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TRADE AND INDUSTRIAL POLICY REFORM
IN DEVELOPING COUNTRIES:
A REVIEW OF RECENT THEORY AND EVIDENCE

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ABSTRACT

This paper reviews recent theory and evidence on trade and industrial policy reform in developing countries. First, the theoretical and empirical basis of the rationales for policy reform are discussed. Next, two sources of heterodoxy are identified and evaluated: (a) the East Asian experience with interventionist industrial policies; (b) recent models of imperfect competition. The survey then turns on strategic issues in reform, and discusses the theory of piecemeal reform, tax or tariff uniformity, credibility, political economy, and interactions with stabilization policy. The penultimate section reviews the available evidence on the consequences of recent policy reform.

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1. Introduction

A decade or two from now, the 1980s will probably be remembered as the time when two significant, and not unrelated, set of events occurred. First, much of the developing world, including a majority of countries in Latin America and Africa, became engulfed in a debt and macroeconomic crisis of major proportions. Per capita income scarcely grew, and, in many countries, declined over the course of the decade. It became commonplace to call this the "lost decade" for development.

But maybe not all was lost. For the second major feature of the decade was that in scores of countries, the inward-oriented, import-substituting policies of the past came under critical scrutiny from policy makers—often from the same government leaders who had enthusiastically espoused and implemented the older policies. By the end of the decade, the anti-export and anti-private enterprise bias of the prevailing policy regimes was largely discredited. Public enterprise, industrial promotion, and trade protection were out; privatization, industrial de-regulation, and free trade were in.

This paper is an attempt to review what we know about the consequences of these policy reforms. I try to cover in equal measure both theory and evidence, as it is only the interplay of the two that allows us to comprehend and interpret the world around us. Just as theory without facts is vacuous, a search for evidence in the absence of a sound conceptual framework yields unintelligible results. Research on policy reform has not been short on either theory or evidence, even though, as we shall see, there is still a need for systematic empirical studies on the consequences of the recent round of reforms. My focus is strictly on trade and industrial policies; macroeconomic stabilization issues are touched upon only to the extent that they impinge on microeconomic reforms. Further, I will emphasize the more recent literature.

Since the World Bank has been intimately involved in the policy reforms of the 1980s through its Structural Adjustment Loans, I begin the survey by considering the role of the World Bank and the concept of "structural adjustment". In the following section (section 3), I briefly discuss the nature of the

policies to be reformed. Section 4 is devoted to the rationale for trade and industrial policy reform. I identify four basic arguments: (i) improvements in static resource allocation; (ii) dynamic benefits in the form of learning and growth; (iii) improved flexibility in face of external shocks; and (iv) reduced rent-seeking. I discuss critically the theory and evidence that underlie each one of these arguments.

Sections 5 and 6 turn to two sources of "heterodoxy". First, I discuss recent revisionist accounts of the East Asian experience (section 5). These accounts have stressed the positive role of government intervention in trade and industry, and sit uncomfortably with the orthodox emphasis on restricting the government's role. Section 6 covers recent models with imperfect competition. These models, developed in part in response to the challenge posed by East Asia to received theory, provide increased latitude for government intervention, on account of both static and dynamic effects. Section 7 is devoted to the literature on the strategy of reform, and covers recent contributions including those in the theories of piecemeal reform, timing and sequencing of reform, credibility, and political economy. Section 8 reviews the available evidence on the consequences of the reforms of the 1980s, paying particular attention to the supply response, and to static and dynamic efficiency. In section 9, I offer some brief concluding remarks.

2. Policy reform, structural adjustment and the World Bank

During the 1980s, the term "structural adjustment" became virtually another name for policy reform. Almost all major episodes of policy reform during this period in the developing world were instigated and/or supported by Structural Adjustment Loans (SALs) from the World Bank. The reforms usually took place in the context of intense policy dialogues with the World Bank—as well as with the International Monetary Fund, which began to disburse medium-term assistance under its own Extended Structural Adjustment, and Enhanced Structural Adjustment facilities. The policy dialogue with the Bretton Woods institutions, along with the conditionality that goes with the latter's lending, helps account for the remarkable uniformity that has characterized the reformists' agenda. Wherever reforms were attempted, the words "structural adjustment" became the code used to describe and legitimize them, and liberalization and outward orientation the main strategies employed. Williamson (1990) has termed

this agenda the "Washington consensus".¹ Perhaps the only important exception was China; where policy developments were insulated from World Bank and IMF conditionality. But even here, the ongoing reforms since 1978 have unmistakably moved the economy in the direction of greater use of the market mechanism and private incentives, and of greater export orientation.

The role played by the World Bank in the reforms of the 1980s has been chronicled and analyzed in a number of different sources, notably by World Bank staff themselves. Thomas *et al.* (1991) and Corbo, Fischer, and Webb (1992) present useful compilations of Bank studies, focusing on the effectiveness of adjustment lending. A comparable independent study including case studies is that by Mosley, Harrigan, and Tøye (1991).

According to Ernest Stern, a vice president of the World Bank who was closely involved in the development of SALs, interest in such lending arose from the frustration felt in the Bank in the aftermath of the second oil shock regarding the lack of real involvement in country policies, despite substantial commitment of resources in the form of project assistance:

Initially our thinking focused on the ways to help countries develop greater export capacity.... When we started, however, we were quite naive about just how profoundly distorted the development strategies of many of the developing countries were.... [These countries] must begin to move from highly distorted price incentives and investment frameworks to something more stable, more oriented to the market system of prices, and more open and less protected. (E. Stern, 1991, 1-2)

Hence, even though the origin of SALs lay in the external payments crisis brought on by the two rounds of oil shocks in the 1970s, the Bank's attention soon turned to correcting microeconomic distortions. Indeed, it became common to view the subsequent debt crisis of 1982 as "one of the symptoms of these distortions," as Stern himself put it (1991, 2).

¹ However, he later came to regret the implication that the choices made by reformists all over the developing world were in fact derived from a consensus reached in Washington, D.C. (Williamson, 1992).

The goals set forth for SALs, therefore, covered both macroeconomic stabilization and microeconomic reforms. As Thomas *et al.* put it:

Two types of policy response, both labeled "adjustment," were called for [to deal with the external shocks of the later 1970s and the early 1980s]. The first was stabilization, or managed reductions in expenditures to bring about an orderly adjustment of domestic demand to the reduced level of external resources available to the country. The second was structural adjustment, or changes in relative prices and institutions designed to make the economy more efficient, more flexible, and better able to use resources and so to engineer sustainable long-term growth. It was envisioned that effective structural adjustment measures would reduce the necessary extent of stabilization. (1991, 11)

Contrast this definition of structural adjustment with the following one by Streeten:

The essence of development is structural adjustment: from country to town, from agriculture to industry, from production for household consumption to production for markets, from largely domestic trade to a higher ratio of foreign trade.... In this very general sense, development is synonymous with structural adjustment and a paper on structural adjustment would be a paper on development. (1989, 3)

While one cannot help but agree with Streeten, I will use the term structural adjustment in the narrower sense used by Thomas *et al.*² In particular, I will focus on structural adjustment policies, i.e., policies aimed at improving an economy's efficiency and its long-term growth. Macroeconomic stabilization policies, aimed at price stability and overall balance between an economy's resources and its expenditures, are covered in the companion chapter by Corbo and Fischer. However, as will become

² An even narrower definition is given by Edwards and van Wijnbergen (1989, p. 1482): "A structural adjustment program can be defined as a set of policy measures that attempts to permanently change relative prices of tradable to nontradable goods in the economy, in order to reallocate, or help along reallocation of, production factors in accordance with the new set of external and domestic economic conditions" (emphasis added). By focussing only on one key relative price, and the one that is most directly influenced by the exchange rate at that, this definition presents a somewhat incomplete picture of the microeconomic changes typically called for in the Bank's structural adjustment programs.

clear, it is not always easy to draw clear distinctions between stabilization and structural measures.

3. What is to be reformed?

An exhaustive list of the policies that came under attack by the reformers would fill volumes, as does indeed any official catalogue describing the industrial incentive regime in a typical import-substituting country. In trade policy, the reforms were directed at licensing and other quantitative restrictions, high and extremely differentiated tariff rates, export taxes, and burdensome bureaucratic requirements and paperwork. In industrial policy, the targets were inefficient and loss-making public enterprises, entry and exit restrictions on private enterprise, price controls, discretionary tax and subsidy policies, and soft-budget constraints.

The best quantitative picture of the state of trade protection in developing countries is provided in Erzan *et al.* (1989). These authors provide a snapshot of tariff and non-tariff barriers in some 50 developing countries as of the mid-1980s. They list sectoral average tariff rates, as well as coverage ratios for non-tariff measures such as licenses, quotas and advanced import deposits. See also Kostecki and Tymowski (1985) for a review of import charges (other than customs duties) and a calculation of their ad-valorem equivalents in a smaller group of developing countries. Prevailing industrial policies are discussed, more qualitatively, in Dervis and Page (1984) Frischtak (1989), and Meier and Steel (1989). De Soto (1989) provides an influential account of the burdens imposed on private-sector activity by bureaucratic regulations and paperwork in Latin America, particularly where small business is concerned.

Policy discussions on trade policy were much influenced by the early work directed by Little, Scitovsky, and Scott (1970), Balassa (1971), and Bhagwati (1978) and Krueger (1978). These studies undertook quantitative descriptions and evaluations of trade regimes, notably by measuring effective rates of protection in developing countries. They demonstrated that the existing policies had resulted in haphazard and often inordinately high levels of protection, hard to reconcile with policymakers' stated objectives.

More recently, Krueger, Schiff and Valdes (1991) have completed a multi-volume study on agricultural pricing policy that promises to do for agriculture what this earlier work has done for trade policy in industry. These authors quantify the effects of policy interventions on agriculture, taking into account both direct effects (i.e., sector-specific interventions) and indirect effects (i.e., those arising from trade restrictions on manufactures and induced changes in the equilibrium exchange rate). They document the existence of a large disincentive for agricultural production, with the explicit and implicit taxation of agriculture ranging from 25 percent in the case of Asian and Mediterranean countries to more than 50 percent in sub-Saharan African countries. Interestingly, Krueger *et. al* find that most of this tax originates not from direct interventions, but from the general-equilibrium implications of industrial protection and overvalued exchange rates (for a summary of their findings, see Krueger, Schiff, and Valdes, 1988). In a sense, then, what these authors have documented is the flip side of the earlier industrial protection studies referred to above.

4. Why reform? The rationales for policy reform

By the late 1970s, the studies mentioned above on trade and industrialization policies had gradually erected a formidable case for policy reform in developing countries. The indisputable success of South Korea, Taiwan, Singapore and Hong Kong with what appeared to be market-oriented policies strengthened the argument (see below, however). Perhaps the clincher was that the external-payments crisis originating from the debt debacle made policy change unavoidable. However, it was by no means clear that change would take the form of liberalization: the first impulse of policy makers confronting a balance-of-payments crisis is typically to tighten quotas and impose foreign exchange rationing. That the 1980s eventually turned out differently was partly due to the fact that policy makers learned from their past mistakes. But there were other reasons as well: (i) World Bank and IMF conditionality ruled out access to external financing in the absence of at least some lip-service to reform; (ii) the depth and persistence of the macroeconomic crisis relegated to second-place distributional considerations that would have blocked microeconomic reforms in more normal times (Rodrik, 1992a).

There are four basic arguments in favor of market-oriented policy reform: (i) economic liberalization reduces static inefficiencies arising from resource misallocation and waste; (ii) economic liberalization enhances learning, technological change, and economic growth; (iii) outward-oriented economies are better able to cope with adverse external shocks; (iv) market-based economic systems are less prone to wasteful rent-seeking activities. While all four of these arguments are used widely, it is the last three that have dominated the discussion on structural adjustment policies. This is understandable since the benefits on account of the first, basically some Harberger triangles, are quantitatively minor compared to the benefits arising from the others, which usually are sizable rectangles. However, by and large, only the first of these arguments is solidly grounded in accepted economic theory.³

4.1. Static effects: Resource mis-allocation

The efficiency costs of Import-substitution policies, encompassing most notably high levels of trade protection and industrial regulation, were documented extensively in the studies cited above (Little Scitovsky, and Scott, 1970, Balassa, 1971, Bhagwati, 1978, and Krueger, 1978). These policies had encouraged the development of industries that were high-cost, and did little to ensure that productivity would increase over time. The resulting pattern of specialization became divorced from comparative advantage. From the perspective of resource allocation, the effects were anti-export, anti-agriculture, anti-labor, and anti-newcomers in industry.

The literature on these issues is broad, and it is impossible to provide a complete list of references. On the employment consequences of trade regimes, see in particular Krueger (1983). The dismal export performance of sub-Saharan African countries is reviewed by Svedberg (1991), who traces its roots largely to domestic economic policies. The consequences of industrial regulations are discussed in Frischtak (1989), and Meier and Steel (1989). Two recent sources on India's infamous industrial regime are Pursell (1990) and Bhagwati (1993). For additional references on the earlier literature, see

³ My four-fold classification is not meant to be entirely exhaustive. An additional rationale for trade and industrial policy reform is improved capacity utilization in the face of bottlenecks and macroeconomic policy failures. However, as the qualifiers in the previous sentence indicate, I do not consider this to be as "basic" an argument as the others I have included.

the surveys by Pack (1988) and Bruton (1989).

While the theoretical and empirical arguments for the resource misallocation costs of the import-substitution syndrome are strong, it is much harder to make a compelling case regarding the magnitude of these costs. Reasonable estimates of the welfare cost of relative-price distortions under usual neoclassical assumptions rarely produce numbers in excess of a couple of percentage points of GNP (see, for example, Srinivasan and Whalley, 1986). Moreover, when distortions get too large, the emergence of parallel and black markets tend to alleviate the welfare costs (see Roemer and Jones, 1991). How, then, can such small numbers be reconciled with the large and growing performance gap between import-substituting countries and the outward-oriented countries of East Asia? To provide an answer, it is common to turn to explanations that go beyond static allocative-efficiency.

4.2. Dynamic effects: Technical change, learning, and growth

Import-substituting industrialization policy was supposed to enhance technological capabilities and economic growth. That it failed to do so, while outward-oriented East Asian countries continued to grow at phenomenal rates, suggested to many economists not only that the infant-industry position was untenable, but that it had it exactly backwards. The anti-export and anti-competition bias of prevailing policies, the argument now went, discouraged innovation, cost-cutting, the acquisition of technological capabilities, and therefore eventual growth. Correcting these biases would remove the technological disincentives. A representative statement is from Balassa (1988, 45):

It has often been observed that [monopolies and oligopolies] prefer a "quiet life" to innovative activity, which entails risk and uncertainty. In turn, the carrot and stick of competition gives inducement for technological change. For one thing, in creating competition for domestic products in home markets, imports provide incentives for firms to improve their operations. For another thing, in response to competition in foreign markets, exporting firms try to keep up with modern technology in order to maintain or improve their market position.

This view became conventional wisdom as a retrospective explanation of the East Asian success, as well as a prospective argument for removal of distortions in other developing countries.

The analytical foundations of such arguments regarding the dynamic benefits of liberalization have never been too clear. Too often, the preferred method of proof is a casual appeal to common sense. In particular, no distinctions are typically made between policies for which received theory is silent as regards learning (or has ambiguous implications), and those for which a definite theoretical presumption exists.

Relative-price distortions, such as trade taxes and investment subsidies, are of the first kind. Such distortions affect relative profitabilities across industries and sectors. If some sectors are adversely affected by intervention, others must be left in better shape. Consequently, even if changes in a sector's profitability could be presumed to have unambiguous consequences for innovative activity (which they do not), the net change in economy-wide innovation would still be unpredictable. Innovative activity would be reduced in some sector, but enhanced in others.

This argument applies equally well to X-efficiency: if tariffs encourage entrepreneurial slack in import-competing sectors because they increase such sectors' relative prices, by the same logic they must reduce slack in export-oriented sectors (Rodrik, 1992b). Moreover, Balassa's statement above notwithstanding, the a priori relationship between the degree of product-market competition and innovative activity is by no means clear; for the state of the debate in the advanced-country context, see Nalebuff and Stiglitz (1983), Hart (1983), and Scharfstein (1988). Neither is it clear whether the inadequacy of incentives to upgrade quality due to informational externalities call for policy intervention (as in Bagwell and Staiger, 1989) or are aggravated by it (as in Grossman and Horn, 1988).

To rescue the conventional wisdom, one needs to resort in each case to finer arguments and special assumptions that are rarely made clear. An early exception is Corden (1974, 224-31), who dissected many of the arguments linking trade policy to cost-cutting incentives and showed their fragility. Developments in the theories of industrial organization and growth have now made learning and technical change more amenable to analysis, and some recent contributions will be reviewed in section 6.3.

In the second group are trade and industrial policies that have unambiguously deleterious

consequences for learning and technological capability. Some prominent examples are as follows. Domestic price controls on industrial commodities like steel discourage innovation and quality upgrading because they lead to excess demand; in the presence of excess demand, firms have no need to increase demand for their product by improving it (see Perez and Peniche, 1987, for the case of Mexican steel⁴). Soft-budget constraint policies similarly discourage innovation in a number of ways: when profits are taxed on the basis of ex post profitability, the benefits of any innovation are shared with the government; when the government stands ready to bail out a loss-making enterprise, it discourages the adoption of technologies that may otherwise render the firm viable (Atiyas, Dutz, and Frischtak, 1992, 16-17). Entry and exit restrictions, through capacity licensing or prohibition of layoffs, prevent more efficient newcomers from replacing less efficient ones. More directly pernicious are restrictions on imports of technology and capital goods, and local-purchase requirements forcing firms to use inferior inputs and equipment (as is common in many countries that prohibit imports when domestic substitutes exist). See Lall (1987) for relevant evidence from India.

There is a wide array of empirical evidence that has been brought to bear on these issues and to test, in particular, the hypothesized cause-and-effect relationship between protection and poor technological performance. However, since the conceptual issues are rarely sorted out as a prelude to empirical analysis, the results of these exercises are difficult to interpret. There are three types of empirical evidence that deserve mention: (i) firm-level case studies; (ii) cross-industry studies of technical efficiency and productivity change, and (iii) cross-country studies of economic growth. I will briefly discuss each in turn.

4.2.1. Firm-level case studies of technological change

Several in-depth case studies of technological change and learning have been carried out at the firm level, and the results are described in a number of sources, including Katz (1987), Lall (1987), and Pack

⁴ The authors quote the owner of the company they studied as saying that if the sun were not visible through the steel sheets, they could be sold.

(1987). See Levy (1991) for case studies of learning related to export markets among Taiwanese and Korean footwear producers. Pack (1992) provides an overview and survey of the firm-level literature on technical change. These studies show that there is a considerable amount of technological tinkering that goes on even when firms are cut off from foreign markets. They do not, however, lead to any easy generalizations regarding the extent to which trade regimes affect the pace of learning. In fact, it is easy to read the case evidence in very different ways: Katz (1987) concludes from his and his collaborators' studies that reducing costs has not been a high-priority for Latin American firms because of high levels of trade protection and little internal competition; the author of one of those studies, however, provides evidence that it was firms which could rely on steady growth in captive domestic markets that undertook the highest levels of technical effort (Pearson, 1987, p. 421).

4.2.2. Cross-industry studies of technical efficiency and productivity change

There exist a number of studies that correlate aspects of policy regimes with measured changes in total factor productivity (TFP) at the industry level. Among the most notable of these are Krueger and Tuncer (1982a), Nishimizu and Robinson (1984), Nishimizu and Page (1991).

Krueger and Tuncer (1982a) find that, on average, periods of slower TFP growth in Turkish industry coincided with period in which the trade regime was more restrictive. Drawing on data from Korea, Turkey, Japan, and Yugoslavia, Nishimizu and Robinson (1984) relate the increase in sectoral TFP to sources of demand growth, including export expansion and import substitution. They find a preponderance of cases where export expansion is positively associated, and import substitution negatively associated, with TFP growth. They caution specifically, however, that no causality can be attributed to these results. Nishimizu and Page (1991) analyze a panel of industries from several countries and regress TFP growth on country characteristics. They find that export growth is positively correlated with TFP growth, but only in economies that follow "market-oriented policies". However, they also find that import penetration was negatively correlated with TFP performance in the same economies in the post-1973 period. Naturally, the same comment about causality applies to this study as well.

There have not been many studies that have attempted to test the infant-industry hypothesis directly. A well-known paper by Krueger and Tuncer (1982b) compares sectoral TFP growth rates in cross-section of Turkish industries, and reports that there was no systematic tendency for more protected industries to have had higher TFP growth than less protected industries.⁵ Strictly speaking, the authors' method does not constitute an appropriate test of the infant-industry argument. Such a test would require a counterfactual regarding the TFP path that the protected industries would have followed in the absence of protection; the implicit assumption that the less protected industries provide the appropriate counterfactual is not compelling.⁶ Along similar lines, Dollar and Sokoloff (1990) analyze TFP growth in South Korean manufacturing industries (over the period 1963-79), and find productivity increase to play a smaller role in the growth of heavy industries than in the growth of light and medium industries. They speculate that the reason may have to do with the prevalence of credit subsidies for heavy industries, which would have encouraged capital deepening. On the other hand, Waverman and Murphy's (1992) study of TFP growth in the automobile sectors of four countries—Argentina, Mexico, Korea, and Canada—provides a more mixed picture. Judged by the yardstick of TFP growth, the second most successful country during the 1970s was Argentina (after Korea), the most closed of the four economies. Waverman and Murphy find TFP growth to have been high in Argentina both during its trade-liberalization period (1978-81) and earlier. Other, more informal evidence on infant industries are surveyed in Bell, Ross-Larson, and Westphal (1984), who suggest that the evidence is rather damaging

⁵ Actually, a closer look at their data leads to a conclusion more favorable to protection. Krueger and Tuncer report data on three measures of protection and two measures of productivity growth. The only correlations that are statistically significant at a 10 percent confidence level between these types of indicators are two positive correlations between a measure of protection and a measure of productivity growth. Moreover, one of these is statistically significant at the 1 percent level. I am grateful to Ann Harrison for this information.

⁶ Krueger and Tuncer claim (1982b): "... in order for infant industry considerations to have warranted intervention in favor of industry *i*, costs per unit of output must have fallen more in *i* than in *k*" (1145). This is not quite right. One can imagine a situation where dynamic learning externalities in industry *i* call for intervention, but once these externalities are appropriately internalized via policy, productivity still grows slower than in other industries.

to the case for infant-industry protection.

The above studies can be criticized for not being able to control for industry or country effects that exert an independent influence on productivity. An interesting study that avoids some of these problems is Chen and Tang (1987) on Taiwan's electronics industry. These authors compare the level of technical efficiency (as measured by distance from an estimated production frontier) in two groups of firms, one that comprises firms that are constrained to export all their output, and one that includes firms that are allowed to service the protected domestic market. They find that the former group exhibits a higher level of technical efficiency than the latter. However, the interpretation of this result is open to question also. In particular, there is reason to suspect that the two samples of firms would be subject to selection bias: since firms know which policy regime they are going to be operating under, it would seem obvious that only firms that had reasonably high estimates of their efficiency would submit themselves to the exports-only regime.

A recent paper by J.-W. Lee (1992) is significant because it focuses on the productivity consequences of Korea's industrial policy, which has been the subject of great debate (see section 5). Lee constructs sectoral estimates of tariff and non-tariff barriers, tax incentives, and credit subsidies. His econometric analysis covers a panel of 38 Korean manufacturing sectors over four 5-year periods (during 1963-83). He finds sectoral TFP growth rates to be negatively and statistically significantly correlated with non-tariff barriers, but positively and significantly correlated with tax incentives. These findings are interesting, as well as puzzling. It is difficult to reconcile the two sets of results theoretically, suggesting perhaps that differences in the implementation of these interventions may have had something to do with the findings.

Other empirical studies of how contacts with the outside world influence domestic technological performance include Katrak (1989), Aitken and Harrison (1992), and Prasnikar, Svejnar, and Klinedinst (1992). Katrak finds a positive relationship between the amount of imported technology and domestic in-house R&D in Indian enterprises. Aitken and Harrison look for evidence of spillovers at the plant level from foreign subsidiaries to local firms in a panel drawn from Venezuela. They find no indication

that foreign presence helps domestically-owned plants' productivity. Prasnikar *et al.* is a plant-level econometric study of the determinants of technical efficiency in the former Yugoslavia. This study finds no evidence that export orientation or the presence of joint ventures with foreigners had beneficial effects on technical efficiency. See the chapter by Evenson and Westphal in this volume for a more complete discussion of the related literature.

Finally, a recent group of papers has been devoted specifically to the experiences of countries undergoing structural adjustment programs, and has paid close attention to econometric and conceptual issues. These papers will be discussed when we turn to the results of recent policy reforms.

4.2.3. Cross-country studies of economic growth

A large number of cross-country studies have looked at the relationship between economic growth and some measure of trade policy and/or price distortions, using various controls on the right-hand side of the regression. These studies generally conclude that openness has been conducive to higher growth.

The immediate problem in such regressions is coming up with an appropriate indicator of trade policy that would rank countries consistently among each other from least open to most open. Many candidate indicators exist, including trade shares, tariff and non-tariff measures, and residuals from factor-endowments models of trade patterns. Pritchett (1991) reviews and discusses some of the better-known measures.⁷ His disturbing conclusion is that there is virtually no statistically significant positive correlation among them. Secondly, there is the usual problem of attributing causality: if governments routinely tighten restrictions when economic performance becomes worse, statistical analysis will pick up a spurious relationship between distortions and growth. This may happen even in the absence of conscious government policy. Under a fixed exchange rate, for example, the black-market premium will endogenously increase in response to a foreign-exchange crisis. If such crises are

⁷ Pritchett limits his attention to "objective" measures of outward orientation. These include: the share of trade in GDP, adjusted for country characteristics and factor endowments; the average tariff and coverage ratio of non-tariff barriers; measures of deviation of actual trade patterns from the pattern predicted from a model of resource based comparative advantage; measures of real price distortions.

associated with lower growth, the analyst will uncover a negative relationship between the black-market premium (the trade distortion variable) and economic growth.

Hence, most of the indicators that have been used can be criticized on conceptual or empirical grounds. Balassa (1978), Feder (1983), Michaely (1977), Syrquin and Chenery (1988), and Easterly (1992) use exports (either their growth rate or their share in income) as the indicator of openness. This raises problems of endogeneity and reverse causality (Jung and Marshall, 1985, Esfahani, 1991). Alam (1987) and Easterly (1992) use the trade orientation index presented in World Bank (1987), which has been criticized as being misleading and biased (Taylor, 1991, p. 107). Edwards (1992) uses a measure of openness computed by Leamer (1988), which attributes all of the residual from a cross-country factor-endowments model to government intervention and has serious shortcomings in the way it ranks certain countries.⁸ De Long and Summers (1991) use a range of measures, among which a dummy for high levels of effective rates protection (> 40%) and the World Bank (1987) trade orientation index are found to exert an independent negative effect on growth. Barro (1991) and Dollar (1992) use some measure of the deviation in the local price level from purchasing power parity (in the case of Barro, only with respect to investment goods), derived from Heston and Summers (1988).⁹

The last method deserves separate comment, as it appears at first sight to yield an intuitive and objective measure of openness and price distortions, and has received considerable attention. What Dollar (1992) does specifically is to take a ten-year average for each country of the deviation in its price level from that of the U.S. The systematic component of cross-country differences in non-tradables

⁸ For example, one of Leamer's measures (the scaled regression-based openness measure) ranks countries like Morocco, Indonesia and Ivory Coast as more open than countries like Canada and the U.S. While Edwards (1992) limits his sample to developing countries, such anomalies reflect the inadequacy of the basic method. Leamer himself remains doubtful about his results: "As I examine these results, I am left with a feeling of skepticism regarding the usefulness of the adjusted trade intensity ratios as indicators of trade barriers. I see tastes (Japan's coffee), omitted resources (Iceland's fish), and historical accidents (switzerland's watches). I am not sure that I see trade barriers" (1988, pp. 198-99).

⁹ This is by no means a complete list of such studies. For additional references, see for example Esfahani (1991) and Helleiner (1990).

prices is purged, to the extent possible, by regressing price levels on national income.¹⁰ Dollar claims that "a country maintaining a high price level over many years would clearly have to be a country with a relatively large amount of protection (inward orientation)" (525-26). However, it is not uncommon for countries to maintain overvalued exchange rates (as measured by PPP) for a prolonged period of time, even in the absence of trade restrictions--think of Chile in 1979-82 and the U.S. in 1981-85, for example. Moreover, the converse of the statement is certainly not true: a large amount of protection need not imply a high price level for tradables as a group. Trade protection raises the prices of import competing goods relative to exportables; it has no definite implication for the aggregate price index for tradables. A country can slap on extremely high levels of import barriers, and yet have its price index for tradables scarcely move against the U.S. level (or indeed have it actually fall below the U.S. level). In practice, what will bring this re-equilibration about is a compensating appreciation of the national currency which will reduce the dollar prices of local exportables while it dampens the increase in the dollar price of importables.

Judged from this perspective, some of the anomalies in Dollar's rankings can be better understood. For example, India and Indonesia are listed among the second least distorted group of countries (there are four groups in all), which should come as a surprise to anyone with some knowledge of these countries' trade regimes during 1976-85. What explains this, in all likelihood, is that these two countries managed their exchange rates and macroeconomic policies rather well over the period in question, avoiding sustained overvaluations of their currencies. It is even more surprising to find Chile listed among the more closed economies, even though this economy was certainly one of the least protected ones in the world during much of this period. Since Chile also experienced a pronounced exchange rate overvaluation during part of this period, this result is however understandable in light of the methodology. In short, purchasing-power-parity-based indicators of price distortions are likely to capture the exchange-rate (and therefore macroeconomic) stance of countries, and miss out on micro price

¹⁰ In his growth regressions, this price level index is actually combined with an index of real exchange rate variability to produce what Dollar calls an outward orientation index. The inclusion of the variability index is itself problematic in this context.

distortions when exchange rates are managed well.

An additional problem with growth regressions of the type discussed here is that they tend to be very sensitive to the precise configuration of explanatory variables included in the regression. Levine and Renelt (1992) have shown that very few explanatory variables are "robust" to the inclusion of additional variables on the right-hand side of cross-country growth regressions. The share of investment in GDP tends to be robust in this sense. Trade and price-distortion indicators are not. But they also report that the ratio of trade to GDP does appear to have a robust correlation with the investment share. Partly in response to this criticism, Harrison (1991) has analyzed a large set of trade and price distortions, and included them individually in a panel regression with country fixed-effects and additional controls of the type Levine and Renelt have used. Within this fixed-effect framework, she recovers a systematically negative and statistically significant correlation between trade distortions and growth.

4.2.4. Summary on empirical studies on dynamic costs of price distortions

A number of problems have plagued the empirical studies surveyed here. We summarize the more important here: (i) the trade-regime indicator used is typically measured very badly, and is often an endogenous variable itself; (ii) the direction of causality is not always clear, even when a policy variable is used as the trade indicator; governments may choose to relax trade restrictions when economic performance is good; (iii) openness in the sense of lack of trade restrictions is often confused with macroeconomic aspects of the policy regime, notably the exchange-rate stance;¹¹ (iv) the causal mechanisms that link openness to beneficial dynamic effects are rarely laid out carefully and subjected to test themselves; this makes it very difficult for policy conclusions to be drawn.

Measurement and conceptual issues aside, it is perhaps reassuring that so many studies using so many different indicators tend to confirm that countries with fewer price distortions, particularly on the

¹¹ When foreign currency is rationed, an overvalued exchange rate is equivalent to an import tariff. However, in all other cases the consequences of exchange-rate overvaluation (or undervaluation) differ from those of trade barriers. This distinction is rarely drawn in the studies discussed above.

trade side, tend to grow faster. Even if we are not convinced by any single study, should we not be swayed by all of them taken together? Perhaps so. But the virtual impossibility of accurate cross-country measurement of distortions, as well as the prevalence of distortions in Taiwan and Korea in the 1960s and 1970s (see below), should make us cautious with regard to the presumption of improved performance in any specific country contemplating liberalization.¹²

4.3. Response to external shocks

The case for policy reform was much strengthened by the argument, originating most forcefully in Bela Balassa's work, that export-oriented countries are better positioned to deal with negative external shocks than inward-oriented countries. The argument was advanced by analyzing the comparative experience of countries during the second half of the 1970s. Focussing on the period following the first oil shock (1974-78), Balassa (1981a) first calculated the foreign-exchange impact of terms-of-trade and export demand shocks for several countries. Then, he decomposed the aggregate shock into four types of what he called "policy responses": (i) additional net external financing; (ii) increase in export market share; (iii) import substitution; and (iv) import effects of lower GNP growth. He argued that export-promoting countries, unlike inward-oriented countries, were able to increase their world market shares, which in turn favorably affected their economic growth. Balassa (1981b) later confirmed these findings with a larger sample of developing countries.¹³

Focussing on the early 1980s, Sachs's (1985) comparative analysis of East Asian and Latin American experiences reinforced Balassa's conclusion. Sachs argued that the primary reason most East Asian countries were successful in avoiding protracted debt crises was the higher share of exports

¹²Also, the weight of published evidence should be tempered by a selection bias at work. Such is the appeal of conventional wisdom on this issue that it is possible that many studies which find an insignificant or positive relationship between price distortions and growth do not make it beyond first-draft stage.

¹³ See Srinivasan (1988) for a review of these and related studies by Mitra (1986). Balassa's procedures have been criticized by Hughes and Singh (1991) for not taking into account the negative interest rate shock to Latin American countries and the positive remittance shock to certain Asian countries, thus making the comparison less favorable to the former.

in their GNPs. He also went one step further in linking the Latin American outcome to the political pressure originating from powerful urban groups with a stake in inward-orientation.

At first sight it is paradoxical that more open economies should perform better in the face of negative external shocks. Here it is useful to distinguish between the impact effect of a shock and the transition out of it. With regard to the former, it is clear that a given terms of trade shock is more harmful to a country with a high export-to-GNP ratio than one with a low ratio. Similarly, a reduction in external capital flows affects a country that has actively participated in international capital markets more than one that has not. Indeed, the impact effects of external negative shocks were gravest on the most open economies such as Korea in 1980 and Chile in 1982-83, but were barely felt in a closed economy like India.

The appropriate way to think of Balassa's and Sachs's arguments, therefore, is as follows: it is not that outward oriented countries are immune to shocks, but that they have an easier time getting out of crisis. But even here there are conceptual problems. If what one understands by outward orientation is the absence of microeconomic distortions that bias incentives away from exports, it is difficult to see how such distortions could be causally related to the balance-of-payments crises that have typically followed external shocks. None of the case studies in Thomas *et al.* (1991), for example, makes a convincing case that microeconomic distortions were at the root of the crisis of the early 1980s. As a matter of simple economics, trade restrictions lower exports and imports, and have no implications for the balance between the two. The trade balance is determined by macroeconomic policies—expenditure policies and exchange-rate policy in particular. The correct response to an adverse balance-of-payments shock is a combination of expenditure-reducing and expenditure-switching (i.e., exchange-rate) policies. The evidence is that countries that recovered relatively quickly from their respective shocks were those that applied this simple recipe (see for example Dailami, 1991, on Korea, and Moran, 1991, on Chile).¹⁴

¹⁴ Westphal's criticism of Dailami's account is noteworthy: "[the chapter] does not develop with sufficient clarity the point that Korea's rapid recovery from the macroeconomic crisis owed far more to stabilization policies than to concurrent structural adjustment policies" (1991, 406).

These objections notwithstanding, it is still possible that outward oriented countries have greater flexibility in responding to shocks, or that their political economy more easily allows (and accommodates) a change in macro policies. The informal evidence is consistent with these views, but the studies cited above—with the exception of Sachs (1985), which explicitly links policy choices to the underlying political economy—have only scratched the surface. Consequently, we lack a good understanding of how and why certain configurations of economic policy render the economy more resilient to external shocks than others.

4.4. Institutional effects: Reducing rent seeking

The final set of arguments in favor of policy reform has to do with governance issues. The institutional setting under which import-substitution policies have typically operated has given rise to a wide variety of incentive distortions and resource misallocations that collectively go under the name of "rent-seeking". Starting with Krueger's (1974) classic article, it has become commonplace to argue that the resource costs of the prevailing distortions are multiplied several-fold by the existence of such activities. Examples of the waste generated include: employment of lobbyists and other intermediaries in pursuit of licenses and incentives to be obtained from government officials; generation of excess capacity when import licenses are allocated in proportion to installed capacity; competition for scarcity rents in black markets when commodities and foreign exchange are rationed; smuggling, under-invoicing, and over-invoicing. See Krueger (1990) for a recent re-statement, Bhagwati (1982) for a theoretical generalization, Gallagher (1991) for an empirical application to African countries, Tarr (1992) for an application to autos and TVs in pre-transition Poland, and Murphy, Shleifer, and Vishny (1991) for an extension in the context of economic growth.

While the costs of rent-seeking may be genuinely immense, it does not follow that a correction of price distortions and a move to outward orientation necessarily eliminates them. As long as governments exist and they implement policy, individuals and groups will exercise political power to obtain particularistic benefits for themselves. For example, Onis (1991) shows how a new type of rent-

seeking took over once Turkish policy moved towards Korean-style outward orientation: rent-seekers started to run after export subsidies instead of import licenses.

It is a plausible hypothesis, nonetheless, that certain types of policies are more conducive to rent-seeking than others. Compare tariffs and quotas. As Bhagwati and Srinivasan (1980) have noted, tariff revenue can be sought by rent-seekers just as quota premia are. Yet, it is reasonable to suppose that the anonymity of revenues that accrue to the general budget somehow shields them from the gaze of rent-seekers, something that cannot be said for quota licenses that carry hefty premia (Krueger, 1990). Similarly, a uniform tax system may be more impervious to lobbying than one with a highly differentiated structure (see Panagariya and Rodrik, 1992, for an analysis). But the lack of overt rent-seeking in East Asia must be attributed primarily to the "hardness" of the state in that setting (see the next section), and not to outward oriented policies per se.

5. Heterodoxy I: Reinterpreting the East Asian experience

The East Asian success story--i.e., the stupendous growth rates achieved by Japan, South Korea, Taiwan, Singapore, and Hong Kong--raises the challenge of how this experience can be emulated in other settings. Economists who prescribe openness and price liberalization to developing countries typically present a picture of the East Asian experience that differs rather sharply from that presented by East Asian specialists themselves. A usual caricature is that these countries achieved their miracles by minimizing price distortions, giving markets free rein, and emphasizing exports. In the case of Korea and Taiwan, in particular, emphasis is placed on reforms during the 1960s that greatly reduced the restrictiveness of the trade regime, eliminated financial repression, and established a free-trade regime for exporters. Analysts who have studied these countries closely describe a much more nuanced situation, and stress that government intervention has been pervasive (except for in Hong Kong). The latter credit East Asian governments for making the miracles happen, not by getting out of the way of private entrepreneurs, but by actively nurturing and protecting infant industries.

With regard to liberalizing trade restrictions, for example, it is clear that East Asian countries did not

go nearly as far some Latin American countries have done recently, and that whatever was accomplished took place a lot more gradually. Here is how Hong (1991) describes the progress of liberalization in Japan, Korea, and Taiwan:

It was not until the 1960s that Japan eliminated the bulk of its formal quantitative restrictions: the nominal import liberalization ratio (by items) expanded from less than 70 percent in 1960 to about 93 percent in 1964, and to 97 percent by 1976. Similarly, Taiwan did not eliminate the bulk of its formal quantitative restrictions until the early 1970s: the nominal import-liberalization ratio increased from 61.5 percent in 1970 to 96.5 percent in 1973.... Korea is scheduled to eliminate the bulk of its quantitative restrictions during the period 1984-88. (p. 245)

According to a Korean Development Institute (KDI) study (cited in Hong, 1991), the average effective rate of protection in Korea (for domestic sales only) actually rose from 30 percent in 1963 to 38 percent in 1978, after a dip to 24 percent in 1970.¹⁵ The contrast with the rapid and no-holds-barred liberalization that has taken place in Chile in the second half of the 1970s, and in Bolivia, Mexico, and Argentina in the 1980s is staggering.

With regard to industrial policy, the following evaluation of Tanzi and Shorne (1992) of Taiwan's tax incentives is noteworthy:

Taiwanese policymakers believed that they could pursue an investment strategy that would second-guess the market and pick winners. As a consequence, Taiwan kept its tax rates much higher than Hong Kong but pushed the investors in the desired direction through the widespread use of tax incentives. These incentives were fine-tuned to a degree rarely seen in other countries. (p. 57)

The same objectives were pursued in Korea via selective and discretionary credit subsidies (see C.H. Lee, 1992). On industrial activism in Singapore, see Young (1992).

¹⁵ This reflects an increase in protection of the agricultural sector, however. For manufacturing proper, the effective rate has declined from 26 percent in 1963 to 13 percent in 1978.

The extensive involvement of the state in industrialization has long been familiar to close observers of East Asia (see for example Jones and Sakong, 1980, Westphal, 1982, and Pack and Westphal, 1986). Two recent books have led the way in popularizing the reinterpretation of the East Asian experience, Amsden (1989) on Korea and Wade (1990) on Taiwan. While many of Amsden's and Wade's arguments have been made before, what is new in these books is an ambitious re-conceptualization of this experience,¹⁶ as well as their extensive documentation of the government's role in allocating resources and guiding industrialization in both instances.

Amsden (1989) describes in detail the Korean government's use of trade protection, selective credit subsidies, export targets (for individual firms!), public ownership of banking sector, export subsidies, and price controls—all deployed single-mindedly in the service of acquisition of technological capabilities and of building industries that will eventually compete in world markets. She argues that government policy was successful not because it got prices right, but indeed because it got them purposefully wrong. However, a key element of the strategy, Amsden argues, was that in exchange for government subsidies and trade protection the government also set stringent performance standards. Firms were penalized when they performed poorly, as when they became subject to "rationalization" (government-mandated mergers and capacity reduction) in the wake of over-extension. They were rewarded when they fulfilled government objectives, as when they were awarded subsidized credit for fulfilling export targets. Such discipline kept the system free of the rent-seeking that has contaminated incentive regimes in other settings: "in other countries--like Turkey and India, for example--subsidies have been dispensed primarily as giveaways. In Korea the 'wrong' prices have been right because government discipline over business has enabled subsidies and protection to be less than elsewhere and more effective" (Amsden, 1989, vi).

Wade (1990) does not deny that there were elements of the free-market (i.e., Hong Kong) recipe in

¹⁶ But see Johnson (1982) for an antecedent in Japan's case, as well as Jones and Sakong (1980) on Korea.

the Taiwanese strategy, but he qualifies the picture significantly. He calls Taiwan a governed market economy, characterized by: (i) high levels of investment; (ii) more investment in certain key industries than would have resulted in the absence of government intervention; and (iii) exposure of many industries to international competition (p. 26). He documents the pervasiveness of incentives and controls on private firms through import restrictions, entry requirements, domestic content requirements, fiscal investment incentives, and concessional credit. He argues that the Taiwanese state has consistently acted in anticipation of comparative advantage in such sectors as cotton textiles, plastics, basic metals, shipbuilding, automobiles, and industrial electronics: "Taiwan manages its trade differently from many other developing countries, but not less" (p. 113). Like Amsden, he stresses the "hard" nature of the East Asian state, but also argues that the emphasis on exports helped reveal policy mistakes and made reversal possible when some ventures got too costly.

These works do not make easy reading for economists, both because they so boldly contradict conventional wisdom on what constitutes good economic policy, and because their authors' analyses occasionally remain incomplete or confusing. The latter is true particularly on the question of whether the various policy interventions more or less offset each other, resulting in broad policy neutrality on balance, as liberalizers are prone to argue (e.g., Shupe, 1991). On this important issue, Amsden openly contradicts the Lerner symmetry theorem (and Walras' Law) without attempting a reconciliation.¹⁷ Wade does the same, and also contradicts himself.¹⁸ Nonetheless, these books cannot easily be dismissed; they present a serious challenge to those who would deny the usefulness of an activist

¹⁷ "The argument that relative prices in Korea were distorted but in the right direction, that is, toward exports, is therefore itself distorted: Prices were distorted in all directions in Korea--both for import substitutes and for exports--and often for one and the same product in the two categories" (Amsden, 1989, p. 155).

¹⁸ "The government was trying to promote both exports and, in different industries, import substitution...." (1990, p. 117, my emphasis). Later on, Wade writes: "[export promotion and import substitution] are mutually exclusive only if defined to refer to the overall balance of incentives between domestic and foreign sale. But at the individual industry level, import-substituting incentives and export-promoting incentives can be complementary" (p. 363). His second statement is, of course, correct, but greatly limits the force of his argument since it is a partial-equilibrium one which cannot have applied to more than a narrow segment of industry.

industrial policy. Similar analyses of the East Asian experience, with varying emphases, are presented in Banuri (1991), Bardhan (1990), Biddle and Mitor (1992), Biggs and Levy (1990), Gereffi and Wyman (1990), Johnson (1987), and Westphal (1990).

It bears repeating what is perhaps the most striking aspect of the revisionist accounts of the East Asian experience: the policy instruments used to such benefit in that context are no different from those that have apparently failed so miserably in Latin America, Africa, and the rest of Asia. The policies in question are import quotas and licenses, credit subsidies, tax exemptions, public ownership, and so on. For example, export subsidies that have worked so well in Korea in the 1960s have been ineffective and a source of rent-seeking in Kenya in the 1970s, and in Bolivia, Cote d'Ivoire and Senegal during the 1980s.¹⁹ A reasonable hypothesis is that the reason has to do with differences in the way that the government interacts with the private sector. One way of conceptualizing this difference is to think of the government as a Stackelberg follower vis-a-vis the private sector in much of the developing world, whereas it is the Stackelberg leader in East Asia. A model of this sort can be used to explain how identical policies can have diametrically opposite consequences in different institutional settings (see Rodrik, 1992d).

If there is a set of conclusions regarding the East Asian experience on which the revisionists and the liberalizers can agree on, it probably goes as follows: (i) there has been a lot of government intervention and an active trade and industrial policy; (ii) but intervention has taken place above all in the context of stable macroeconomic policies in the form of small budget deficits and realistic exchange-rate management; (iii) equally important, the governments' emphasis on and unmitigated commitment to exports has helped minimize the resource costs and incentive problems that would have otherwise arisen from heavy intervention; (iv) also, intervention has taken place in an institutional setting characterized by a "hard" state and strong government discipline over the private sector; (v)

¹⁹ This point was also stressed by Pack and Westphal (1986): "The differences between Japan, Korea, and Taiwan, on one side, and most less successful industrializing countries, on the other, are not to be found in the use of different policy instruments. The differences are to be found instead in different ways of using the same policy instruments—for example, in the scope of their application, in whether they are used promotionally or restrictively" (pp. 102-103).

furthermore, such a setting is lacking in most other developing countries. What one then does with these conclusions depends on one's predilections. Some would argue that it is possible to engineer local versions of the institutions that have made Korea's or Taiwan's policies so successful (e.g., Wade, 1990, chap. 11; Fishlow, 1991). Others would conclude that weaker governments should economize on their scarcest resource, administrative competence, and restrict their involvement in the micro-management of the economy (Krueger, 1990). Yet others would call for an entirely hands-off approach (Lal, 1990).

6. Heterodoxy II: Recent models of imperfect competition

One of the common arguments against East Asian type industrial policies is that governments could not possibly make informed decisions about which industries will eventually become successful and hence deserve support. Wade (1990) argues that this objection misses the point: "The governments of Taiwan, Korea, and Japan have not so much picked winners as made them." (p. 334, emphasis in the original). In other words, Wade implies that under the right set of government policies, industries can be nurtured into competitiveness even if these industries are ex ante undistinguished with respect to potential comparative advantage. Now, while this statement may be true as a matter of objective description, its normative implications are not as salutary as Wade assumes. Indeed, in an economy approximating perfectly-competitive conditions, the policy just described would have to reduce the economy's real income. Making "successful" exporters out of industries that do not possess an underlying comparative advantage is a resource-subtracting policy. So is this another display of poor economics?

The answer is not so clear in light of recent trade models with increasing returns to scale and imperfect competition. Assume for a moment that much of manufacturing operates under increasing returns to scale, at least up to a point. Assume also that industrial production exhibits demand or technological spillovers; that is, the expansion of a firm leads to an increase in demand faced by other,

neighboring firms or a reduction in their costs.²⁰ Under these circumstances, the pattern of comparative advantage can be largely arbitrary. A policy that subsidized a sub-grouping of firms or industries exhibiting such demand complementarities or technological spillovers would permanently alter the economy's "comparative advantage" and raise its real income (Pack and Westphal, 1986; Murphy *et al.*, 1989; Krugman, 1991, 1992). Moreover, the informational requirements of a policy of this sort need not be heavy: an input-output table and some knowledge of the industrial structure of more advanced countries are basically all that the policy makers would need.²¹

There are strong echoes of Rosenstein-Rodan (1943), Nurkse (1953) and Hirschman (1958) in this. Indeed, one consequence of the emergence of this new literature has been the partial rehabilitation, at least at the level of theory, of concepts such as "big push," "balanced growth" and "linkages".

This is just one example of how conventional wisdom can be upset by explicitly considering increasing returns to scale. However, the new literature is far from having yielded robust conclusions.

²⁰ See Stewart and Ghani (1992) for a survey of evidence on this and other type of spillovers. Note that a demand spillover, taken on its own (i.e., in the absence of increasing returns), would not constitute grounds for policy intervention. A technological spillover normally would.

²¹ This is how Wade (1990, p. 335), citing the *Economist*, describes the way MITI picked industries to support: "First, MITI officials studied income elasticities of demand for various items in the main markets of the world, especially the United States. Second, they examined trends in technological change in various industries. Third they checked industries with high income elasticities and high potential for technological change against Japan's specialization index, or the share of each industry in Japan's industrial exports over the share of that industry in world trade.... If world demand was growing especially fast for some particular item, the planners would get worried if Japan's specialization index for that item was not going up too. On the other hand, if Japan's specialization index was already high for an item whose world demand was not rising, they would not worry if its exports did not keep up. Fourth, they checked the trends against another index called the 'export and industrial estrangement coefficient.' This measured the relationship between an item's importance in Japan's total industrial output against its importance in exports.... With these measures, the government could identify sectors where measures for encouraging greater output and exports should be stepped up." None of this of course makes sense in the context of the competitive model of economy. But with increasing returns, demand spillovers, and imperfect competition, a justification can be constructed. Of course, it is also easy to credit East Asian planner with too much: even Amsden (1989) recognizes that Korean policy makers may have gone too far with their promotion of heavy and chemical industries in the late 1970s. See Yoon (1992) for a model of how a Korean producer of computer memory chips became successful without direct government support, and Young (1992) for an interesting critique of Singapore's industrial policy.

As we shall see, more often than not it has led to a bewildering array of special cases and an embarrassingly rich set of possible outcomes from policy intervention. Consequently, it may be a mistake to think of it as having significantly enhanced the case for intervention. Some have noted that returns to scale and imperfect competition are rampant in developing countries, which makes the new ideas particularly relevant to developing countries (Krugman, 1989; Rodrik, 1988; Helleiner, 1992a). Others have dismissed them as largely irrelevant to developing-country circumstances and concerns (Srinivasan, 1989; Corden, 1990). See Grossman (1990) for a cautious survey of recent arguments for promoting new industrial activities, and an evaluation of their policy relevance.

How important is imperfect competition in developing countries? Casual evidence would suggest that it is very important indeed. See Lee (1992) for a recent survey of studies on market structure in developing countries. However, imperfect competition is often the consequence of government policy itself: entry and exit restrictions, capacity licensing and quantitative trade barriers are among the policies that come to mind. The evidence on returns to scale is much more limited. What we have are mostly engineering studies undertaken for advanced countries (as summarized in Scherer and Ross, 1990, for example). Serious recent econometric evidence comes in a paper by Tybout and Westbrook (1992a) who analyze a panel of plant-level data from Chile. They find no trace of significant returns to scale: none of their estimates for three-digit industries suggests departures from constant returns, and only two (out of 12) of their four-digit estimates indicate increasing returns. They caution, however, that their method is unable to pick up any set-up costs that might be present. Broadly supportive evidence comes from Little (1987), who reports that small enterprises do not face a substantial comparative disadvantage vis-a-vis larger firms.

Perhaps the recent literature's main contribution resides in providing new tools for analysis of some age-old questions. The new tools relate to the modeling of three sets of issues in particular: strategic interactions among firms; market-size externalities; and equilibrium when returns to scale and learning-by-doing are internal to firms. These in turn have raised three types of policy questions: (i) strategic trade policy (i.e., profit-shifting policy); (ii) policies to promote industries with scale economies; and (iii)

policies to promote learning and growth. I take up each in turn.

6.1 Strategic trade policy

Much of the recent interest in modeling policy in imperfectly-competitive settings arose from the work of Brander and Spencer (1985) on strategic trade policy. The basic Brander-Spencer model consists of two oligopolists based in different countries, competing in third markets and operating under constant costs. Their competition is modeled in a static, Nash-Cournot fashion; that is, each firm selects its output taking the other firm's output as given, and the equilibrium is defined as the pair of outputs from which neither firm wishes to deviate. In this setting, Brander and Spencer showed that if one of the governments moved first and offered an export subsidy to the domestic firm, the policy would unambiguously increase home welfare (producer profits net of subsidy costs). What brings this result about is the first-mover advantage arising from the assumed ability of the government to credibly commit itself to a subsidy before firms select their output levels. In effect, this transforms the domestic firm into a Stackelberg leader vis-a-vis the foreign firm, increases the market share of the domestic firm, and enhances home welfare by shifting profits towards the latter.

What makes support of home firms a potentially worthwhile objective in imperfectly-competitive markets is the existence of excess profits, at least when there is limited entry. This makes a peso of additional activity inherently more valuable in these industries than in other, perfectly competitive sectors.

However, the practical relevance of the profit-shifting argument is quite limited. As Krugman (1992) has put it, "while an admirable piece of modeling craftsmanship, [the Brander-Spencer model] has generated intellectual and political heat out of all proportion to its long-run importance". The laundry list of objections against the result is indeed formidable. The export-subsidy prescription is reversed (into an export tax) when firms compete in prices (in Bertrand fashion) rather than in quantities (Eaton and Grossman, 1986).²² With free entry into the industry, the rents from policy intervention are competed

²² The logic, somewhat crudely, goes as follows. When firms play Bertrand, they each assume that the other firm's price remains unchanged "in response" to an increase in own price. In actual fact, the optimal response is to raise prices when the competitor does the same. This means that under Bertrand

away and the home economy left worse off.²³ If the home government lacks perfect information about costs and demand, the intervention may be set at the wrong level. When the foreign government plays the same game, a prisoners' dilemma situation results. Last but not least, the available empirical studies (which are mostly of the calibration-simulation type) yield only small gains from strategic policy even when policies are set optimally and with perfect information. See the essays in Krugman (1986) for a good discussion of the policy issues raised by the Brander-Spencer model, and the real-world limitations to its usefulness.

Because they are rarely significant players in oligopolistic global markets, the direct implications of the Brander-Spencer model to developing-country exporters are even more limited. Baldwin (1992) conducts a calibration-style empirical analysis of one of the few exceptions: Brazilian exports of commuter aircraft (the EMB-120) to U.S. and European markets. He finds that, on profit-shifting grounds alone, even an optimally-selected Brazilian subsidy would have reduced home welfare. (But he also shows that this result would be reversed once labor rents in the Brazilian aircraft industry are allowed for.)

Perhaps a more promising area for profit-shifting policy is domestic markets in which home firms compete with local subsidiaries of multinational corporations or with direct sales from oligopolists abroad. In such markets, there is a parallel case for discriminating against the foreign firms. Such discrimination can be accomplished by import tariffs when foreign firms do not produce locally (Levy and Nolan, 1992), or by discriminatory performance requirements when they do (Rodrik, 1987a). But in

conjectures the home firm is too restrained in setting its price, relative to the true (out-of-equilibrium) response by its competitor. An export tax raises the home firm's price, thereby correcting the "distortion" due to the difference between the conjectured response and the actual response.

²³ It is possible to confuse the presence of excess profits with the lack of free entry. Suppose entering an industry is risky, with a positive probability that an incumbent will make losses (and have to exit). In order for there to be any entry at all, there must also be a positive probability of excess profits. Excess profits, under free entry, will be zero ex ante, but positive ex post. Subsidizing incumbents will simply lead to additional entry, and the dissipation of additional rents created.

either case, many of the limitations of the original profit-shifting argument carry over to this setting as well.

Levy and Nolan (1992) systematically analyze policies in the area of trade and direct foreign investment in the presence of excess profits, and present a useful summary of the implications for developing countries. The "lessons" they list are as follows: (1) Competition from foreign firms need not always be beneficial. (2) Imports can be excessive under laissez-faire. (3) Foreign investment can be harmful, even under free trade. (4) Policies that discriminate in favor of domestically-owned firms can be beneficial. (5) Given the available empirical evidence, imperfect competition in the industrial sector of developing countries does not justify nominal tariff rates in excess of 15 percent. (6) Imperfect competition in the industrial sectors of developing countries is not an argument against trade liberalization measures of the type typically under consideration.

6.2 Policies to promote industries with scale economies

The "new" trade theory has investigated a second area of potential policy intervention when domestic firms operate at sub-optimal levels of capacity. In the presence of increasing returns to scale, average costs of production exceed marginal costs; and since prices cannot fall below average costs for firms to remain financially viable, there must exist a gap between price and marginal cost (even when excess profits are zero). In principle, this gap could be closed via policies of subsidization and trade protection which encourage increased scale of production.

When economies of scale are large enough, and there exist demand spillovers from one sector to another, it is even possible that otherwise profitable industries will never get established in the first place. This is the basis for Murphy, Shleifer, and Vishny's (1989a, 1989b) justification for coordinated industrialization policies:

When domestic markets are small and world trade is not free and costless, firms may not be able to generate enough sales to make adoption of increasing returns technologies profitable, and hence industrialization is stalled.... [W]e focus [in this paper] on the contribution to industrialization of one sector to enlarging the size of the market in other sectors. Such

spillovers give rise to the possibility that coordination of investment across sectors—which the government can promote—is essential for industrialization. (1989a, pp. 1003-4)

Note, however, the important caveat with regard to trade. If firms are able to take advantage of world markets, they are freed from dependence on demand spillovers from other sectors in the same economy; they can instead rely on a much larger world market. While it is possible to think of market-size externalities that are local rather than global—e.g., when geographical proximity matters or there are non-tradable inputs—the possibility of foreign trade greatly reduces the applicability of Murphy *et al.*'s argument.²⁴ Indeed, since government policy is often the greatest impediment to trade, the argument can even be read as one in favor of free trade rather than government intervention.

This objection is a general problem with the idea of promoting increasing-returns industries. If exporting is an option and transport costs low, firms can be expected to take advantage of it to reduce their costs and become competitive. Consider, for example, the case of an import-competing firm with strong scale economies (and assume the country in question is small in world markets). Trade protection would allow the firm to increase its output and reduce its unit costs. Is this a good idea? If the alternative is to close down the firm at no cost, the condition for such a policy to make sense is that the firm be able to reduce its average cost below the world price. Otherwise, we can save resources by shutting down the firm and importing what was locally produced before. But if the firm can reduce its average cost below its competitors' by expanding its scale of output sufficiently, it needs no inducement from the government to undertake what is a profitable strategy in any case.²⁵ The (necessary but not sufficient) condition for local welfare improvement due to a small increase in

²⁴ Pack and Westphal (1986) make a similar argument in the presence of trade, but they critically assume that the import price of the relevant final good exceeds its export price (i.e., there exists transport costs).

²⁵ For a large-country the situation may be different. Trade protection may raise the marginal cost of the foreign firms, because it reduces their sales. This in turn makes the domestic firm achieve a larger market share even in foreign markets. This is Krugman's (1984) idea of import protection as export promotion.

protection is less stringent, namely that the domestic marginal cost lie below the world price (Rodrik, 1988). But of course the latter may still be an inferior strategy to letting the firm go bust.

Allowance for free entry generally weakens the case for trade protection even further. Entry in the presence of scale economies tends to crowd firms and lead to duplication of fixed costs; protection leads to further entry, and aggravates the duplication. Harris (1984) has shown, in the context of a computable general equilibrium model for Canada, how the reversal of this process can lead to an "industry rationalization" effect that significantly enhances the welfare gains from trade liberalization. The basic mechanism can be understood by considering the equality between price and average cost in a model with free entry. In the aftermath of trade liberalization, the domestic price in import-competing industries has to be lower, which implies a lower level of average costs in the new equilibrium. What allows this new equilibrium to exist is the exit of some of the incumbent firms, which provides room for the remaining firms to expand their production lines and reduce their unit costs. The quantitative importance of this rationalization effect has been confirmed in simulation exercises carried out in partial equilibrium for several Turkish industries (Rodrik, 1988) and in a general equilibrium exercise for Korea (Gunasekera and Tyers, 1991). The latter study estimates welfare gains of the order of 7 percent of GDP arising from lengthened production runs and increased labor productivity, a number that greatly exceeds anything that comes out of models with constant returns. However, a rather similar model calibrated to Cameroonian data yields negligible effects from industry rationalization (Devarajan and Rodrik, 1992).

Note that the potential for excessive entry creates a role for entry restrictions, especially when entry has been artificially spurred by trade restrictions. This point is rarely recognized in industrial-policy discussions, which too often assume the worst about the effects of such restrictions (e.g., Frischtak, 1989). Whatever deleterious consequences entry barriers in countries like India and Argentina may have had, they may have at least prevented even greater departures from minimum efficient scale.

6.3 Policies to promote learning and growth.

Recent models of endogenous growth have stressed how learning and purposive R&D activity drive economic growth through the creation of new products and the improvement in the quality of existing ones. Unlike in the neo-classical models of the Solow-type, long-run growth rates in these models are not pinned down by a forever-diminishing marginal productivity of capital, and can be affected by government policy (Lucas, 1988; Romer 1986). Endogenous growth is obtained by allowing non-decreasing returns to reproducible assets, such as knowledge and human capital. A question of particular interest has been how international trade and trade policy influence growth in models of this kind. The answer is: it depends.

To see the different channels at work, consider a simple endogenous growth model of the type considered by Grossman and Helpman (1991) and Rivera-Batiz and Romer (1991). We distinguish between three sectors, which we call agriculture, manufacturing, and R&D. The agriculture sector is intensive in unskilled labor, while manufacturing is intensive in skilled labor. We suppose they trade at exogenously given world prices. The R&D sector also uses skilled labor and specializes in inventing intermediate goods, which are produced under monopolistically competitive conditions. The wider the range of intermediate goods, the lower are the costs in the manufacturing sector (as in Ethier, 1982). (Alternatively, this cost effect could arise from knowledge spillovers produced in the R&D sector.) The profitability of producing these intermediate goods determines the rate at which new goods are produced, and therefore the rate at which manufacturing costs decline. The R&D sector is therefore the economy's growth sector: activity in this sector directly determines the economy's growth rate.

International trade has three main consequences in a model of this type.²⁶ Following Grossman and Helpman (1991, chap. 9) and Rivera-Batiz and Romer (1991), we can list them as follows:

(1) The comparative-advantage or allocation effect. Static comparative advantage determines the instantaneous resource-pulls in an economy opening up to trade. If the effect of these is to direct

²⁶A fourth, more direct, consequence arises from the enhanced contact with foreigners and with foreign technologies that trade often stimulates.

resources towards the "growth sector" of the economy, the effect of trade is to speed up economic growth; otherwise, opening up to trade may lead to reduced growth. In the context of the model sketched out above, a country that is poorly endowed in human capital would experience a reduction in the relative wages of skilled labor, and therefore a decrease in the cost of doing R&D. The consequence would be an increase in that country's growth rate. The opposite is true for an economy that is well endowed with skilled labor (Grossman and Helpman, 1991, chap. 6). More broadly, trade is likely to enhance growth to the extent that innovative activity is more closely linked to the exporting sector than the import-competing sector, and diminish it otherwise.

(2) The market size or integration effect. International trade expands the size of the market which the R&D sector services; but it also increases the competition faced by the home R&D sector. The first of these effects generally increases growth, as long as there is some increasing returns built into the R&D sector. For example, when intermediate goods are traded and used in the R&D sector, the enlarged market size allows a wider range of inputs, lower costs, and therefore a boost in R&D activity and growth. Alternatively, when there is learning-by-doing, the larger market size speed up the rate of learning (Davis, 1991). The second effect is generally detrimental to growth because the smaller market share implied by each of the innovating domestic firms reduces the incentive to innovate. Feenstra (1990) provides a model of two countries with unequal sizes in which intermediate goods are not traded. The latter property implies that the smaller country has a cost disadvantage in producing these goods, and its firms lose market share when trade is opened up. Consequently, trade unambiguously reduces the smaller country's growth rate.

(3) The redundancy effect. In the absence of trade, some innovative activity is necessarily duplicated in different countries. That is, resources are devoted to developing identical products. With trade, such duplication can be avoided.

Hence, only the last of these effects is unambiguously favorable to trade. In view of this, it is possible to come up with models of trade and growth to satisfy any type of priors or to rationalize any

conventional wisdom.²⁷ Complicating the analysis further, growth and welfare do not always go hand in hand in these models: it is possible for growth-enhancing policies to reduce welfare, and for welfare-enhancing opening up to reduce growth.

Are there any generalizations that can be drawn for developing countries in particular? There is one robust feature in the type of models considered here, and that is the following: the more asymmetric the trading countries are—in terms of size, extent of a head start, or static comparative advantage—the more likely that growth effects will be asymmetric also. This raises the danger that developing countries may end up with the short end of the stick, as could happen when comparative-advantage and/or market-size effects lead to a crowding out of their innovative sectors. For countries that are similar, the danger is less real.²⁸ Somewhat paradoxically, this resuscitates the theoretical case for regional integration schemes among developing countries, even though such schemes have long gone out of academic fashion.

A particularly noteworthy paper in this research tradition that has served to clarify the links among agricultural productivity, openness, and growth is Matsuyama (1991). This paper shows how the effect of agricultural productivity on growth is mediated through the openness of an economy. Matsuyama considers a model with the following key features: (i) there are two sectors, agriculture and manufacturing; (ii) there is learning-by-doing in the manufacturing sector, which drives growth; and (iii) the income elasticity of demand for agricultural output is less than unity. In a closed economy, the

²⁷ Krugman (1987) and Young (1991) provide additional examples where trade is detrimental to growth. De Melo and Robinson (1990) present an imaginative CGE application to "explain" Korea's growth performance in terms of externalities arising from exports and from the acquisition of technology via imported goods. Buffie (1992) and Taylor (1992) explore models with yet additional channels of ambiguity. In Taylor's model, growth is driven by profitability, and the effect of commercial policy depends on how much it depresses the profitability of the export sector relative to the increase in the import-competing sector's profitability.

²⁸ As Rivera-Batiz and Romer (1991, p. 974) put it, "there is a strong presumption that trade restrictions between similar regions like North America and Europe will reduce world wide rates of growth."

model predicts that agricultural productivity is positively related to growth: the more productive is agriculture, the higher the resources that can be devoted to manufacturing, and the faster the rate of learning and growth. In an open economy, by contrast, this result is reversed: a more productive agriculture leads the economy to specialize in agriculture and therefore to withdraw resources from manufacturing, which is the engine of growth. Turning Matsuyama's results on their head, one can then argue that the optimal trade strategy for a developing country depends on its level of agricultural productivity. Countries that are poorly endowed in arable land have little to fear from openness; indeed they should encourage it. But countries that have a comparative advantage in agriculture should worry about the consequences of crowding out manufactures if they rely on trade too much.²⁹

The focus on ideas and on learning in many of these papers is a useful counterweight to the traditional focus on the accumulation of physical and human capital (i.e., investment and schooling) as the engine of growth. It requires attention to be devoted to the microeconomics of how ideas are generated and transferred. As Romer has emphasized, the focus on ideas places openness to the outside world at the center of the analysis, but in a different way than one usually thinks of openness in trade models:

When one considers the economic opportunities afforded by ideas, openness is central to the analysis, but not necessarily in the sense articulated by the classical theory of trade. In terms of the effect on the rate of growth (and even on the overall effects on consumer welfare), it probably matters little whether the consumers of a developing country have access to cigarettes and citrus products made in the US.

What does matter is whether investors from the rest of the world have an incentive to put ideas to use in that nation. By creating the right incentives, any country in the world can follow the first of the two strategies mentioned in the title [of Romer's paper]: using ideas. But it also

²⁹ For example, Lucas (1990) simulates a macro-econometric model of the Indian economy to find that real value added in manufacturing (at world prices) would fall in the aftermath of complete trade liberalization.

matters whether producers in a nation receive the right signals about the ideas that can be sold on world markets, whether they have access to the right inputs, and whether they receive the right rewards for generating such ideas. This is what is required for the second strategy, producing ideas. (p. 5)

Romer goes on to discuss the cases of Mauritius and Taiwan as archetypal examples of these two respective strategies. See also Amsden and Hikino (1991) for historical examples on the two strategies, and Young (1992) for a parallel account on the divergent industrial strategies in Hong Kong and Singapore. These case studies illustrate that a government's commitment to provide the right incentives for the transfer and generation of new technologies (i.e., adequate property rights and policy stability) is of significantly greater importance than the extent of policy intervention per se.

Informal case studies like these aside, there are as yet practically no direct empirical tests of the specific trade-growth linkages identified above. We need such tests to close the large gap that presently exists between the empirical work described in section 4.2.3 and the theoretical models discussed here. The former is informative but largely devoid of policy content, while the latter are stimulating, but remain empirically untested.

7. How to reform? Issues in the strategy of reform

The recognition that trade and industrial regimes in developing countries are sorely in need of reform, as well as the growing experience with reform, has led to an expanding literature on appropriate strategies for reform. Some of the issues involved—such as piecemeal reform—have a relatively long tradition of analysis within economics. Others—such as the analysis of policy credibility and of interaction with stabilization—are of more recent origin, and owe their genesis to the special circumstances of the 1980s. My review will stress the more recent analytical contributions. For broad discussions of reform strategy on various aspects of trade and industry, see Takacs (1989), Nellis and Kikeri (1989), Thomas, Nash and associates (1991), Michaely, Papageorgiou and Choksi (1991), Johnson (1991), Krause and Kihwan (1991), and Atiyas, Dutz, and Frischtak (1992). Evans (1991,

1992) provides a more heterodox perspective on reform strategy. On cost-benefit analysis of privatization in second-best environments, see Jones, Vogelsang, and Tandon (1990).

7.1 The theory of piecemeal reform

The theory of piecemeal reform is a natural extension of the theory of the second best. The question it poses is the following: Suppose all policy distortions cannot be removed at once; what partial reforms can we undertake and be certain that we have increased (rather than reduced) aggregate real income? See Dixit (1985, sec. 4) for a review of the literature and references. Two results stand out in this literature: (i) an equal percentage reduction in all distortions increases aggregate income (the "radial" method); and (ii) reducing the distortion on the most highly-taxed good increases aggregate income provided that good is a substitute to all others (the "concertina" method).

Two notable recent extensions of this literature are Falvey (1988) and Lopez and Panagariya (1992). Falvey shows that the presence of quantitative trade barriers does not affect these conclusions, provided "distortions" in the above is read as applying to tariff-ridden goods only: that is, the radial and concertina methods still work as long as they are applied to tariff-ridden goods only. Further, since the presence of quantitative restrictions cuts off spillovers, a loosening or removal of any quota distortion is beneficial if quotas are the only distortion. Lopez and Panagariya show that in the presence of a "pure" intermediate input (i.e., one that is not produced at home), the substitutability assumption of the concertina method will normally fail; in reasonable models, such an input has to be complement to at least one final good. Therefore, when pure intermediate goods have high tariffs, the concertina method cannot be relied on to reduce the overall tariff structure in a gradual manner.

7.2 Is tax or tariff uniformity a good idea?

Provided the substitutability condition holds at every step along the way, the logic of the concertina approach to reducing distortions leads us at the end of the road to a uniform tax or tariff system. Indeed, ruling out complementarities like those discussed by Lopez and Panagariya (1992), any move towards uniformity from above—that is, the reduction of the most extreme distortions—will necessarily be an improvement over the status quo ante.

This is occasionally interpreted as a justification for recommending uniform tariffs or, at least, reduced dispersion in rates. However, the theorems just stated are derived under the assumption that the tariffs in existence do not serve an economic or non-economic purpose in the first place. Once the stated goal of having taxes and/or tariffs is made explicit, we can almost always find a non-uniform tariff structure that will do better than any uniform one.³⁰ For revenue-raising purposes, for example, a differentiated tariff structure along Ramsey principles would be called for. For providing import-competing goods with a given amount of protection, a differentiated structure would be called for also, unless we do not care about consumption distortions. With pre-existing market distortions, the optimal tariff structure will be similarly non-uniform in general. A uniform tariff is optimal only when the objective of policy is to reduce aggregate imports to a certain level. For a transparent discussion of these issues, see Panagariya (1990). For a real-world application that shows how second-best tariff can significantly diverge from uniformity, see Devarajan and Lewis (1990). On the design of optimal tariffs for distributional or revenue reasons, see Heady and Mitra (1987). On how export taxes can be justified in the presence of revenue constraints and market distortions, see Roumasset and Setboonsarng (1988).

Tariff uniformity is sometimes recommended on the basis of administrative simplicity and political economy, rather than economic efficiency. However, such arguments are not always subjected to careful scrutiny. When they are, they turn out to have a number of limitations (see Panagariya and Rodrik, 1992).

7.3 Timing and sequencing of reform

A different set of second-best issues arises when we consider the time path of liberalization, possibly in connection with liberalization in other areas. Two questions in particular have dominated the analysis in this area: (i) how quickly should reform be introduced? and (ii) how should reform in different

³⁰ It goes without saying that tariffs are rarely first-best policies. The only exceptions are the presence of market power in world trade, and a non-economic objective that targets the volume of imports directly (see Dixit, 1985). So considerations in the present paragraph apply to instances where the first-best policies are not available for some reason.

areas be sequenced?

On the speed of reform, the classic, but too-often neglected contribution is Mussa (1986). Mussa considers the optimal timing of trade reform in a model where domestic factors of production face adjustment costs when they relocate from one sector to another. Contrary to the widely-held belief that adjustment costs call for gradualism in policy reform, he shows that the optimal policy consists of an immediate jump to free trade unless there exists specific market distortions; adjustment costs by themselves are not an argument for gradual introduction of reform. To understand this conclusion, we have to draw a distinction between the rate at which the reform itself is introduced and the rate at which the private sector finds it optimal to adjust to the reform. In the presence of adjustment costs, it is true that agents may find it optimal to spread out over time their sectoral reallocation. However, it does not follow that reform itself should be spread out over time also. Mussa shows that, as long as individuals have rational expectations regarding the future path of factor rewards and there are no market distortions, they will in fact adjust at a socially optimal rate when the reform is introduced all at once. Departures from these assumptions may call for gradualism (or indeed overshooting). If, for example, individuals have static expectations regarding future factor prices, they may adjust too quickly, and then it may be beneficial to slow down the reform. Other complications arise when there are distortions in the adjustment process, or when the government wishes to moderate (for distributional reasons) the losses incurred by individuals in the previously-protected sectors.

On the issue of sequencing, most of the analytical work has focussed on the question of whether trade liberalization should precede or follow capital-account liberalization. Studies by Edwards (1984), Edwards and van Wijnbergen (1986), and Rodrik (1987b) generally come out in favor of a trade-first strategy. The transition to markets in Eastern Europe and the former Soviet Union has given rise to broad-ranging discussions of alternative sequencing options with regards to reforms in the areas of prices, trade, finance, and privatization; see, for example, Genberg (1990), Hinds (1990), Kornai (1990), Lipton and Sachs (1990), Portes (1990), and Williamson (1991).

7.4 Credibility in policy reform

Policy reforms in the Southern Cone of Latin America during the 1970s and throughout the world during the 1980s were frequently met with skepticism on the part of the private sector, who had been deceived in the past by promises of reform and by aborted efforts. Calvo (1989) has shown how the lack of credibility that a reform will last introduces a distortion that could easily render the (incredible) reform harmful rather than beneficial. See Rodrik (1991) for an application of this idea to structural adjustment programs.

To see the basic idea, consider a trade reform that is put in place today, but is widely expected to be temporary. This temporariness introduces a distortion in the intertemporal structure of prices, the effect of which may outweigh the temporary elimination of the static distortion. In Calvo's (1989) model, the distortion exhibits itself in the form of over-borrowing while the reform lasts: since imported goods are perceived to be cheap only temporarily, the private sector goes into debt for usual reasons of intertemporal substitution. In a model where foreign borrowing is ruled out, the same intertemporal distortion would exhibit itself in the form of a sub-optimally low level of investment, thanks to a reduced saving rate (Rodrik, 1989a).

In view of the adverse incentives created for private-sector behavior, credibility problems can be self-fulfilling: the reversal of reform may come about for no other apparent reason than the belief that it will be aborted (Rodrik, 1991). In addition, credibility problems can arise because of dynamic inconsistencies in government policy. In an interesting paper, Matsuyama (1990) analyzes the extent to which a government can credibly threaten to liberalize so as to induce domestic firms to undertake appropriate investments. He shows that such threats are unlikely to be credible. As long as firms realize that the government's best option is not to liberalize in the absence of such investments, the firms' best strategy in turn is not to yield. Since liberalization "threats" are incredible, they are never carried out. Similarly, Hardy (1992) models the soft-budget constraint that is inherent in government policy, notably but not exclusively in Eastern European countries, as a form of dynamic inconsistency. As long as the government cares about unemployment, its commitment not to bail failing enterprises is

not entirely credible. Hardy suggests that the creation of a "social safety net" may render such a commitment more credible, by reducing the income loss to unemployed workers.

As these examples show, depending on the precise source of the credibility problem and how it is modeled, the policy prescriptions vary. Froot (1988) suggests going slow on liberalization, while Rodrik (1989a) argues for going over-board to signal the government's true intentions. Engel and Kletzer (1991) show how credibility can be enhanced over time by optimal policy choice when individuals are Bayesian learners. For a broad, informal discussion of government strategies, including external commitments (e.g., accession to GATT), reputation-building, signalling, increasing the costs of policy reversal, and institutional design, see Rodrik (1989b).

7.5 The fallacy of composition

The simultaneous implementation of outward-oriented policies in countries producing the same commodity exports (e.g. coffee or cocoa) has raised the worry that a fallacy of composition may be the end result. Even if the terms-of-trade consequences can be judged minor for exporters taken one at a time, the same need not be the case for the group as a whole. Such considerations have been given increased salience by the exceptionally low level of real commodity prices in the 1980s. Over the longer horizon, there is evidence that the terms of trade for primary commodities have experienced a small, but statistically significant negative trend during the present century (Grilli and Yang, 1988; Diakosavvas and Scandizzo, 1991). These considerations give rise to the possibility that export taxes (whether administered singly or jointly) remain part of the optimal policy package for certain commodity exporters (Panagariya and Schiff, 1990, 1992; Evans *et al.*, 1992). However, in view of the extremely restrictive import policies already in place in these countries, it is likely that such considerations would not come into play short of drastic liberalizations. In other words, the existing restrictions are much too high to justify on the basis of terms-of-trade arguments.

Ever since Bhagwati (1968), it is known that a country with market power in trade cannot experience immiserizing growth as long as it has in place optimal export taxes. Bandyopadhyay (1992) has shown that this logic need not hold when there are more than a single exporter of the same commodity, unless

exporters select their export tax cooperatively. As the qualifier in the previous sentence indicates, the reason is that export taxes that are selected, say, in a Nash fashion cannot adequately cope with the externality generated by each country's growth. Even when countries impose their individually optimal export taxes, they can still be immiserized when they grow.

7.6 Political economy issues

One of the most important puzzles in understanding economic reform is the following: if reform is such a great idea, why are governments typically so reluctant to undertake it? There has been increased attention paid by economists to this question recently, for the simple reason that it is impossible to design sensible reform packages without understanding what keeps governments from embracing reform in the first place. Attempts to resolve the puzzle usually revolve around distributional issues: losers from reform, it is assumed, tend to be politically-powerful groups, such as urban industrialists and organized labor, while the gainers, such as agricultural workers and small industrialists, are disenfranchised and powerless.

Two recent papers have gone beyond this simple, almost tautological explanation. Alesina and Drazen (1991) focus on the question of why reforms are delayed, even though all groups lose as a consequence. While their reference point is a stabilization (i.e., macro) crisis, their basic argument is relevant to all distortions whose costs increase over time. Their answer relies on asymmetric information: when groups are uncertain about the costs incurred by their rivals, they may choose to enter a war of attrition in the hope that somebody else will give in first and agree to pay a disproportionately large share of the costs (or, more to the point, receive a disproportionately small share of the reform's benefits). What this argument shows is that reforms may be delayed even when all groups stand to benefit from it.

In Fernandez and Rodrik (1991), a different form of uncertainty is introduced. It is assumed that individuals do not know precisely how they will fare under reform, even though the aggregate consequences may be well known. This is motivated by the evidence that large trade reforms bring into existence new activities that could not have been predicted *ex ante*. The paper shows that under these

circumstances, reforms that would have been accepted *ex post* (i.e., once the uncertainty is resolved) may fail to be adopted *ex ante*, even if individuals are risk neutral and completely rational. Political systems have a status-quo bias in the sense that many beneficial reforms are passed up, even though they would have been popular if introduced by a dictator.

The concern with distributional and other political-economy issues has led to their introduction into analyses that are otherwise quite conventional. For example, in their analysis of the Marshall Plan (which they call "history's most successful structural adjustment plan"), de Long and Eichengreen (1991) identify the Plan's major contribution as follows: it "facilitated the negotiation of a pro-growth 'social contract' that provided the political stability and climate necessary to support the postwar boom" (p. 6). Levy and van Wijnbergen (1992) pay special attention to distributional issues in their CGE analysis of agricultural liberalization in Mexico, focusing on poor farmers in particular, and recommend measures that would alleviate adverse consequences. De Janvry *et al.* (1992) construct an index of political feasibility of policy outcomes, based on a number of arguments drawn from the political-economy literature, and introduce it in a CGE model.

7.7 Interaction with stabilization policy

Perhaps the hallmark of the reforms of the 1980s has been their implementation in the context of macroeconomic instability. Indeed, the most significant trade and price reforms often have been in reality mere appendages to stabilization programs (as in Bolivia in 1985, Mexico at end-1987, Brazil and Peru in 1990, Argentina in 1991). This despite the broad professional consensus, emerging largely from the failures in the Southern Cone of Latin America during the late 1970s, that a stable macroeconomic environment is a key prerequisite to the success of microeconomic reform (Corbo and de Melo, 1987; Cavallo, 1991; Hachette, 1991). This consensus has received dramatic confirmation in research undertaken by Kaufmann (1991) at the World Bank. Kaufmann re-estimated rates of return from 1200 World Bank projects in 58 countries. He found that the overall quality of macroeconomic management— as measured by the extent of fiscal deficits, exchange-rate overvaluation, and negative real interest rates—made a significant difference to the productivity of investment projects. It is self-evident that

triple-digit inflation can negate the benefits of structural reform: entrepreneurs are unlikely to take full advantage of relative-price changes when there is a high degree of uncertainty about the overall price level.

Hence, there can be little dissent from the view that macroeconomic stability is essential to the success of structural reform. Much of the debate on the wisdom of undertaking structural reform in the context of stabilization policies has focussed instead on whether the former can assist in the disinflation process. Three channels in particular have been addressed:

(1) Exchange-rate management. Trade liberalization typically calls for a compensating exchange rate depreciation, in view of the likely downward nominal rigidity of wages and other non-tradables prices. Stabilization of the price level, by contrast, requires avoiding such jumps in the exchange rate. Hence liberalization in the midst of stabilization exerts conflicting pressures on exchange rate policy (Sachs, 1987). Usually, the conflict is resolved in favor of stabilization, leading to a prolonged overvaluation and large trade deficits (as in Mexico after 1987 and Poland in 1991).

(2) Importing price discipline from abroad. Trade liberalization, and the removal of quantitative restrictions, in particular, may help disinflation by forcing convergence between domestic inflation in tradables prices and external inflation. This strategy was tried in Chile during the 1970s, but has been judged a failure thanks to the backward-looking nature of wage contracting (Corbo and de Melo, 1987). In the context of Eastern European stabilizations of the early 1990s, the strongest advocate of this strategy has been Jeffrey Sachs—somewhat paradoxically in light of his earlier predilections in favor of delaying liberalization (Sachs, 1987). Sachs has argued that precious effort need not be wasted on breaking up monopolistic enterprises, as long as the trade regime is freed up in the initial stages of the program (Berg and Sachs, 1991).

(3) Fiscal revenues. Shoring up fiscal revenues is a primary goal of stabilization programs. Certain types of trade liberalization may go in the opposite direction, when they involve substantial cuts in export and import taxes. In practice, however, the typical trade liberalization package is as likely to increase fiscal revenues as to reduce them. Transforming quotas into tariffs is an unambiguously

revenue-enhancing measure. So is reducing the scope of tariff exemptions, or reducing prohibitively high tariffs that encourage smuggling and squeeze out official trade. A preliminary review of the evidence from countries undertaking SALs indicates the absence of any clear patterns with respect to fiscal consequences of trade reform (Greenaway and Milner, 1991).

In addition, structural reform can interact with stabilization in more subtle ways. One reason that so many Latin American governments have jumped on the free trade bandwagon is their desire to enhance the credibility of their stabilization efforts. What better way to signal that these governments now really mean business than to disavow their entire complex of import-substitution policies (Rodrik, 1992c)? A paper by Diwan (1990) makes this notion more precise in the context of bargaining with external creditors. He argues that a shift towards export-promoting policies increases the cost to a debtor government of repudiating its debt, because the trade penalties that would be incurred—such as the loss of trade credits—are proportional to the volume of trade. This renders the government's promise to honor its debt more credible, and thereby relaxes its credit ceiling.³¹

8. What has been achieved? Evidence on consequences of policy reform

Since the reforms of the 1980s are recent and still largely under way, a section evaluating the results of these reforms has to be necessarily briefer than one would wish. In addition, the results of structural reforms are likely to have been delayed by the environment of macroeconomic instability in which they have been typically carried out. For the same reason, the consequences of microeconomic reforms are hard to disentangle from the effects of stabilization policies. Available studies are too often sloppy in identifying precise cause-and-effect relationships.

For obvious reasons, the World Bank itself is the primary source for information on the extent of

³¹ As Diwan (1990) points out, however, a government may also choose to turn inward precisely because this reduces the cost of a future debt repudiation: "The choice between export promotion (EP) and import substitution (IS) depends on whether it is more profitable to increase the credit ceiling above inherited debt in order to borrow more, or to reduce it below inherited debt in order to repay less" (p. 306).

policy reform that has taken place—see, for example, Thomas *et al.* (1991) and Corbo *et al.* (1992) for detailed overviews (as well as evaluations). Webb and Shariff (1992) is a particularly useful source, describing the policy content of SALs and the evidence on their implementation. Table 1 summarizes some of their findings, and shows how wide-ranging the reforms have been, with sectoral and

Table 1: Summary Information on SALs and SECALS, FY 1979-89

	conditionality (%)		implementation (%)	
	dist'n of all actions	share of loans w/action	full	at least substantial
A. Structural reforms	84	n.a.	n.a.	n.a.
trade	16	79	56	82
sectoral	28	n.a.	n.a.	n.a.
industry	5	44	53	65
energy	5	27	72	80
agriculture	17	62	49	74
financial sector	10	51	79	92
govt. administ.	9	72	54	68
SOE reform	14	65	67	77
social policy	3	24	55	82
others	5	49	n.a.	n.a.
B. Macro policies	16	n.a.	n.a.	n.a.
fiscal	8	67	72	89
monetary	3	42	61	89
exchange rate	3	45	71	81
wage	2	22	50	50
All	100	n.a.	60	79

Source: Adapted from Webb and Shariff (1992).

trade reforms dominating the agenda. Sixty-one countries have submitted themselves to the conditionality of at least one SAL (or SECAL--sector adjustment loan) over the period 1979-89, and on average more than three-quarters of all conditions have been substantially implemented. For other, less comprehensive accounts, see Whalley (1989), Rodrik (1992c), and Helleiner (1992b) on trade reforms and Williamson (1990) for a progress report which focuses on Latin America. See Lardy (1992) on the important case of China, and Pryor (1991) for an account of agricultural and other reforms in Marxist developing countries. Trade and industrial policy reforms in Eastern Europe are reviewed in Blanchard *et al.* (forthcoming). On privatization, World Bank (1992) is a comprehensive survey of developments over the last decade; it reports that more than 80 countries have launched ambitious efforts to private their public enterprises and that more than 2,000 enterprises (including 805 in Eastern Europe, however) have been privatized in developing countries since 1980.

8.1 The supply response and restructuring

World Bank staff has also been at the forefront of evaluating the consequences of policy reform. One strand of analysis has focused on whether countries that have received SALs have outperformed others, once other circumstances are controlled for to the extent that they can. Faini *et al.* (1991) and Corbo and Rojas (1992) have undertaken large-scale econometric studies

addressing this question. The answer seems to be that, once external shocks are controlled for, SAL recipients tend to do better than comparator countries in exports and economic growth but worse in investment. These findings are broadly confirmed by the work of Mosley *et al.* (1991). The reduction in investment is puzzling, and suggests that the increase in growth may be largely due to the impact of additional imports made possible by external financing. However, there are important interpretational problems that attach to these studies. In particular, the links between specific policies and outcomes are not examined. And policy reform is measured simply by a dummy variable that takes the value of unity when a country has received a SAL.

The argument for getting prices right is predicated on the existence of a non-negligible supply response to price changes. With respect to exports, the evidence would appear to be clear: a credible, and lasting effort to increase the supply-price of exportables is rewarded by a large, often very quick export response. The export performance of Korea and Taiwan during the 1960s had already turned elasticity pessimism on its head. More recent experience has given additional reason to be confident about the presence of a strong supply response in exports. In countries where export profitability has been increased in a sustained fashion, export miracles have soon followed: see, for example, Hachette (1991) on Chile, Krueger and Aktan (1992) on Turkey, and Lardy (1992) on China. Even in Eastern Europe, where low-quality manufactures were long judged unmarketable in Western markets, a turn to undervalued exchange rates in 1990-91 (alongside the collapse of domestic demand) has yielded a large increase in exports to the West (see Rodrik, forthcoming).

However, as this last example indicates, export booms have generally been associated with sharp currency devaluations and, occasionally, export subsidies. Export processing zones have also played a critical role in some other, more narrowly-based cases: electronic components in Malaysia, garments in Bangladesh and Sri Lanka, and the maquiladora in Mexico (Helleiner, 1992b). It is more difficult to identify cases where import liberalization itself was causally implicated; Chile may be the only significant exception, but even here the effects were delayed well until the exchange rate began to play a supportive role in the mid-1980s. The Lerner symmetry theorem is a poor guide for the short-run,

especially when the economy is mired in macroeconomic instability.

One of the striking regularities in the export performance of these countries has been that, once a decisive increase in exports is achieved, the process tends to be self-perpetuating even when the originally advantageous circumstances reverse themselves somewhat. In Korea and Turkey, exports have been affected during periods of prolonged real appreciation, but have not come crashing down. This suggests that export performance is subject to strong hysteresis effects: it may take a big push (i.e., sizable change in incentives) to get exports out, but by the same token, once the transition is made, not much may be required to keep them going. A rare glimpse into the microeconomics of the exporting decision is provided in a paper by Roberts and Tybout (1992). The authors carry out a statistical analysis of plant-level data from Colombia, and look for evidence of sunk costs and hysteresis in the decision of plants to export. They find strong persistence, in the sense that the exporting status of a firm exerts an inordinate influence on the future decision to export.

In poorer, agricultural countries such as those in Africa, the supply response may be considerably more limited than in Latin American or Asian countries. For one thing, agricultural supply elasticities are necessarily low in the short run. A survey of the aggregate supply response in agriculture suggests that long-run price elasticities of supply may be in the range of 0.3-0.9, with poorer countries at the lower end of this range (Chhibber, 1990). Infrastructure constraints appear to be a key bottleneck. The sharp increase in cocoa output in Ghana following the price reforms of 1983 would seem to belie this conclusion. However, a significant (perhaps a third) of the increase in output can be attributed to previously smuggled exports now showing in official statistics (Green, 1989). This example suggests that the true supply elasticity can be overstated when the presence of unofficial markets prior to reform are not taken into account. Also in Ghana, Steel and Webster (1991) have found some limited evidence of industrial restructuring at the firm level (mainly in product mix), but further adjustment has apparently been blocked by inadequate demand and lack of credit.

A healthy export response can be entirely consistent with sluggish industrial restructuring, if firms simply choose (and have the incentive) to substitute foreign markets for domestic markets. In Eastern

Europe, where structural change is badly needed to get away from Soviet-style industrialization, the early evidence is that reform policies have not been able to foster much restructuring. There is some evidence that the much-repressed services sector has revived somewhat (Berg and Sachs, 1991). But, as of the middle of 1992, there was scant evidence of restructuring within manufacturing industry (Estrin, Schaffer, and Singh, 1992; Commander and Coricelli, 1992; Borensztein, Demekas, and Ostry, 1992). The reasons appear to be labor-hoarding by enterprises and the governments' reluctance to let large firms go bankrupt. In addition, the increase in exports to the West has ameliorated, but not entirely offset, the huge fall in industrial output that followed reform efforts. Hughes and Hare (1992) report, moreover, that the shift towards exports in the Eastern European countries has not noticeably pulled resources into the more competitive industries (as measured by domestic resource costs).

8.2 Consequences for static and dynamic efficiency

Evaluating the efficiency consequences of policy reforms is a difficult task, and one that differs considerably from model-based analyses of prospective reform. One needs a counterfactual regarding what would have happened in the absence of reform, and to disentangle the effects of the reform under consideration from the effects of other changes in the environment. To render a welfare judgement, one needs in addition a set of shadow prices to value the change in the quantities of outputs and inputs. Even if all these obstacles are surmounted, there is the difficulty of figuring out exactly what has happened. Here is Leroy Jones (1991) on evaluating divestiture:

An all too typical story of divestiture runs as follows: visit country X and be told that enterprise Y is a divestiture success story with vastly enhanced profitability; visit company Y and be shown how costs have been reduced and demand increased by a variety of impressive management reforms; visit the political opposition and be told that profits were turned around primarily because of a side-condition of divestiture that competing imports be banned for five years. (p. 129)

Such difficulties have not stopped Jones and his colleagues from evaluating the welfare consequences recent privatization efforts (Galal et al., 1992). Their study is a rare and exemplary effort to apply a

common methodology to reforms in different countries. Their analysis of twelve cases from Chile, Malaysia, Mexico, and the U.K. reveals that 10 of them improved national welfare and 11 improved world welfare. Moreover, the welfare gains appear quantitatively significant.

The productivity consequences of China's reforms since the late 1970s have been the subject of a series of papers by Dollar (1990), Jefferson (1990), and Jefferson, Rawski, and Zheng (1992). Dollar (1990) finds that China's incentive reforms have led to rapid TFP growth and a reduction in TFP differentials across firms. Moreover, he finds that TFP growth was positively correlated with the share of profits that firms were allowed to retain. Jefferson (1990) draws attention to the pronounced increase in TFP in the iron and steel industry during the reform years, while Jefferson *et al.* (1992) argue that factor accumulation—mainly in material inputs—was still the principal contributor to aggregate growth in the state and collective sector.

The most systematic evidence to date on the efficiency consequences of trade reform comes from a research project led by James Tybout at the World Bank.³² Tybout and his collaborators have assembled panel data sets from several developing countries, and have subjected them to statistical analysis, paying close attention to conceptual and econometric issues. Tybout (1992) provides a progress report, and links this research to antecedents. Three questions have been addressed in particular: (i) has trade liberalization led to reduced price-cost margins in import-competing sectors? (ii) has it resulted in firms taking better advantage of scale economies through industry rationalization? (iii) has it led to improvements in technical efficiency?

On the first question, Foroutan (1992), Levinsohn (1992), Harrison (1990), and Grether (1992) provide an affirmative answer. The first two authors analyze the Turkish case, where a substantial trade reform took place during the 1980s. In a three-digit industry-level analysis with panel data,

³² On the more recent evidence, see also Helleiner (1992b, p. 44) who summarizes the results of seventeen country studies he directed in the following terms: "The case studies in this volume offer very weak, if any, support for the proposition that either import liberalization or export expansion are particularly associated with overall productivity growth."

Foroutan finds that higher import penetration is correlated with lower price-cost markups (controlling for capital-output ratios and fixed effects). Levinsohn undertakes a plant-level version of Foroutan's exercise. Also, instead of using import penetration as the independent variable, he looks at the change after 1984, the year that major trade reform was implemented. His finding is that price-cost gaps decreased in imperfectly competitive industries which experienced a decrease in protection, while they increased or stayed the same in others. Harrison undertakes an analysis very much like Levinsohn's for Cote D'Ivoire, and reaches broadly similar conclusions. Finally, Grether looks at both plant- and industry-level panel data from Mexico, and concludes that price-cost margins were reduced by the trade reforms of the 1980s; the relaxation of quantitative restrictions was apparently particularly effective, as trade theory would predict.

With regard to industry rationalization, the results are less encouraging. Tybout (1989) carries out an analysis of plant level data from Chile for the 1979-85 period, and finds no relationship between import competition and exit rates. Roberts and Tybout (1991) examine annual plant-level data from Chile and Colombia, and find that, controlling for industry and country effects, higher trade exposure is positively correlated with smaller plant sizes over the long run. Further, the mix of high and low productivity plants is not strongly associated with trade exposure. As Roberts and Tybout indicate, "both of these findings cast doubt on the mechanisms linking trade, plant size, and productivity in a number of recent analytical and simulation studies" (1991, p. 2). Similar results are obtained in Tybout and Westbrook's (1992b) study on the Mexican liberalization: "We find that scale effects were only significant for a minority of industries during the sample period [1984-89], and that improvements in scale efficiency were not associated with heightened foreign competition" (p. 1). A possibly dissenting conclusion is reached in Dutz's (1991) study on Morocco. Dutz finds that the probability of exit in response to an increase in imports is significantly higher among small firms than among large firms; together with his evidence that large firms are more efficient, this may suggest an improvement in average technical efficiency following liberalization. This conclusion needs to be tentative, however, since the focus should be on net rather than gross exit rates.

Finally, the available studies are generally favorable to the hypothesis that trade reform is conducive to gains in technical efficiency. Foroutan (1992) reports that growth in import penetration is correlated with growth in TFP in Turkey. Tybout *et al.* (1991) find in Chile that performance in TFP was better in industries that experienced the largest declines in protection. Similarly, industries undergoing the most dramatic reductions in protection in Mexico improved their efficiency the most (Tybout and Westbrook, 1992b; but see also the mixed results obtained by Grether, 1992). On the other hand, Harrison's (1990) results on Cote d'Ivoire fail to uncover a similar link once imperfect competition is explicitly allowed for: "our data suggest that when we incorporate imperfect competition into the productivity estimates [which are biased if perfect competition is assumed], there is no apparent relationship between productivity and trade reform" (p. 25).

9. Conclusions: What we know and what we don't

Few would disagree with the proposition that getting prices systematically and significantly wrong in the way that import-substituting countries have done in the past has been a costly mistake. But few would also disagree that getting prices right, in and of itself, will be insufficient to make Bolivia or Ghana grow at Korean rates. A cautious conclusion from the literature surveyed here would be as follows: the benefits of price reform remain small in relation to developmental objectives, and tend to be linked to economic growth through uncertain and unreliable channels. Furthermore, the East Asian experience indicates that relative-price distortions, and the analysis thereof, are vastly over-emphasized relative to the institutional dimensions of reform. It bears repeating that the South Korean and Taiwanese economies have prospered in policy environments characterized by quantitative trade restrictions, selective subsidies, and discretionary incentives bearing more than a passing superficial resemblance to those in other developing countries. What has differed, of course, is the discipline exerted by the East Asian state over private-sector groups. It also bears repeating that countries like Mexico, Argentina, Chile, and Bolivia have travelled recently much faster and further on the road to price reform and trade liberalization than South Korea, Taiwan, and Japan before them ever did.

Genuine reform requires the creation of a new set of interactions between government and the private sector, one that provides for an environment of policy stability and predictability, that discourages rent-seeking activities, and that improves on the governments' ability to discipline the private sector. In other words, the change that is needed is not only in policy, but also in policy making. The East Asian experience is full of clues as to what the end-product should look like. But we know much less about how to get there. Economists' comparative advantage may lie in analyzing price distortions; but it is research on issues of governance and institutional design that promises to yield the larger marginal social product.

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