Exchange Control, Liberalization, and Economic Development

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For the past three years, the National Bureau of Economic Research (*NBER*) has been sponsoring a research project on exchange control, liberalization, and economic development. In this project, a number of country studies have been undertaken, focusing upon the quantification and analysis of individual developing countries' experiences with exchange control regimes and attempts at liberalizing those regimes, focusing equally on the interaction between the country's trade and payments regime and its economic development.

The countries studied have included Brazil (A. Fishlow), Chile (J. Behrman), Colombia (C. Diaz-Alejandro), Egypt (B. Hansen), Ghana (C. Leith), India (J. Bhagwati and T. N. Srinivasan), Israel (M. Michaely), South Korea (C. Frank, Jr.), the Philippines (R. Baldwin), and Turkey (A. Krueger). Each study has been undertaken within an analytical framework devised by us and agreed upon in advance by all participants. These studies are now completed or nearly so, and they are to be published by the National Bureau of Economic Research through 1973 and 1974. They should be of interest to students of the individual countries as well as to those concerned with trade and development issues more generally. When all the studies are final, we shall have a great deal of material for analysis on a comparable basis of different countries' experiences.

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The final stage of the *NBER* project consists of our attempt to synthesize the results of the individual studies in an overall volume. This paper represents a preliminary report on some of these results. We therefore present an overview of some of the major topics in Section I. In Section II, some of the more detailed results pertaining to the effects of exchange control regimes are presented.

I. An Overview

For each country covered by the Bureau project, individual researchers were asked to trace their country's experience with a view to identifying: (1) when and why exchange control was adopted, and how the control regime was intended to relate to the country's domestic economic goals; (2) the evolution of quantitative restrictions after their initial imposition; (3) efforts, if any, to ameliorate the undesired results of the payments regime; (4) experiences with attempts at liberalization and the timing of the economy's response to those attempts; and (5) the resource-allocational, income-distributional, and growth effects of the country's experience. Within that framework, each country's author singled out for in-depth analysis a particular point in time during which the detailed working of the exchange-control regime was analyzed, and selected one liberalization effort for intensive analysis.

On the basis of the results from individual studies to date, we have been surprised at the degree of similarity among seemingly diverse countries. On each topic, certain broad conclusions have emerged.

Motivation for Quantitative Restrictions (QR)-Regimes

Initial adoption of exchange controls was generally an *ad hoc* response to external events. Rapidly, however, quantitative restrictions were perceived as a means of furthering domestic industrialization policies. Whether it was the rapid shift in international market conditions during the 1952–1954 period or memories of the Great Depression, most policy makers were pessimistic—probably to an objectively unwarranted degree—about prospects for growth through industrialization based upon export growth and diversification. The optimal resource allocation dictum—that the marginal cost of earning foreign exchange should be equated with the marginal cost of saving foreign exchange—was generally abandoned in favor of saving foreign exchange at all costs.

In the process of using exchange control to foster the growth of domestic industry, however, the internal working of the *QR* systems generally frustrated, at least partially, the very domestic goals they were designed to achieve. Bureaucratic allocational procedures, political pressures surrounding the administration of controls, and the private sector response to the unintended incentives created by the regimes led to frustration of the goals the *QR* regimes were designed to serve. We shall return to more detailed examination of the logic of *QR* systems in Section II.

Export Promotion Versus Import Substitution

Among the more interesting results that appear to emerge from our preliminary analysis of individual countries' experience is that countries which have had export-oriented development strategies appear, by and large, to have intervened virtually as much and as "chaotically" on the side of promoting new exports as other countries have on the side of import substitution. Yet, the economic cost of incentives distorted toward export promotion appears to have been less than the cost of those distorted toward import substitution, and the growth performance of the countries oriented toward export promotion appears to have been more satisfactory than that of the import-substitution oriented countries. If that conclusion is valid, the lesson is that policy should err on the side of allowing a higher marginal cost for earning than for saving foreign exchange.

There are several theoretical reasons which would explain such an asymmetry in outcomes, and the empirical evidence does point in their direction. In theory, there are four reasons why export promotion may be the superior strategy.

(1) Generally speaking, the costs of excess export promotion are more visible to policymakers than are those of import substitution. If there are departures from unified exchange rates, export-promoting growth can be sustained only by subsidies or other incentives costly to the government budget. Thus, there are built-in forces within the government against excessive export subsidization and promotion. The equivalent costs of import substitution are borne by firms and consumers and, hence, no obvious intragovernmental pressure group emerges as rapidly when incentives are biased toward import substitution.

(2) An export-oriented development strategy generally entails relatively greater use of indirect, rather than direct, interventions. There is considerable evidence from the individual country studies that direct intervention may be considerably more costly than is generally recognized (see Section II below). When policy makers are concerned with export promotion, direct controls cannot be as pervasive as they can be under import sub-

stitution. Price controls, distribution controls, and a host of other detailed interventions make little sense, even to bureaucrats, when firms' outputs are intended largely for overseas markets, but appear attractive when production is oriented toward the home market under import substitution. The fact that, under import substitution, government officials have power to remove or enhance domestic monopoly positions of import-competing firms implies that those firms can be induced to accept otherwise intolerable (and socially unprofitable) interventions with their decisions. By contrast, officials simply do not have the same degree of power over firms engaged primarily in the export market.

(3) Exporting firms, however much they may be sheltered on the domestic market, must face price and quality competition in international markets. Import-substituting producers, with no competition for domestic markets, are a pervasive fact of life in the developing countries where import substitution has been stressed. While there is little hard evidence on the subject, there is considerable reason to believe that sheltered monopoly positions may be important explanations of low productivity growth in the newly established manufacturing industries in developing countries. Insofar as the adverse side effects of inadequate competition are less severe under the export-oriented strategy, it may be that export promotion is superior simply because it reduces the incidence of the problem.

(4) If there are significant indivisibilities or economies of scale, an export-oriented strategy will enable firms of adequate size to realize them. When import-substituting incentives dominate the domestic market, import-substituting firms generally are confronted with powerful incentives for expansion through diversification; each new product line provides one more domestic monopoly position. If indivisibilities and/or economies to scale are important, an export-oriented strategy will provide better incentives for expansion of capacity in existing lines. As such, an export-oriented growth strategy is better suited to achieving whatever economies of scale are present than is an import-substitution strategy where firms are generally limited in their horizons by the size of the domestic market.

These and other arguments supporting the case for an asymmetrical behavior of the export-promoting *versus* import-substituting economies appear to be borne out by the contrast in the success of South Korea and the relative failure of India, for example, in the countries studied in the project. Since approximately 1960, the economic policies of South Korea have been heavily oriented toward growth through exporting. The rate of growth of exports has been almost double that of real *GNP*. Close inspection of South Korean policies indicates that the kinds of detailed and chaotic interventions which we have found in other countries are abundantly present in Korea's case as well: numerous *QR*'s, high tariffs, and physical targeting of exports and imports. The striking difference, however, is in the remarkable degree to which the government has been willing to use exchange-rate changes and to lean in favor of export promotion *via* preferential allocation of import licenses, etc. Thus, aside from other special factors, such as the high inflow of foreign resources (official and private), the one striking aspect of Korean success has clearly been the significantly less discrimination against exports than in other developing countries, and *not* (it would appear) the presence of a neoclassically efficient allocation mechanism *in toto* in the system.

Whether this asymmetry between export promotion and import substitution is

important or not awaits further exploration as the final results of the country studies emerge. What is clear is that, of the countries which have stressed export promotion, none have been free from interventions of the type that economists generally identify with *QR* regimes and import-substitution strategies, and that the export-promotion strategies generally appear to have higher payoffs.

Nominal Versus Effective Devaluation

Export rebates, tariffs, surcharges, import entitlement schemes, and a host of other devices are generally employed under *QR* regimes, and they lead to a wide dispersion in effective exchange rates (the amount of domestic currency paid when a good is landed per dollar of c.i.f. value) by commodity categories. Moreover, the increasing resort to changes in surcharges and export subsidies and to alterations in effective exchange rates means that, even without a formal devaluation, there are many degrees of partial devaluation in *QR* regimes.

Usually, formal devaluation is accompanied by the partial or total removal of export incentives and surcharges upon imports. The result is that changes in the parity, as reported by the International Monetary Fund, do not necessarily provide a good indication of the economically relevant magnitude of the devaluation. Thus, in Egypt, Bent Hansen's study shows that the 1962 devaluation was little more than a tidying up operation: complicated export bonuses and import charges were replaced by across-the-board measures, so that the average local currency payments and receipts per dollar of international transactions increased by only one-fourth the amount of nominal devaluation. For Chile, Jere Behrman's study shows effective devaluations to be about two-thirds the nominal ones in 1959 and 1963. By contrast, when Chile adopted frequent exchange-rate adjustments in the late 1960's, the effective devaluations slightly exceeded the nominal, although real devaluation was much smaller.

Determinants of Success of Liberalization

Because of the significant differences in practice between nominal and effective devaluation, we believe that it is important, under *QR*-regimes, to distinguish between devaluation and liberalization.

Liberalization may be said to occur when the official price of foreign exchange assumes an increased role in the allocation of resources, whereas devaluation occurs whenever nominal exchange rates are altered. Thus, as illustrated by Egypt's 1962 episode, it is possible to have a devaluation in which the altered nominal price of foreign exchange has little or no effect on resource allocation, and quantitative restrictions and other direct interventions maintain their importance as allocative instruments. In other cases, such as the Turkish devaluation of 1958 and the Indian devaluation of 1966, the devaluations more than offset the reductions and removals of surcharges, taxes, and export premia. In those circumstances, the official price of foreign exchange increased in importance as an allocator of scarce foreign exchange, at least in the short run.

The difference between nominal and effective devaluations has the important effect that, as happened with the 1966 Indian devaluation, the criteria by which the devaluation is judged are typically confused; and the "rationalization" implicit in shifting from a *de facto* to a *de jure* devaluation (resulting in no effective devaluation) is ignored and the nominal devaluation is assessed as though it was also the effective devaluation.

The studies also point up a number of interesting conclusions regarding the likelihood of effective devaluations leading to *continued* increases in the allocative func-

tion of the price of foreign exchange. A few vignettes are worth pointing out here. (1) Starting from the long exposure to automatic protection under the *QR*-regime, few industries will accept the consequence of effective devaluation and reduced reliance on *QR*'s; namely, the need to compete or contract. As Michaely's study of Israel and the Bhagwati-Srinivasan analysis of the 1966 Indian episode show clearly, liberalization works only insofar as imports of noncompetitive goods are involved, and the degree of protection to import-using industries may even increase as imported intermediates get liberalized. (2) The effect of liberalization is often to induce a recessionary tendency rather than the traditionally feared inflationary impact. The recessionary impact follows from governments typically trying to contract monetary and fiscal policy, while ignoring the fact that the devaluation itself sets up endogenous recessionary tendencies. These come from several sources: (a.) the excess of imports over exports, thanks to influx of aid and private capital, itself implies deflation with devaluation; (b.) the increased imports of materials can lead to increased output and lowered profit margins and may adversely affect investment in the import-competing activities whereas the exporters may not push up investment in time because they expect the increased export incentives to be neutralized *or* the system remains so loaded against exports that exporters find it difficult to increase their investments sufficiently; and (c.) as in Turkey, the initial effect of an effective devaluation seems at times to be to reduce construction activity, with adverse effects (at least in the short run) on employment and income.

Payments Regimes and Economic Growth

The determinants of a developing country's overall growth rate are numerous, and the payments regime is only one such factor. The interaction between the payments regime and economic growth is complex and depends upon a host of other factors in individual countries.

That the effects of the payments regime on growth cannot be analyzed without regard to other aspects of the domestic economy cannot be stressed enough. Clark Leith's findings on Ghana provide a good illustration. Its major export, cocoa, is almost unaffected by the payments regime directly. The price paid to producers is determined by the Cocoa Board and is independent of the exchange rate. On the import side, government control over credit allocation under credit rationing, combined with severe capital market imperfections, means that the demand for imports is more a function of government policies in the credit market than it is of the price of foreign exchange. All new investment projects must be approved by the government, which has power to grant or withhold subsidies and other privileges large enough to make the difference between profit and loss on virtually all investment projects. Under such circumstances, it would be folly to analyze the payments regime as if entrepreneurs were responding in perfect markets to price signals alone. This is not to say that the payments regime does not have its own effects upon resource allocation and growth, but rather that analysis of those effects is considerably more complex than is generally assumed. The individual country studies and our forthcoming synthesis explore these interactions in some detail.

II. The Anatomy of Quantitative Restrictions

Tariffs Versus Quotas

It is always true that every quota has a nonnegative tariff equivalent at each point in time for every recipient of an import license. However, it is not always the case that there is a single tariff-equivalent for a

quota for a given homogeneous import commodity, and it is generally false that the resource-allocational effects of a quota are the same as those of the tariff-equivalent even when there is a single tariff-equivalent.

The reason why there may not be a single tariff-equivalent for the import of a homogeneous commodity is that resale of imports is often illegal. In that case, there is no reason to expect a common implicit domestic price in the absence of a perfect and costless black market. Thus, the criteria for allocation and the actual detailed bureaucratic decisions as to who should receive an import license, and how much each should receive, will in general affect resource allocation.

Even when there is a single domestic price for the imported good, the method of license allocation makes an important difference to resource allocation and income distribution. It is useful to think of the differences between the c.i.f. price of the good (at the nominal exchange rate) and the domestic price as consisting of two parts: (1) the duties, surcharges, and other costs of landing paid by the actual importer, including his normal costs of foregone interest, handling, and so on; and (2) the premium accruing to the recipient of the import license. The local currency cost of the c.i.f. import plus the first item equals landed cost. Landed cost in local currency divided by the c.i.f. price in foreign currency equals the effective exchange rate. Landed cost is then the price that would prevail in the domestic market if there were no *QR*'s upon the import. The premium, therefore, is the windfall gain accruing to the recipient of an import license.

The precise allocation of import licenses makes for important differences because it determines *who* will receive the premium; we note two here. (1) If licenses for intermediate goods imports are allocated directly to producers, these producers are implicitly being subsidized in their production process. A devaluation would increase the costs of the manufacturers using the intermediate good. If, however, licenses are allocated to importers who then resell to the manufacturers, the premium accrues to the importers. If devaluation is then carried out, there will be no effect on manufacturers' costs unless the size of the devaluation exceeds the size of the premium. (2) The calculation of effective protection again must allow for the fact that some imports would be obtained directly by producers at premium-exclusive prices and others at premium-inclusive prices. The resulting estimates of protection can be significantly different than if no adjustment was made for the indirect allocation of imports of intermediates to producers, as illustrated for example by the Bhagwati-Srinivasan study of India.

That the distinction between premium and landed cost is important can be seen by inspection of Turkish data for 1968 presented in Krueger's study. At an official exchange rate of *TL* 9=\$1, it appeared that the average landed cost of \$1 of imports was *TL* 23.8 and the premium was *TL* 23.1.

Logic of QR's

Once a *QR* regime is established, it seems to have an internal, self-contradictory logic all its own. The tariff equivalent of existing quotas tends to fluctuate widely and the unintended side effects of *QR*'s tend to force other changes. Decision makers do not receive visible feedbacks as to the effects of their actions. Thus, one finds quota categories where the quotas are redundant and there is a zero premium side by side with quota applications exceeding the amount of the quota by exorbitant multiples. Yet these multiples provide little information to those allocating quotas, because the amount of applications is itself influenced by expectations as

to the probable disparity between the amount applied for and the amount received.

But that is only a small part of the story. For, once a *QR* regime is established, quotas inevitably become a tool seized upon by governments to accomplish a host of purposes other than the initial one of restraining *ex ante* payments imbalances. Thus, "priorities" are established and preferential treatment is given to applicants willing to further an officially desired goal. For example, efforts are generally made to encourage capital goods imports at the expense of consumer goods imports, in the hope of accelerating the rate of investment. In turn, the newly established manufacturing capacity often has intermediate goods import "requirements" which can be met only at the cost of reducing capital goods imports, thus defeating the initial purpose of the priority. Moreover, in increasing capital goods imports, consumer goods imports are the first to go, and the production structure of the domestic economy becomes increasingly oriented toward consumer goods.

Once that happens, growth in investment becomes increasingly dependent upon expansion of imports, itself a function of export growth. Yet the protection afforded to producers in domestic markets by *QR*'s is so great that profitability lies in expanding domestic sales and disincentives to export increase. By this point, governments are trapped: if they devalue the currency (which could have been done in the first place as an alternative to *QR*'s), they fear that the rate of capital formation will decline as capital goods become more expensive. If they do not devalue the currency, they must resort to *ad hoc* measures such as export rebates, import entitlement schemes for exporters, and the like in order to stimulate export growth. As these "incentives" grow over time, the regime becomes increasingly piecemeal. In virtually all the countries studied in the project which have had *QR* systems, governments themselves have reacted against these undesired side effects and proliferation of special regulations that seem to result from *QR* systems.

The tendency toward increasingly detailed, often internally inconsistent, controls and the resulting frustration of initial intentions shows up in numerous ways. In India, a major goal was the reduction of concentration in economic power, which presumably meant reducing the share of the large industrial concerns in industrial output. Yet the regulations and procedures surrounding licensing applications (for investment and for imports) became so complex that the large firms had a strong competitive advantage in satisfying license requirements: their share actually increased. In Turkey, import licenses were granted to establish assembly industries in the expectation that those (import-substitution) industries would save foreign exchange and provide incentives for domestic production of parts and components. Instead, people invested in the assembly industries in order to earn import licenses, and the value of licenses for assembly industry requirements of intermediate goods increased, rather than decreased, during the 1960's, while domestic content requirements had to be employed to induce investments in parts-and-components producing activities.

Wide Variations in Economic Costs

When producers know that they will benefit from complete protection from imports once domestic productive capacity is established, there are powerful profitability incentives to establish capacity regardless of the social opportunity costs of so doing. The drive to industrialize has been such an important goal that few of the countries covered in the Project have been able to resist using *QR*'s to provide those

incentives. In India and Turkey, goods have simply become ineligible for importation once domestic productive capacity was established. In Egypt and Ghana, the same thing happened *de facto*. In Brazil, the Law of Similars, combined with domestic content requirements, and a provision that tariff rates be doubled once domestic production started, achieved the same result.

It is easily predictable that under such systems the variation in domestic resource cost among and within industries will be great. One of the purposes of the country studies was to quantify the extent of this variation, and the results show remarkably wide differences. We do *not* find that all import-substitution firms are inefficient. On the contrary, some appear to have very low costs while others require a large multiple of all resources in order to save an equal amount of foreign exchange.

In view of this, a major defect of the *QR* system seems to be its inevitably indiscriminate nature. If, within such a system, low-cost activities could be differentially encouraged, the excess costs of the system should be significantly lower. Yet, the workings of the system seem invariably to result in an inability to reflect differentials in social profitability to individual decision makers.

Actual User Licensing

We have already shown that the allocation of import licenses to firms using imported goods in their production process has different resource-allocational implications from those that arise when premia on licenses accrue to individuals who then resell to actual users. One feature of most *QR* systems is that they have tended to become increasingly actual-user oriented, and the fraction of import licenses allocated directly to user firms has increased over time.

The motive for this method of allocation seems reasonable enough: it is designed to avoid allowing large windfall gains to accrue to persons who apparently do nothing but apply for import licenses and, in addition, it rewards those individuals who have contributed toward the industrialization goal, as well as providing an implicit subsidy for recipient firms.

Difficulty, however, arises from the fact that criteria for allocation of licenses among actual users are needed in the presence of excess demand. Without such criteria, the allocating officials are naturally accused of favoritism. The most frequently adopted criterion has been to allocate licenses to recipients in proportion to different firms' capacities, although almost all countries have made provisions whereby new entrants would be entitled to an initial allocation.

This allocational criterion has had two closely interrelated and deleterious side effects: (1) it has, predictably enough, encouraged the development of excess capacity, and (2) it has resulted in roughly proportionate expansion of all firms in a given industry with little competition between them.

Turning to excess capacity first, in many newly established industries, firms' output levels are determined, within fairly narrow limits, by the volume of imports they obtain. Hence, summing over firms within an industry, the industry's output is closely tied to the imports of intermediate goods allocated to it. The fact that there are excess profits to most firms at that level of output is reflected by the premium on import licenses: any individual firm could increase its total profit if it obtained more imports.

The only way to get more imports, however, is to expand capacity, since one's import rights are a function of his share in total capacity of the industry. Thus, even with existing excess capacity, it may pay to build more, since the return on the in-

vestment is the premium to be earned per unit of imports times the expected increment in import licenses.

When policy makers perceive this result, a natural response is to attempt to control the expansion of capacity. Then, investment licensing follows import licensing. Again, criteria are needed and the circle has one more twist: profitability cannot be used as a criterion, since it emanates from import-licensing procedures, and also is regarded with suspicion (the bureaucrats are rewarding the already rich large firms). Thus, the natural temptation is to allow expansion proportionately over all applicants or over all firms. Decisions about the relative rates at which different industries shall be expanded must then be made and private profitability departs further and further from social profitability.

This brings us to the effect of import, and investment, licensing upon competition. For those industries where a firm's imports determine its output, the firm-specific allocation of imports determines market shares. With output fixed in the short run, there is little competition among firms. If there were no investment licensing, it might be that more profitable firms would expand more, with higher equilibrium levels of excess capacity in the long run. In general, however, investment licensing rules out even that form of competition, perhaps diminishing excess capacity, but insuring the growth of efficient and inefficient firms alike. We spoke earlier of the asymmetries of export promotion and import substitution. It may well be that, in dynamic terms, the inability of *QR* systems to foster relatively more rapid growth of more efficient firms is one of the gravest drawbacks of the *QR*-import-substitution development pattern.

III. Concluding Remarks

We have only been able to scratch the surface of the results of the *NBER* project. Many of the statements we have made require, and indeed have, careful documentation and elaboration. Moreover, there are numerous topics on which we have been unable to touch due to space limitations—evidence on export responses to altered real exchange rates, macroeconomic considerations in exchange-rate policy, many of the factors (such as effect on R&D) involved in the trade-regime-growth interaction, and the limits to *QR* regimes resulting from illicit transactions.