic structure, which differs significantly from present comparative advantage. This analysis is in contrast to a large body of literature that assumes that planners aim at equilibrium and that imbalances result from random errors in assumptions, mismatches between objectives and instruments, and other unforeseen difficulties in implementation. True, imbalances can result from the planners' inherently insufficient knowledge of the available technologies and their poor foresight of the roles of innovation, weather conditions, changes in tastes, and so on. Yet, given the authorities' preferences, their response to any deviation in circumstances, which makes the initial, seemingly consistent, plan unfeasible, ^{1/} will be systematic in enforcing the implementation of some targets while letting the rest adjust to a below plan level.

Once the plan objectives are being implemented in a market-like environment, price distortions in favor of certain products and activities are considered an important policy tool in pursuing the development strategy, substituting for coercive distribution in physical terms. Once direct price compensation from the budget for each export and import transaction is abandoned, multiple exchange rate practices become an open-economy counterpart of the policy of domestic price distortions supportive of plan priorities.

Internal imbalances are observable both in final consumption, when severe shortages of some goods are accompanied by large stocks of others, and in the production process, when supplies of inputs are inadequate to operate at the desired degree of capacity utilization. An indirect test of the overall political sustainability of a given degree of economic imbalance is provided by the PE's external position. Once the tensions arising from these imbalances become politically harmful, the authorities often attempt to bridge them through enlarged foreign trade. Unless accompanied by substantial adjustment in other policies, this opening to

^{1/} It is always overambitious in order to mobilize public support and encourage effort.

foreign trade results in a large external deficit, which indicates the unsustainability of the current policy mix and precipitates its revision.

In order to postpone hard choices with unsettling distributional and political implications, the authorities may simply opt for a combination of financing and suppressing the deficit. Each of these two courses is harmful to the interests of the international community. Suppression of the deficit by restrictive trade and payments practices may disrupt trade flows in ways harmful to trade partners, whereas accommodating financing, unless temporary and reversible, involves forced long-term lending and may cause an excessive drain of resources from other members. Moreover, the accumulation of distortions in the allocation of resources and the accumulation of a nonsustainable debt are bound to choke off the country's economic growth and additionally complicate the eventual adjustment. The requirements of both sustained economic growth and a country's credit-worthiness--two ultimate criteria for success--leave no doubt that the alternatives to economic adjustment offer only temporary and very expensive relief. Nevertheless, economic history provides examples in which the "temporariness" of suppressed imbalances could be measured by decades.

Faced with an imminent need to adjust, the PE authorities will re-examine whether the policies that produced the imbalances were a necessary and appropriate way to pursue their objectives. In their search for the most appropriate policy response, the authorities will be interested in exploiting the scope for increasing the efficiency of resource use on the supply side in order to reduce the burden to be borne by a reduction in investment and consumption on the demand side. 1/

Our analysis shows that the overall economic performance of a PE and the authorities' approach to balance-of-payments adjustment are greatly affected by the degree of their attachment to domestic price distortions, and thus to multiple exchange rate practices, in support of plan priorities as a development policy tool. In addition, their attitude to exchange rate adjustment is influenced by the importance they attach to the sectoral and distributional effects of an overvalued exchange rate. Furthermore, the authorities' attitude toward price and exchange rate adjustments is influenced by the extent of their commitment to stability of the overall level of domestic prices.

1/ Less than full employment of resources can be assumed, since even with the strictest planning of resource use the external deficit is often associated with capacity underutilization due to scarcities in import- and/or export-intensive inputs.

The PE authorities perceive the need to devalue the currency and to gradually unify the exchange rate as sacrificing the following: (i) the dynamic gains from their development strategy; (ii) the distributional benefits of their previous pricing policies; and (iii) the social and political advantages from institutional arrangements associated with past policies. They expect the change in policy to achieve: (iv) a short term economic gain derived from raising allocative efficiency and income; and (v) the economic and political gains from a reduction of imbalances which makes it possible to relax coercive redistributions.

Nevertheless, our analysis of the assumptions underlying the rationale of an appreciated exchange rate and multiple exchange rate practices concludes that these instruments are inherently ineffective in pursuing objectives (i), (ii), and (iii) and that the alleged tradeoffs are largely misconceived. For example, more realistic assumptions on the availability of production techniques and the stability of demand patterns limit the scope for benefits from import-substituting industrialization and heavily subsidized export of modern manufactured sector products, implying also that a less developed PE should maintain its traditional exports.

To be sure, there may be certain market imperfections or externalities whose existence implies that some viable policy objectives would not be adequately accommodated by pricing in a free market. These considerations call for intervention in the allocation of resources by domestic tax-cum-subsidy measures that directly address the market distortion to be corrected. They do not, however, justify trade or exchange restrictions, which, if used for this purpose, entail considerable and increasing efficiency costs to the economy, and thus adversely affect achievement of other objectives. The export competitiveness of the whole economy suffers from the noncompetitive quality and high prices of protected modern manufacturing sector producer goods. The economy also suffers from sectoral imbalances between supply and demand and from productivity losses, due to limits to the scope of forced saving from depressed factor incomes in the traditional sector. Experience of protectionist practices in developed market economies suggests that, whereas the welfare loss to consumers can be outweighed by the importance of noneconomic social objectives and the limitations of fiscal policy, 1/ losses of allocative efficiency, which give rise to structural weaknesses, increase over time.

1/ The protection to ensure employment in certain sectors (textiles, footwear in several market economies, agriculture in EEC) is empirically most relevant. Justification for intervention excludes the possibility for reduction in factor incomes to the level implied by the international price. Protection, instead of domestic subsidy to labor in the sector, is the third-best policy which requires the assumption that the capacity of fiscal policy is exhausted and/or that the cost of protection will be shared by the exporter. Labor's demand for 'earned' income, and owners' preference for separate distribution between profits and wages of the benefits from the subsidy could be met by the second-best policy of domestic subsidy on production.

Persistent and extensive violation of allocative efficiency requirements through direct controls and price distortions on domestic and international transactions in PEs lead to a situation akin to structural disequilibrium in market economies. On the export side, it is characterized by a "salability illusion" which leads the planners to overestimate the amount of the modern manufacturing sector products they can sell in advanced economy markets. The persistence of the illusion may be due to the fact that the planners view improvement in quality of exports as a stationary goal whereas technology, design, performance, and marketing standards are moving targets, hence the gap remains.^{1/} While concealed trade subsidies create an illusion of favorable terms of trade, the pursuit of export expansion with modern manufacturing sector products and import substitution through large subsidies and extensive direct controls lead to "potentially immiserizing terms of trade," given the inelasticity of demand for exports and imports.

Whereas unsold exportables are rapidly absorbed by domestic sellers markets, imports are hard to repress. When ex ante export plans are not fulfilled, the ex ante balanced trade becomes ex post deficit, which is similar to the consequences of excessive demand in market economies and explains the unplanned portion of the rapid rise in PEs external debt.^{2/}

The discussion points to the gradual depletion of the potential for forced savings through depressed prices and real wages in the T-sector (Section IV, part 3). The removal of this potential reduces the scope for redistributive policies to obscure the adverse income effects of allocative inefficiencies resulting from pervasive price distortions. The excess of the sum of the net investment and loss in income due to inefficiencies over the limited amount of saving which can be extracted by the PE price and tax mechanism has to be reflected in a macroeconomic imbalance or an external deficit, akin to excess absorption in market economies.

Once the potential for extraction of surplus from the traditional sector becomes depleted, choices among policy options increasingly resemble those in market economies. Namely, the rate of growth and prospect for medium-term increase in employment and real wage can be sustained by a combination of reduction in income loss from allocative inefficiencies (supply side) and increase in saving in the modern manufacturing and non-tradables sectors (demand side). In principle, the adjustment can be undertaken by a variety of alternative policies that include: (i) an adjustment in the plan and directives for its implementation, (ii) a reform of taxes and subsidies, (iii) an incomes policy, and (iv) a price reform supported by a reduction in foreign trade distortions.

^{1/} See Holzman (1979).

^{2/} Ibid., (1979) p. 79-80.

Irrespective of the instrument, the shift in supply policy has to emphasize the efficiency of resource use in terms of maximizing present income at world market prices. Microeconomic behavior in this direction is better promoted by incentives to managers and workers in a market-like framework than by plan directives geared to long-term structural and social objectives whose attainment may require a resource allocation that violates the short-term efficiency criteria. The efficiency and political costs of additional taxation and/or reduction in nominal wages in the modern manufacturing and nontradables sectors reduce the implicit cost of price adjustment designed to accomplish that purpose.

External adjustment requires the allocation of a greater share of resources to the most efficient exports and import substitutes. Inefficient and therefore oversized import-substituting sectors will have to be restructured and reduced when import and foreign exchange regimes are liberalized. The need to reduce both domestic and external imbalances, together with the reappraised weights of costs and benefits of alternative instruments, make it necessary to carry out an exchange rate unification that will require effective depreciation for sectors previously facing an overvalued rate, accompanied by a reduction in distortions to foreign trade, and an adjustment in domestic prices. An adjustment in relative prices has to be complemented by restraints on aggregate demand supportive of the transfer in resource use in accordance with new price signals. If the accumulated imbalances are large and deeply rooted and the adjustment has to be accomplished in a short time, various rigidities in the economy and in external demand will require a sharp change in relative prices supported by devaluation.

While the institutional arrangements and organization of PEs follow fairly inflexible political parameters and development strategies, there is nevertheless scope for evolution in economic arrangements while maintaining the same final objectives. To the extent that certain features of economic management are better suited to the pursuit of certain objectives, the shift in emphasis among short-term economic objectives will also have an impact on the evolution of economic organization and management of PEs. Greater emphasis on allocative efficiency and balance of payments adjustment requires greater use of decentralized economic decisions based on economic incentives provided by market-related relative prices and exchange rate and trade policies consistent with such prices. The required improvement in microeconomic allocation will follow only if decisionmakers in enterprises fully bear the consequences of the financial outcome of their operations within the "rules of the game" that, once revised, remain stable. This implies substantial reduction in and/or full accountability for political interference with economic life (related to decisions in investment and distribution within the enterprise sector in particular), which may prove incompatible with the

authorities' perception of their responsibilities. 1/ Progress in this direction will depend on economic necessity and especially on the authorities' assessment as to whether and to what extent political fundamentals must be compromised in the process.

1/ In this respect, a difference between PEs and many market economies where the state is involved in microeconomic decisions is one of degree only.

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