Abstract: This paper examines the impact of greater foreign competition on domestic firms. Particular attention is paid to dynamic benefits, such as technology spillovers, improved inputs and learning by exporting. While greater foreign direct investment and import competition can be associated with adjustment costs and an increase in the turnover of firms particularly in the short run, the cumulative benefits from greater allocative efficiency and spillovers can be substantial. A number of important lessons are drawn to maximize the potential for beneficial outcomes. To complement openness to foreign competition, attention must be paid to the domestic investment climate. This will facilitate the adjustment process and the entry of new, more productive firms. The speed of adjustment can be accelerated and the costs minimized, the less distortions and barriers to movement there are in factor markets and barriers to entry more generally. Strong domestic competition and well functioning regulations both decrease the risks of new foreign monopolies, while also increasing the ability of local firms to benefit from spillovers from the larger foreign presence in the economy. Openness itself can also be important for realizing benefits. Open trade policy reduces the risk that MNCs will be able to exert local monopoly power. And, foreign provision of services can strengthen key elements of the investment climate, broadening the ability to absorb the benefits of greater liberalization.
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I. Introduction

This chapter examines the impact on local firms of increased exposure to foreign competition. A lot of attention has traditionally been paid to static benefits associated with the improved allocation of resources into more productive areas and greater competition lowering prices and dissipating economic rents that had accrued to the few. These benefits will indeed result in a one-time increase in productivity. For improvements to continue over time, dynamic benefits are needed to increase the growth of productivity. Taking the cumulated effects of the static and dynamic benefits together makes a more complete and compelling case for greater liberalization of trade and foreign investment.

This chapter puts a special focus on the potential for dynamic benefits to liberalization, drawing on the evidence of sector and firm-level studies from developing countries. The sources of dynamic gains to productivity include: technology transfers and spillovers; greater competition and lowering of barriers to entry increasing innovation; access to improved machinery and inputs that embody more advanced technology; greater specialization in industries with more rapid productivity growth and possibilities of learning effects through exporting.

Many of the static benefits of liberalization accrue from the dismantling of policies that reduce competition and distort the allocation of resources. However, it should also be recognized that many of the sources for dynamic gains themselves stem from elements of imperfect competition. The endogenous growth literature demonstrates how increasing returns to scale can be a source of continued higher growth, (see Romer 1986, 1990, and Grossman and Helpman 1991) For example, Grossman and Helpman (1991) develop a model of innovation where it is this potential to capture monopoly rents that drives firms to undertake R&D expenditures. These expenditures on R&D raises productivity for all firms and thus leads to higher overall growth.

While imperfect competition can be a source for dynamic productivity gains, it carries with it the potential to undermine such gains. The scope for reducing output, raising prices and capturing economic rents that is inherent in imperfect competition implies that effective government regulation or oversight is needed. The potential for capturing such rents can encourage innovation, but can also create vested interests that seek protection and restrictions against potential competitors.

Three features of endogenous growth models should be noted, features that help to distinguish between types of imperfect competition that are likely to carry dynamic gains rather than eliminate even static benefits of liberalization. First, there are positive externalities to the activities undertaken by the firms. Second, there is free entry for new firms in the increasing returns to scale sector. And, third, the flow of monopoly rents can

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1 While the distinction between static and dynamic gains are clear, empirically, it can be difficult to measure their relative magnitudes separately. Adjustments to change take time, so even static effects can take time to show up in firm responses. As most panel datasets of firms are only a few years long, it can be difficult to show if productivity growth itself has significantly changed. It should thus be kept in mind that data constraints are likely to underestimate the true long run benefits from greater openness and liberalization.
be limited in time. Indeed, the authors note the importance of the Schumpeterian nature of their view, that creative destruction must be inherent in the innovative process. Thus, the incentive system and spillovers are central for the potential for dynamic productivity gains -- and free entry and exit are crucial for the continued realization of such benefits.

While the overall benefits from liberalization can be substantial, not all individuals will gain and there are no guarantees that all the benefits will materialize. There are costs to adjustment as firms exit and workers need to seek new employment. It is also possible that domestic competition can be reduced in some areas if sufficient domestic producers exit an industry. The second half of the chapter addresses how policy choices and institutions can help maximize the potential benefits and minimize the risk of unfavorable outcomes associated with greater openness. An investment climate that fosters domestic competition not only protects against market abuses (domestic or foreign), it best equips local firms to absorb the dynamic benefits of greater interactions with foreign firms.

Even if all the elements of a favorable investment climate are not in place, a certain degree of openness itself can help foster the conditions for making reform more beneficial. Particularly if restrictions on foreign investment are relaxed, it is important that trade is liberalized. The best means of guarding against investors’ (foreign or domestic) abuse of market power is to ensure they face competition – from abroad if domestic competition is insufficient. If domestic regulatory agencies are weak, exposure to foreign competition provides a necessary check on anti-competitive practices.

In addition, countries can use the international market for services to strengthen weak institutions and poor infrastructure. Prime examples include allowing foreign investment in telecommunications and power; allowing the “Big Six” accounting firms to operate; or allowing foreign financial institutions to provide services in the local market. Issues of market power may remain, but improvements in business support services can have enormous carry-over benefits to all who rely on them as inputs to their activities.

Liberalizing trade or foreign investment is not sufficient to promote competition. Nor does liberalization imply a weakening of all regulations. What needs to be targeted are those regulations that stifle competition through protecting selected industries or firms. If anything, the importance of effective government oversight is heightened in the post-reform phase for key areas such as antitrust, safety standards, environmental regulation and reporting standards. Liberalization in the face of weak institutions – or the continued presence of other barriers to entry – can undermine the drive to greater competition, simply creating new winners in alternative rent-seeking opportunities. Thus, the quality of institutions, the strength of domestic interest groups and the existing degree of openness will affect both the extent of the benefits and costs, and how they are distributed.

**Focus on LDCs rather than developed countries highlights risks and rewards**

The tradeoffs in embarking on greater liberalization and integration are starker for LDCs than for their developed counterparts. Traditionally, the manufacturing sector has been protected in many LDCs, with regulations often favoring the larger enterprises. As a result, less efficient firms are able to continue to operate, resulting in a wider degree of productivity dispersion. Constraints on competition have also allowed oligopolists to
exert market power and scale economies are often not realized as many small firms fail to
grow.2 These economies would seem to have the most to gain in terms of catching up to
foreign technology and productivity levels by altering these conditions and increasing
exposure to foreign firms.

But features of LDC economies also highlight the constraints for gains to be
realized. With a few notable exceptions, the size of the markets are small, particularly for
more sophisticated manufacturing goods, reinforcing the likelihood of market
concentration and unexploited scale economies. Particularly if transport costs are high
and distances are long, changes in the regulatory environment may not be sufficient to
attract significant foreign investors or foreign goods. These features of LDC economies
imply that issues of market concentration and the ability to absorb spillover benefits
could be more problematic for LDCs than developing countries. The risks to
mismanaged liberalization are greater for LDCs, but so are the rewards if handled
correctly.

II. Recent developments in FDI, import penetration and exporting

Greater exposure to foreign competition can come through three principal channels.
The first dimension is that of foreign firms locating in the domestic economy. These
issues surrounding greater foreign direct investment have received much of the attention
of anti-globalists and so a careful examination of the issues and the existing evidence is
important. The second channel looks at the effect of greater competition through the
opening of a country to more imports. As quantitative restrictions and tariffs continue to
fall, import penetration has increased dramatically in the formerly protected economies.
A third channel is to look at the expansion of exports and of domestic firms as they enter
foreign markets. For the purposes of this chapter, openness is not defined on any single
dimension. Rather, the chapter is organized around the different sources of costs and
benefits to domestic firms of increased foreign competition–highlighting those cases
where the channel of the foreign competition matters. However, before discussing the
sources for greater productivity, this section provides an overview of the recent trends in
import penetration, exports and FDI.

As documented in chapter 4, tariffs and non-tariff barriers have fallen considerably
over the last decades, particularly for manufacturing goods. Figure 1 shows the ratio of
imports and exports to GDP since 1960. Such averages do mask variations across
individual countries and across sectors, but it is clear that competition from foreign goods
has risen considerably. With many countries reversing their import-substitution policies
of the 1960s and 1970s, imports of goods – particularly of capital goods – have soared.
Commensurate with this growth in imports, exports have also flourished. The economies
of East Asia set impressive standards for the success of more outward oriented growth
strategies. As discussed in chapter 4, much of the increase in trade has been in
manufacturing goods, and increasingly in services.

2 Tybout argues that these broad characterizations of LDCs need to be qualified. He finds that
productivity dispersion in LDCs is not always so large, that turnover is substantial and comparable to levels
in OECD countries and that monopoly rents do not seem to be any larger than in OECD countries. (Tybout
1998)
Likewise, restrictions placed on foreign ownership have fallen throughout the 1990s. The total number of regulatory changes in a given year that are favorable to foreign investment has averaged 100 for most of the decade, with over 130 in 1999 alone. In contrast, instances of tightened restrictions have been between 2 and 18 throughout the decade (UNCTAD 2000). Rather than forbidding foreign ownership entirely, most countries have shifted to ‘negative lists’, i.e. lists specifying a limited number of sectors from which foreign investors are excluded (e.g. military supplies) or have caps on the share of a firm foreigners may hold. The effect of these changes has facilitated the growth of intra-industry trade and allowed foreign firms to set up production facilities in lower cost areas, both to sell in the local market and to serve as export platforms.

The flows of FDI have soared in the last decade. From flows of $200 billion in 1990, the level doubled to $400 billion in 1996 and more than doubled again to $865 billion in 1999. The flow of private capital now swamps multilateral and bilateral aid and concessionary loans. While some see this as calling into question the need for international financial institutions to be involved as suppliers of capital, looking at the details of the destinations of these private flows confirms that IFIs still have an important role to play.

It is clear from Figure 2 that the majority of FDI is concentrated among high income countries. And, in recent years, this share of FDI to developed countries rose from just over 60% in 1995 to almost 75% in 1999. There are a number of middle income countries that have succeeded in attracting FDI. However, again the benefits are highly concentrated. Almost 70% of FDI to developing countries flows to merely 10 countries – China alone absorbed over a quarter of the developing country inflows during most of the 1990s. In contrast, the share that goes to the low income countries is both low, and has been falling in recent years. In 1995, poor countries received about 13% of the FDI in developed countries. By 1999, it was just over 5%, representing about 1.5% of total FDI that year. Looking at the amount of FDI received per poor person, FDI is not providing the employment, training and spillover opportunities amongst those most in need of them. While China received $195 in FDI per poor person, the number is only $8.50 in India, $2.60 in Kenya and 33 cents in Niger. Clearly some countries have been extremely successful in attracting foreign investment. But, the distribution is not equal, many countries are not benefiting from this source of capital and expertise.

Looking at FDI as a share of gross domestic investment, the picture does change somewhat (see figure 3). While it remains true that FDI is concentrated among a small group of emerging markets, FDI has grown as a share of total domestic investment across all income groups. It is more pronounced for the top recipients and for upper middle income countries. But even low income countries saw the rate increase fivefold since the early 1970s. While FDI to GDI is half that of top recipients, FDI still plays an important role across the developing world.

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3 The ten countries are China, Brazil, Mexico, Argentina, Malaysia, Thailand, Poland, Chile, Indonesia, Venezuela. They were selected based on highest FDI inflows averaged over 1990-98 to smooth out FDI spikes in particular years.

4 The number of people living on one dollar a day was used to define the number of poor people.
In attracting FDI, large local markets continue to play a dominant role. Low labor costs, political stability, and good infrastructure are other key determinants of the location choice of foreign firms. Traditionally, tariff jumping had played an important role in attracting foreign investors. However, official tariff rates have declined, and while effective rates can still remain high, the importance of tariffs as an explanatory factor has declined. The rule of law, effective government regulations and curbing of corruption are also highly correlated with a country’s ability to attract foreign investment. Figure 4 shows the partial correlation between FDI inflows and government effectiveness and with control of corruption. The relationships are highly significant, even after controlling for the effects of market size, education, infrastructure, trade and stability. Improving domestic institutions and regulations are important not just to attract FDI, but also to ensure that the benefits of doing so are maximized. This is a theme that runs throughout this chapter.

Thus the evidence from the last decades show the significant increase in the exposure of firms to greater foreign competition. Changes in FDI and import penetration have seen the most dramatic increases, and the evidence discussed below will focus on these two channels of competition on domestic firms.

III. Foreign Competition Provides Sources for Productivity Improvements

The impact of greater foreign competition on local firms’ behavior is discussed according to different sources of productivity improvements. Of particular interest are those potential costs and benefits that are external to the firm, but internal to the country, such as the potential for technology spillovers and the effects on market structure. The trade literature most often focuses on the productivity gains that can be realized through the reallocation of resources across industries. But there is also heterogeneity across plants within industries, and this chapter draws on the growing literature that uses firm level data to address the impact of reallocating resources from less to more productive plants. Using firm level data has the benefit of being better able to capture the effects of turnover, pricing behavior, inter-firm linkages and sources of productivity growth.

An important source of information comes from studies that have compared firm level productivity growth pre and post liberalization. They have two consistent results. First, they have found that overall sector productivity levels have increased. (See Robert and Tybout 1996.). Much of this is attributed to the shift in resources to more productive firms within an industry and not necessarily due to large shifts across sectors. Second, is that openness leads to lower productivity dispersion (Haddad 1993, Haddad and Harrison 1993, Harrison 1996).

Why were less efficient firms not driven from the market before liberalization? Conversely, why hadn’t more productive firms improved their position and captured the domestic market? On the one hand, subsidies or regulated prices would not have forced out high cost producers. With such firms still in the market, more productive firms may

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Footnote:
5 A significant explanation for the large share of FDI flowing to the top 10 recipients is that they are among the largest of the developing countries. They account for close to half the GDP of the developing world. However, that they receive 70% of the FDI still indicates that they receive a disproportionately large share of the total FDI flows.
not have felt there was an adequate incentive to further increase their productivity or to expand. With liberalization, firms face greater incentives to innovate and greater penalties for failure to do so.

Loss of protection and greater competition from foreign firms can drive inefficient domestic producers to better exploit scale economies, eliminate waste, reduce managerial slack or ‘x inefficiencies’, adopt better technologies or shut down. The next sections address the theoretical and empirical evidence on the relative contributions of these factors in assessing the benefits of greater liberalization and integration.

1. Increases in turnover.

The easing of protection and regulatory restrictions allows resources to reallocate to more efficient producers. High cost producers exit the market as prices fall. If these firms were less productive, or were experiencing falling productivity, then their exits represent productivity improvements for the industry. As mentioned above, greater liberalization is associated with a decline in the dispersion of productivity among firms in an industry. While the destruction and creation of new firms is a normal part of a well functioning economy, too often attention is simply paid to the destruction of firms, missing half of the picture.

While the closing of large or long standing firms gets a lot of media coverage, several points need to be kept in mind. First, the increase in exits is only part of the adjustment. Granted, it is the first and most painful part of the adjustment. However, if there are not significant barriers to factor mobility or other barriers to entry, the other side is that there are new entrants. The exits are often front loaded, but the net gains over time can be substantial.

Wacziarg (1997) uses eleven episodes of trade liberalization in the 1980s to look at the issue of competition and entry. Using data on the number of establishments in each sector, he calculates that entry rates were 20% higher among countries that liberalized compared to ones that did not. This estimate may reflect other policies that accompanied trade liberalization such as privatization and deregulation, so this is likely to be an upper bound of the impact of trade liberalization. However, it is a sizeable effect and indicates that there is plenty of potential for new firms to respond to the new incentives.

Second, the evidence indicates that while exit rates may be significant, net turnover rates are usually very low. Thus, entry rates are usually of a comparable magnitude to the exit rates. Using plant level data from Morocco, Chile and Columbia spanning several years in the 1980s when these countries initiated trade reforms indicates that exit rates range from 6 to 11% a year, and entry rates from 6 to 13%. Over time, the cumulative turnover is quite impressive, with a quarter to a third of firms having turned over in 4 years. (Roberts and Tybout, 1996, p.6)

While the turnover rates are large, they are not substantially higher than those of OECD countries. Dunne, Roberts and Samuelson (1989) report that in the United States,

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6 Cases were selected as those where tariffs or quotas were reduced and trade volumes increased during the following five years, using Tornell (1997) to date the timing of the liberalization. The countries are Morocco (1984), Bolivia and Israel (1985), Bolivia, Costa Rica, Colombia and New Zealand (1986), Turkey and Venezuela (1989) and Poland (1990).
during any five year period, about 35% of manufacturing plants will close. The phenomenon is more common among new and small firms, but even among firms with more than 250 employees, 16% of them will close. Davis and Haltiwanger (1992) report that the annual average for gross job creation and gross job destruction in the US is 9.2% and 11.3%.

Third, these exit and entry rate fluctuations are dominated by changes in the business cycle rather than by changes in trade and industrial policies. The correlation between entry and exit rates are positive and quite high across sectors. Levinsohn (1996) estimates that approximately 10% of the job reallocation is across sectors in Chile during the period in which trade liberalization was introduced. Similar findings are reported for studies of other Latin American countries. The relatively low reallocation across sectors – or between import-intensive and export-intensive industries – suggests that changes in trade policy is not a dominant factor relative to other macroeconomic changes. Comparing the magnitude of changes in entry and exit due to macroeconomic shocks and those due to changes in trade policy show a striking pattern. While the adjustments coming from liberalization are real, the costs need to be put in context. The evidence from 6 semi-industrialized countries show that the effect of fluctuations in macroeconomic conditions are more significant than the effects of trade liberalization on entry and exit rates. In addition, the firm level studies show no significant correlation of entry and exit rates based on import penetration, once macroeconomic shocks are controlled for. (Roberts 1996).

One question of concern is the extent to which turnover is associated with higher productivity. Comparing dying firms with new entrants, the evidence shows that the latter are only marginally more productive than the former. However, this understates the benefits of the turnover. In general, dying firms have falling productivity and new firms tend to increase their productivity over time. (Liu and Tybout 1996, Aw, Chen and Roberts 1997, Tybout and Roberts 1996). In Taiwan, Aw, Chen and Roberts (1997) find that within a five year period, the replacement of low productivity firms with new, higher productivity entrants accounted for half or more of the TFP growth in many Taiwanese industries.

The cumulative benefits can thus be substantial – as are the costs of policies that inhibit the exit and entry of firms. One of the important lessons is that the costs and time of adjustment are greatly affected by restrictions to entry and policies that inhibit the movement of factors. Rather than easing adjustment, such domestic constraints often work to prolong the transition. And without the entry of new firms, the benefits can be delayed or even lost.

Another concern regarding firm exits is whether the greater competition will have such an effect as to wipe out an entire domestic industry. Particularly if the local market is small, it is possible that foreign competitors, already producing at greater scale economies, could simply expand to fulfill the entire local demand. Significant sunk costs can exacerbate the situation. They will make firms less likely to adjust in the short-run. But if there is indeed exit, it may be that conditions are not favorable enough for entrants to undertake the investment to enter the market. Such entry costs may deter entrants, thereby reinforcing the loss of domestic producers of those goods. The relative benefits of government support of selected industries is discussed below in greater detail. In summary, there may be special cases that do warrant such intervention, but policy makers
need to closely examine the prospect for efficient and sustainable future domestic production and whether the benefits will compensate the costs associated with such protection. Chapter 8 takes up the recommendations for safety nets and appropriate government actions during the transition. What is key to minimizing the costs of reallocation is to ensure there are not barriers to entry to keep resources from flowing to those sectors where producers will have comparative advantage.

2. Reducing market power, price changes, and innovation

Barriers to entry – including explicit restrictions on foreign ownership or trade barriers – can foster conditions where domestic firms retain monopoly power. The opening of the domestic market to FDI and/or imports can thus help to break local abuses of market power. This can have three related effects. One is that the market structure can change, with greater numbers of firms producing goods. Second, if barriers to entry are lower, it facilitates the adjustment of resources to the most productive areas and encourages greater innovation. Third, prices will likely come down as competition increases. This is of considerable benefit to consumers and to buyers of intermediate goods. While entering MNCs can help to lower prices, this last effect is more likely to be seen as a by-product of greater competition from imports.

a) Market structure, barriers to entry and innovation

As tariffs and investment restrictions fall, previously protected firms will face greater competition and loss of market power. With reduced barriers to entry, new innovative firms face fewer hurdles in starting up operations. Numerous studies link greater competition to increased incentives to innovate and the data on entry above illustrates that entry can be substantial and is associated with productivity gains. (Caves 1996). (see figure 5) Pavcnik (1999) makes a direct link too between greater trade competition and innovation. Using panel data on Chilean firms, she finds the import-competing firms were significantly more likely to adopt skill-intensive technology in the face of liberalization relative to both exporters and non-traded goods producers.

Other authors look at the issue of incentives to innovate indirectly, trying to capture concentration ratios of industries pre and post reforms. In the short run, the concentration might rise temporarily as exits increase. But new entrants and the inclusion of imported goods should soon lower them. The evidence, however, is mixed, particularly when looking at entry from MNCs.

Dunning 1993 and Caves 1996 in their surveys do point out several studies that do find a positive relationship between greater foreign competition and concentration. However, others find that if one controls for other sector characteristics, the relationship is not significant. Blomstrom and Kokko in their survey conclude that the balance of the evidence indicates MNCs are more likely to crowd out local firms in LDCs, leading to higher concentration ratios. (Blomstrom and Kokko 1996). But they go on to point out that some increase in concentration ratios may not be a bad thing – particularly if it means there is better exploitation of scale economies. Provided a significant number of competitors remain, a decrease in the total number may not be detrimental.

There are three sources for this outcome. The first is that if imports are produced more cost effectively than the domestic producers, some domestic producers will be
driven out of that range of goods. Thus it is possible that domestic production concentration increases, while the range of goods increases and the price of goods declines. In this case, greater concentration is consistent with greater productivity and lower prices.

Second, foreign presence and market structure can be endogenous, making it difficult to separate the effects of foreign entry on competition. A correlation between high concentration and a foreign presence may be due to MNCs being attracted to concentrated industries rather than MNCs serving to lower concentration ratios.

Third, there is also a real danger that market power has been strengthened, particularly if the foreign competition takes the form of FDI. A foreign multinational could succeed in out-competing enough domestic rivals that it wields market power in the domestic market. Particularly given MNCs’ possession of intangible assets, the effect of MNCs on domestic competition should receive close scrutiny (See Box)\(^7\).

Such a danger is greatest if protectionist trade policies are in place. Tariffs give MNCs an incentive to ‘jump’ the tariffs and produce locally. However, once behind the protective barriers, they can then use them to shore up their own monopoly position. Thus, the best means of ensuring such a MNC faces competition is the same as if it was a domestic monopoly: expose it to pressures from rivals abroad. Liberalized trade can be one of the most effective means of insuring against market power. Such a solution is most effective for traded goods. But even in areas such as non-traded services, openness to foreign bids can be a disciplining force. The effectiveness of the approach will also be determined by the strength of the domestic regulatory framework and international cooperation in addressing antitrust concerns, points that will be returned to in the next section.

**BOX**

*The distinctive nature of FDI makes it attractive...*

FDI is distinctive from simply the movement of capital across borders, a point industrial economists brought to the fore 30 years ago. Faced with options of servicing the foreign market through exports or by investing more passively with equity instruments, the question is why some firms decide to establish production facilities abroad, and why it was so important to maintain control of these affiliates. The insight is that such firms possess some intangible asset -- design, technology, managerial skills, or brand image -- that not only make a foreign affiliate profitable, but that warrants maintaining control of such an entity. It is precisely the existence of this intangible asset that makes FDI attractive to host countries. It is the potential for spillovers from the assets or the potential for the diffusion of such an asset to its local producers that has led many policymakers eager to seek out foreign investors.

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\(^7\) The MNC might also engage in transfer pricing and lower tax revenues through the repatriation of profits. Thus, even comparing a foreign and a local monopoly, the foreign monopoly can have even larger costs than a local monopoly it may have displaced.
… but in ways that can make abuse of market power a concern

However, such an intangible asset will by its nature limit some degree of competition. The fact that MNCs are more likely to be capital intensive, advertising intensive and technologically advanced implies they are better positioned to overcome potential barriers to entry than smaller, less sophisticated domestic competitors. It is possible that through MNC entry, local market power can be broken, making entry easier for other firms. However, there is also a danger of the opposite outcome: that the MNC is able to establish market power of its own in the local market. Particularly in LDCs, where firms are relatively small and less technologically advanced, MNC affiliates may be able to out-compete local firms and raise additional barriers to entry. The strength of domestic firms and of competition law are important in minimizing such an outcome.

b) Price changes and openness:

Here, the evidence is clearer; many authors find that greater openness to trade leads to lower mark-ups. Some studies look at the relationship of price markup and import penetration or tariff levels, looking across industries at a point in time. More convincing studies have tested the “imports as discipline” hypothesis by looking at changes in markups as countries liberalize trade. (Levinsohn 1993, Roberts and Tybout 1996) Both types of studies find a negative relationship between openness and markups.8

Kee and Olarreaga (2001) examine 41 countries during the 1980s and 1990s. They estimate a single average markup for each country based on 29 sectors over the two decades. Even at this level of aggregation, they find a significant negative relationship between average markups and import penetration, controlling for market size, financial depth, intellectual property and barriers to entry. (see figure 6)

Data from Mexico shows that with the liberalization of the late 1980s, mark-ups fell dramatically, particularly in industries with greater market concentration and a high proportion of large firms. Grether (1996) finds that a reduction in tariffs of 1% would lower markups up to 1.5% for large firms in more concentrated industries. Figures 7 and 8 demonstrate the strength of the relationship in Chile and Columbia (Kee and Olarreaga 2001)

Levinsohn (1993) examines five industries in Turkey in the period immediately after trade was liberalized. In all five of the industries he examines, markups changed in the expected way, four of them significantly so. In contrast, in more open countries such as Chile and Morocco, there is less correlation between markups and import penetration. However, De Melo and Urata (1986) did find a fall in industry markups pre and post the 1976 reform in Chile.

8 Some caveats do need to be kept in mind. There are certainly econometric issues with some of these studies such as simultaneity bias that may be driving the results. It is also possible that other interpretations could be consistent. Thus, if greater import penetration is the result of real exchange rate appreciation, output prices will be squeezed relative to input prices of tradables, so that markups decline whether or not industries are competitive.
In Cote d’Ivoire, trade was liberalized in 1985. Harrison (1996) uses firm level data to estimate the effects on markups and on productivity. She estimates that a 10% fall in tariffs lowered markups of domestic firms by 6%, although they had no significant impact on foreign firms’ markups. However, a 10% increase in import penetration lowered markups about 2% for both domestic and foreign firms. (Harrison in Roberts and Tybout, p. 184). She also makes a strong case for the importance of controlling for changes in the market structure when assessing the impact of trade reform; ignoring it can lead to underestimation of the productivity gains.

3. Scale economies

The importance of scale economies has received renewed attention in the last dozen years with theories of international trade that emphasize the importance of imperfect competition driving intra-industry trade. (Krugman 1990, Grossman and Helpman 1989). Rather than appealing to factor endowments and comparative advantage, these models emphasize the importance of increasing returns to scale driving specialization and trade. These models are used to understand the large share of trade among similarly endowed countries in similar products. These models also emphasize that the location of particular industries can be sensitive to quirks of history, that once producers in a particular location reach sufficient scale, they can drive out other competitors, further reinforcing its dominant position. This introduces dynamic benefits to scale effects. As such, it also renewed arguments for government intervention to assist particular firms in establishing sufficient scale and/or for governments to regulate firms from exploiting their position to limit entry – issues that are addressed in the next section. Here, we first examine the evidence of the affect of liberalization on firm size and the relative importance of scale effects on productivity.

Liberalization should improve the exploitation of scale economies for firms that see the size of their market increase. This is particularly true for exporters or for firms producing in trade blocks. For firms facing new import competition, scale economies may be reduced in the short run as sales are lost to the new products. However, as firms are forced to be more efficient, either by expanding output as less efficient firms exit or by adopting new technologies, scale economies can be realized.

The importance of this effect can be seen in Brazil’s experience with joining Mercosur. By entering this regional trade block, the market size increased for all firms. In some industries each country had had its own company, each producing at a somewhat inefficient level. By expanding the market and consolidating the number of firms, the remaining firms could produce at a more efficient level. The effects of the heightened competition and greater exploitation of scale economies is demonstrated in the overall terms of trade improvement for Brazil. Exporters to Brazil responded to the greater competition by cutting their prices. Data from the US and from Korea demonstrates that they reduced the price of their exports to Brazil relative to exports to the rest of the world following the Mercosur agreement (see Chang and Winters 1999 and World Bank 2000).

While greater economies of scale could be a reason for the correlation between openness and greater efficiency, the evidence shows that liberalization often works against scale economies, at least in the short run. If the greater competition forced smaller firms down their cost curves, one would expect to see plant sizes increase after
liberalization. However, many studies find that plant sizes are actually reduced for smaller firms (Dutz 1996, Roberts and Tybout 1991, Tybout and Westerbrook 1995, Aitken and Harrison 1994)

Evidence from Venezuela shows that the loss of scale economies can be a particularly problematic for producers of intermediate goods used by MNCs. New MNCs tend to rely heavily on imported inputs, reducing local supplier productivity due to a loss economies of scale. Fortunately, this effect appears to reverse itself as the local content of MNCs inputs rise over time and as firms adjust to the heightened competition by improving their outputs. (Aitken and Harrison 1991)

Rodrik (1988) raises another concern, that the loss of scale economies could serve to reduce a firm’s incentive to invest in new technology. He develops a model where investment in a superior technology will reduce costs, however, the incentive to cut costs rises with market share. Thus, if market share is falling, the incentive to invest in new technology declines. The result is thus that liberalization results in reduced output and reduced investment in superior technologies. However, Pavcnik’s (1999) finding that Chilean import-competing firms were the most likely to adopt skill-intensive technology provides evidence that casts doubt on the applicability of his predictions.

Overall, claims of productivity gains from scale economies should not be overemphasized. Most firms—particularly those that are large, have achieved a minimum efficient scale. For small markets that open up, some firms can expand output to produce at a more efficient level. But the efficiency gains are often achieved by a consolidation of producers, so again, the removal of barriers to exit are important for the productivity gain to be realized.

4. Technology transfer and spillovers

So far, the gains have been mostly static in nature. We now turn to sources of dynamic gains, channels whereby productivity growth can be increased. The source that gets the most attention is the possibility of technology spillovers – not just across borders, but also the scope for such technology transfers to diffuse within the new host country. The possibility of such benefits are most closely associated with FDI.

It is understandable why so much emphasis is placed on the potential for FDI to provide a mechanism for technology transfer when one looks the dominant role MNCs play in R&D and technology generation. Over 80% of the stock of FDI originates from 6 countries – the US, the UK, Japan, Germany, Switzerland and the Netherlands. These countries are also those that dominate technology production. From 1970-1998 between 90 and 98% of all technology licensing and royalty payments were made to these six countries. Looking at US MNCs, over a third of production and sales occur in their overseas affiliates, but less than 10% of its R&D expenditures are undertaken overseas – and over half of that is accounted for by majority owned affiliates in the UK and Germany. While MNCs are often reluctant to conduct the actual technology production in their affiliates, affiliates do get preferential access to the technology. From 1970-85, over 80% of payments on royalties, licenses and patent rights to the US were made by foreign affiliates of US firms. For Germany, more than 90% of the payments from
developing countries came from its own affiliates and 60% for Japan. (UNCTC 1988)
These numbers underscore both the importance of MNCs as a source of R&D and that an important part of all formal technology transfers are closely tied to FDI.

a) Source of spillovers

There are several sources of technology spillovers from MNC affiliates. “Demonstration effects”, whereby direct contact with users demonstrates both the existence and the profitability of new technologies, feature prominently in most case studies of technology diffusion. Local firms can thus improve their productivity by simply copying the techniques used by MNC affiliates. As indicated in the discussion of technology licensing, many of the technologies utilized by affiliates may not otherwise be available in the local market. Many MNCs are unwilling to license the technology without maintaining proprietary control, so FDI remains the only way of getting a technology introduced in the market. Contact with users is then an important source of diffusion as it provides a less risky means of assessing the likely success of a given product or process. It also can be a way of learning about new technologies that local entrepreneurs were unfamiliar with.

Firms can also increase the productivity of local firms through forward and backward linkages with domestic firms. This can take more active forms than mere demonstration effects, such as direct assistance in meeting quality standards, providing capital inputs and sharing managerial techniques.

MNC affiliates can help diffuse technology through the training of their employees. Studies consistently find that MNCs do offer more training than local firms, both for technical staff and for managers. There are numerous cases cited where managers leave to start their own firms, taking the new knowledge with them, although it is difficult to measure the magnitude of the overall effect.

b) Evidence on spillovers

Studies have been carried out using individual firms as case studies to large cross-country studies using aggregate data. The results of the former are not easy to generalize. The cross-country studies find a positive correlation between exposure to foreign technology and higher productivity is informative, but leave open the exact nature of the technology diffusion mechanism. Some of the most informative results come from the recent studies that use large panels of firm-level data that allow for greater econometric testing of the existence and extent of spillovers between firms. Overall, the evidence appears mixed. However, it should be recognized that many effects are hard to quantify (e.g. demonstration effects, worker mobility) and so may underestimate the true effects of spillovers.

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9 More recent numbers are being sought – but one caveat to keep in mind is that these numbers may be inflated as a means of transfer pricing so as to repatriate profits.
Studies show that technology transfer is most likely between FDI firms and local partners when foreign control is maintained. This is because firms are more likely to use technology intensive production processes if they maintain the majority ownership share (Smarzynska, Smarzynska and Wei, Djankov and Hoekman).

Blomstrom and Wolff (1994) found that foreign presence was significant in helping Mexican manufacturing firms converge to US productivity levels from 1965-82. Djankov and Hoekman (2000) studied firms in the Czech Republic. They find that firms with foreign owners are more productive, especially if the firm is majority foreign owned. However, they do not find evidence of spillovers between firms. Haddad and Harrison (1993) in their study of Morocco do not find much evidence of beneficial spillovers; only in two sectors did foreign presence contribute to greater local productivity. Productivity dispersion did decrease, but mostly in sectors with less advanced technology. They interpret this as foreign competition forced local competitors to use more efficient technologies that were within their grasp, but there was little transfer of technology.

Aitken, Hanson, Harrison (1997) use census data from Mexico. They do not find direct evidence of productivity spillovers from foreign to domestic firms. However, they find that a domestic firm’s probability of exporting increases with local MNC export concentration. Thus, domestic firms can benefit from the direct demonstration effects of nearby exporting firms as well as tap into the export infrastructure such as distribution networks and market contacts that have been established by the exporting multinationals.

Studies in Uruguay, Mexico and Morocco have shown that firms in sectors with large MNC presence tend to be more productive. (Kokko 1997, Haddad and Harrison 1993) However, in Venezuela, domestically owned firms did worse as MNC presence rose. This could be attributed to MNCs initial lower local content of inputs, their siphoning off domestic demand and their ability to hire away higher quality labor through higher wages. (Aitken and Harrison 1999). It should also be noted that as local content tends to increase over time, the potential for positive effects grows.12 (McAcleese and McDonald 1978)

It is not likely that mere foreign presence is sufficient for spillovers. It is even possible that a large foreign presence is itself a sign of weak domestic firms, that local firms were not able to compete or absorb spillovers and so surrendered significant market share to foreign firms. What seems to be crucial is the nature of the interactions between foreign and local firms. Thus, the potential for spillovers will be greater if a MNC affiliate actively engages with and competes with local firms.

Kokko (1994) tests this hypothesis that spillovers should not be expected in all industries. For industries where MNCs produce in ‘enclaves’, i.e. where neither products nor technologies bear much resemblance to local competition, there would be little spillovers. However, if the competition is more direct, there are more opportunities for learning. Using Mexican data, he finds evidence of spillovers for non-enclave industries.

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12 Likewise, the authors find forward linkages are likely to increase over time. Studies indicate that the share of affiliates output that is exported tends to fall over time.
Overall, the extent of the spillover benefits has proven hard to measure. What does seem clear, however, is that high local competence and a competitive environment are both likely to raise the capacity of local firms to absorb technology spillovers from greater foreign presence in the domestic market.

5. Improved inputs

The success of the East Asian Tigers in the 1980s and early 1990s is often attributed to their following export-oriented growth policies. Certainly Hong Kong, Singapore, Taiwan and Korea, and the small tigers of Thailand, Malaysia, the Philippines and Indonesia all recorded very high export levels through the mid-1990s. However, growth in exports is not sufficient, nor does it reveal other measures that enabled the exports to be competitive. One explanation that is gaining greater recognition is the importance of allowing the importation of inputs, particularly of the imports of capital equipment. These goods can embody more cutting edge technology and can directly improve the productivity of workers.

Studies do show a positive correlation between access to imported inputs and productivity (Handoussa, 1986, Tybout and Westbrook 1995, Hallward-Driemeier, Iarossi and Sokoloff 2000) Using data on 3000 firms from Indonesia, Korea, the Philippines and Thailand, Hallward-Driemeier et. al. find that foreign exposure significantly raises productivity. The use of foreign inputs is one such measure. It is also striking that the degree of benefits are greatest the less developed the local economy. (see figure 9)

Trade can be a way of importing the R&D carried out by the exporting country. Several papers examine the theoretical and empirical implications of a model where ‘North’ countries conduct R&D and export to the ‘South’. (e.g. Coe, Helpman and Hoffmiaster 1995). They estimate that spillovers of North’s R&D through trade are substantial; that increasing the R&D stock in the North by $100 can raise output in the South by $25. Other papers using OECD data also find R&D spillovers through direct bilateral trade flows and through indirect channels of trade passing through third countries.(Lumenga-Neso, Olarreaga, Schiff 2001)

Attracting a multinational can also be a means of improving the quality of inputs. Their local suppliers can improve their productivity as discussed above. But, in addition, evidence shows that MNCs often encourage suppliers to relocate with them. The corollary of MNCs’ local content rising over time is that suppliers of the MNCs also diversify, providing high quality inputs for the broader local market. (Hallward-Driemeier 1997).

As the importance of intra-industry trade continues to grow, the ability to acquire imported inputs will be key to attracting new foreign firms interested in establishing an export platform. But allowing greater access to high quality inputs can raise the productivity of all firms, not just the narrower set of exporting firms. For the benefits to be widely realized, it is important not to restrict the ability to import to a subset of firms such as those in export processing zones. Particularly for more backward countries, reform in this area holds some the best promise for productivity improvements.
6. Learning and threshold effects of exporting

Of all the means of increasing competition with foreign firms, removing barriers to exports is most clearly beneficial for domestic firms. By selling abroad, firms can better exploit economies of scale as their market increases. They are also more exposed to new technologies, innovative means of production and face steeper competition forcing them to be as efficient as possible. It is well accepted that firms that export are more productive on average than firms that serve only domestic markets. However, there has been a debate about whether it is the experience of exporting itself that contributes to this greater productivity or whether it is simply that more efficient firms self-select to become exporters. There have been some studies testing whether there is ‘learning by exporting’. Bernard and Jensen find that while the level of productivity is higher for exporters, exporters’ productivity growth is not significantly different from non-exporters’. While they find little evidence of ‘learning by exporting’ for US firms, they do find fixed costs of exporting so that there is a role for a firm’s past export history affecting today’s export decision.

Clerides, Lach and Tybout (1998) look at Columbia, Chile and Morocco. Other than the apparel and leather industries in Morocco, they argue that the evidence supports the self-selection hypothesis rather than the learning by exports. However, they provide evidence that exports do provide an alternative source of spillovers. They find that if many firms in a region are exporting, all firms in the region tend to enjoy lower average costs.

Bigsten, Collier et al point out that the strongest test would be to look at the evidence from small, technologically backward and more closed economies. Firms in these environments would be those most likely to benefit from greater exporting opportunities. They would be able to realize greater scale economies, be exposed to new technologies and product types and that the effect would be greatest for firms as they first entered export markets. Using data from 4 African countries (on average 11 times smaller than those in Clerides et al’s study) they do find evidence of both self-selection and as well as significant learning effects. Kraay (1999) also finds significant learning effects among Chinese enterprises. However, he finds the effect is stronger among more established exporters relative to new entrants. This is consistent with there being a number of fixed costs associated with entering export markets so that it takes time to realize the benefits of exporting.

Hallward-Driemeier, Iarossi and Sokoloff (2000) using data from 5 East Asian countries also modify the self-selection interpretation. Firms that are exporters are indeed more productive. Rather than gaining further productivity benefits once they have already entered export markets, the benefit comes as firms try to pass the threshold and enter such markets. They find evidence that it is in aiming for export markets that firms undertake steps necessary to improve their productivity. They document the differences between firms that export and those that don’t on a number of behaviors that are consistent with raising productivity, including training, using foreign technology, imported inputs, and capital intensity (see figure 10). As much of the productivity gains may be realized prior to actual entry into export markets, the measured learning effects are lower. They also find that the productivity differential between exporters and non-
exporters is wider the lower the country’s per capita income, reinforcing the point that the greatest benefits of encouraging exports will be realized among the less developed countries.

This section has looked at the benefits of increased foreign competition on domestic firms, highlighting the potential for dynamic benefits, through spillovers, improved inputs and learning effects. The evidence suggests that the accumulated benefits can be substantial. However, a key to ensuring the benefits are realized is the free entry and exit of firms and providing an environment that encourages new investments. As much of the source of the dynamic benefits stems from imperfect competition through increasing returns to scale or intangible assets, this also raises the importance of a government’s ability to monitor firm behavior, particularly pricing behavior and moves to stifle the entry of competitors, in ensuring benefits are indeed realized. The next section turns to policy issues related to maximizing the beneficial effects of greater foreign competition.

IV. Policies to maximize benefits to openness

In addressing the conditions most conducive to maximizing the net benefits to openness, this section will highlight policies designed to strengthen domestic competition and to improve the investment climate. Such policies will help keep down the costs of adjustment while allowing for a strong investment response and increased scope for spillovers to domestic firms.

Macroeconomic stability will ease the transition, allowing for clearer price signals and providing fewer distortions in the economy. It will also reduce uncertainty, a key factor in promoting a strong investment response as businesses adjust to the new regime. Reducing remaining distortions, loosening restrictions on factor movements and providing clear and consistent regulatory guidelines on competition policy, standards and reporting are other key determinants of successful liberalization.

Chapter 2 highlighted the macro literature on the importance of a good infrastructure, rule of law, low corruption and effective government regulations for growth and for attracting FDI. These provide important lessons for policy makers eager to provide an environment where their firms can thrive and be competitive in a global environment. To underscore the importance of the investment climate, the macro-literature findings need to be complemented with research at the micro-level. The ability to quantify the impact of different policies and bottlenecks on firm performance also brings home the benefits of reform in terms that constituents can readily understand.

Micro-level study of impact of investment climate on productivity

Gaining insights into the impact of differences in the investment climate was a central motivation for the World Bank to undertake a large scale survey across 10 states in India in conjunction with the Confederation of Indian Industries.¹³ Over 1000 firms

¹³ This study provides a wealth of information of firm characteristics and the impact of government policies and the business environment on firm performance. It is a blueprint for studies that the World Bank will be conducting in additional countries in the coming years. Such databanks will provide for important international comparisons, allowing for quantitative measures to complement existing qualitative
Entrepreneurs were asked to identify the best and worst climate states, and to give an estimate of the costs savings of operating in these locations. Figure 11 presents the rankings of states. The horizontal axis shows the percent of firms that ranked the state as best minus the share that ranked it the worst. Maharastra was widely recognized as providing the ‘best’ investment climate, while West Bengal and Uttar Pradesh were seen as providing the poor investment climate. Delhi and Punjab were in the center, and provide a reference point for much of the analysis. States above and to the right of them are classified as ‘good investment climate’ states and those below and to the left as ‘poor investment climate states.’ The correlation between this ranking and the cost-savings is very close. The entrepreneurs perceived an overall cost saving of 30% between the best and worst states; a large competitive disadvantage for firms to overcome.

The size of the cost savings between states is further borne out by the quantitative analysis. This provides reassuring evidence that the entrepreneurs are well informed about the costs and variations in constraints to growth. Controlling for sector and size, value added per worker is about 30% higher in the good investment climate states compared to the poor investment climate states. (See Figure 12) Much of the differences in value added is accounted for by differences in total productivity. Of interest is to relate these differences in productivity to various measures of the investment climate. We will highlight four areas here. The first is the relative supply and cost of infrastructure services. Electricity costs are a prime example. In UP, 98% of firms have their own generator, while less than half do in Maharastra. Particularly for small and medium firms, this represents a large burden. Reliance on the public grid is much lower in low investment climate states due to frequent power interruptions. As self-generation is more expensive – especially for smaller scale enterprises – there are enormous variations in the share of electricity in total costs. This accounts for over 3% of the differences in TFP between the two groups of states. Another measure of infrastructure is the use of the internet. Here, Delhi, the capital makes far better use of the internet and telecommunications more generally, so both groups do poorly in comparison.

Another source of bottlenecks is the regulatory environment. The measure we use is the frequency of government visits. Certainly a base number of visits is desirable, such as health and safety inspections. However, the number of regulations and visits can become excessive. They not only represent opportunity costs for managers for the time spent with the officials, they also can be a source for needing to make additional payments. Firms in poor climate states on average received twice as many visits as those

rankings. For more information and access to the data, please visit the webpage:
http://www.worldbank.research/projects/facs/
in good climate states. The difference between the number of visits explains almost 5% of the TFP differentials.

An area of regulation that receives particular attention is labor relations. India has had particularly stringent rules designed to protect workers, whereby firms with more than 100 employees have to be granted government permission before retrenching any workers. Firms were asked to report the extent to which regulations have left them with excess workers. The number was higher in good investment climate states. This is interpreted that the cost of overmanning is greater for more productive firms so that the extent of additional workers is felt more keenly. This effect accounts for close to 6% of productivity differences.

Using the ranking of states provided by the entrepreneurs, those states that were seen as providing the better climate for competitive businesses were also those that were most successful at reducing poverty. This underscores the point that good investment climate is not simply a narrow concept of pro-big business. To the contrary, what is needed is an environment where all firms can flourish. Small and medium firms provide an enormous share of employment and are the most likely employers of poorer individuals.

This evidence illustrates how investment climates can vary not only across countries, but also across regions within a single country. This generates the possibility for greater divergence as some firms are better positioned to take advantage of greater liberalization than others, even facing similar macroeconomic conditions. The good news is that the rankings of states according to investment climate is only loosely correlated with income levels. However, good climate states did make more progress on poverty reduction than poor climate states. And, without reform the poor climate states are likely to see their income fall relative to good climate states.

Drawing from the evidence on the sources of productivity growth from greater foreign competition and on the role of the investment climate, a number of policy issues need to be addressed.

1. **Competition policy**
   
   The ability of greater openness to deliver the benefits of increased productivity is largely contingent on the state of domestic competition policy and institutions. Particularly important are regulatory issues surrounding entry and exit and factor mobility. Lowering trade barriers while there remain significant barriers to entry or subsidies to particular incumbents will not have much effect on encouraging greater competition domestically. Restrictions to mobility will deter adjustment, drawing out the costs and endangering the benefits from improved allocation of resources and the entry of new dynamic firms.

   There are egregious examples of the effects policies that hamper competition – particularly if tariff barriers are coupled with distortionary domestic incentives. Argentina in the 1980s offers one extreme example. A special production zone was created in Tierra del Fuego to assemble electronic goods. Firms were given generous tax breaks and tariff subsidies. As the domestic market was highly protected, firms were able to
charge prices that exceeded international ones by 150-400%. The business was so
profitable that firms (both foreign and domestic) established firms in the zone, imported
finished goods from Japan to Panama where they were disassembled, imported these
parts to Argentina where they re-assembled them. By 1990, this program was estimated
to have cost the treasury 0.5-1% of GDP. (Newfarmer 2001)

Even if the overall case is made to encourage greater competition, there are three
related areas in which cases are made for protecting or promoting specific classes of
firms. These include arguments for infant-industry protection, support to exporting firms
and concessionary packages offered to MNCs to attract FDI.

i) Infant industry protection. The first is the well known argument that some
protection is required so that industries have the opportunity to be established and mature
prior to facing full competition. The assertion is that once they are mature, they will be
competitive without further protection. The widespread use of such arguments led to the
import-substitution policies followed by many LDCs in the 1950s-70s. While the failure
of this development strategy has curbed the broad application of protection, individual
firms and specific industries still try to make an exception for their particular case. The
most compelling case would be for firms in ‘learning-intensive’ sectors, i.e. in sectors
characterized by learning-by-doing such that their protection would facilitate productivity
growth.

For such a policy to be effective, it requires a very fine balancing act. Firms will
respond to the incentives and conditions they face, and in this case it would be to the
distorted signals created by policymakers, rather than the broader market forces. Unless
there are credible commitments that the protection is only temporary, firms’ responses to
the incentives create dependence on the protection in ways that will not prepare them to
compete over time.

Unfortunately, in practice, too often such protection is afforded to industries or
firms with strong political connections rather than based on economic merits. While
there are a few cases of success, namely Japan’s early industrial policy and Korea’s in the
early 1980s – these same cases have also recently shown the dangers of excessive
government intervention in picking winners and losers.

There is also evidence that once protection is lifted, it is often not the previously
protected firms that excel. If the infant-industry approach had been effective, the now
mature firms should be the industry leaders on productivity and growth. However, in
practice the reverse is often true. As protection is removed, these older firms often suffer
substantial losses as they adjust. The firms that emerge best able to compete in the more
competitive market conditions are often new firms that aren’t hampered by operational
structures or habits created by the earlier distortionary incentives. One example is the
Indian machine tool industry. The sector had received protection through the early
1990s. Productivity dispersion was reasonably large. The fall in protection has led to a
reduction in the number of Indian firms as Taiwanese and Japanese imports entered the
market. However, within a few years, a new entrant has become the most productive
Indian producer – and its cost effectiveness rivals that of its Taiwanese competitors.
(Sutton 2001).
Bringing in the potential spillovers from learning effects, while attractive in theory, are not borne out in the available data. In general, the import-competing firms that are potential beneficiaries of infant-industry protection are not necessarily any more skill intensive or exhibiting greater learning spillovers than exporters or non-tradable manufacturers. Most firm level datasets show that firms that exhibit the most skill intensive production and learning effects, are exporters, thus firms benefiting from greater openness. (Tybout 1998). Overall, the evidence suggests that any learning-by-doing by domestic firms is a complement rather than a substitute to access to foreign knowledge and technology.

ii) Export Promotion: Rather than protect certain firms or industries for foreign competition, some policies do the reverse: offering subsidies or assistance to make domestic firms’ products more competitive abroad. Many countries subsidize exports, directly or indirectly, as a means of improving their trade balance and to increase the competitiveness of their goods overseas. Apart from complaints from trade partners, this system also distorts the true incentives firms face and will not necessarily encourage firms to make the investment and production decisions needed to be truly competitive.

One of the most common forms of providing assistance to exporters is through the establishment of export processing zones (EPZ). The number of such zones has mushroomed, from only a handful in the 1970s to over 500 in 73 countries by 1995. EPZ are usually defended on three grounds. First, they provide a source of foreign exchange. Second, they provide employment. Third, they offer the possibility for technology spillovers, training and demonstration effects.

The experience with EPZ, however, has been mixed.\textsuperscript{14} The first two justifications are realized, but often at quite high cost. Most EPZ require extensive infrastructure investments and many firms producing there receive tax holidays as well as subsidized land or utilities. Domestic firms not located in an EPZ are denied the benefits those in the EPZ receive and thus are at a competitive disadvantage. If the improvements in infrastructure only serve the EPZ rather than the economy more broadly, costly resources are being diverted.

The extent of technology and learning spillovers depends heavily on the links the EPZ have with local firms. Backward linkages can develop if there is sufficient reliance on local suppliers. Unfortunately many firms in EPZ are largely motivated by the prospective of cheap labor and production processes are thus labor intensive and often require low skills, reducing the potential for significant training or learning by doing opportunities. Managers would be more likely to benefit, with demonstration effects and greater exposure to different management techniques. (Madani 1999) Unless carefully designed to encourage linkages between firms inside and outside the EPZ, the potential for spillovers is limited and reforms designed to remove barriers to exporting more generally are likely to have greater beneficial results.

\textsuperscript{14} The relative success of some EPZ also highlights the role of transport costs in limiting the attractiveness of certain locations. Almost all successful EPZ are located on coasts; few inland EPZ have attracted significant numbers of firms.
A fourth justification is sometimes put forward: that an EPZ is the ‘best feasible option’. Policy makers may recognize the benefits of dismantling various protectionist policies, but due to political pressures feel they are not feasible to implement. Creating an EPZ at a minimum allows for some firms to benefit from the relaxation of import tariffs or other restrictions.

iii) FDI promotion: Related is the question of whether countries should be actively trying to recruit foreign firms to locate in their countries. Many countries will currently grant tax holidays or provide subsidized industrial estates to foreign firms. Particularly if there are agglomeration effects, such that attracting an initial foreign firm brings additional foreign firms, the rationale for such a policy could be all the stronger.

However, as with EPZ, it is not clear how much countries should engage in this process. There is a real danger of suffering the “winners’ curse” if the host offers too generous a package to prospective FDI firms. In their bid to attract a foreign firm, the costs incurred may far outweigh any spillover benefits the multinational’s domestic presence will generate. Lall and Streeten (1977) study 90 foreign investments and found that more than a third reduced national income and Encarnation and Wells (1986) had similar findings in their study of 50 projects. Until the extent of externalities is more closely known, our recommendation is to avoid too vigorous a courting of foreign firms.

Overall, there are examples of successful targeted promotions that have led to broader spillovers to the larger economy. However, too often the costs outweigh the benefits. Additionally, the danger of introducing additional distortions and creating new rent-seeking opportunities will fuel interest groups, making the political decision to reverse course that much harder. Policies that emphasize improving infrastructure and the investment climate more generally, offer benefits all firms can take advantage of. This will promote greater efficiency and encourage more entry – both of local firms as well as making the location more attractive to foreign investors.

International competition policy:
While arguing that openness to foreign competition offers one of the best means of ensuring that firms will not abuse local market power, there can be cases where a firm has a global monopolistic position. Such cases, while rare, do raise difficult anti-trust questions. Antitrust is not an area with global framework for resolving disputes or mediating remedies – nor is there much anticipation that such a forum will be created. For many LDCs with limited regulatory enforcement capabilities and underdeveloped legal systems, the only available approach is to rely on the US and EU antitrust systems. On several high profile cases, the US and EU have looked at mergers that raise the issue of monopoly power across borders, blocking some of the proposed deals. While the two

15 In both studies, one of the main reasons for the negative outcomes was that FDI was encouraged at the same time that tariffs remained in place. This allowed high cost foreign firms to enter and serve the local market at high prices, even though cheaper imports would have been available. Fortunately, with the decline in tariffs, such examples should be becoming considerably rarer.
16 A similar conclusion is reached by the G24 research program, see Hanson (2000) for an overview.
sides have not always agreed, they have brought to the public attention the need to address issues of competition, not just within one’s own borders but also across borders. While some discussions of competition policy have begun in the WTO, considerable hurdles remain. Some countries are working out solutions in bilateral talks. In the meantime, reducing restrictions to entry and relying on foreign competition remain the best, if incomplete, options against anti-competitive practices.

2. Regulatory efficiency, rule of law and corruption

The regulatory burden, rule of law and curbing of corruption consistently enter positively into cross-country regressions on growth and on the location choices of foreign investors. They are an important gauges of the strength of domestic institutions. They can not only affect whether foreign investors enter – but also the potential for spillovers to occur.

There are numerous examples of the regulatory burdens facing firms in developing countries. One widely cited example was provided by the attempt of the Institute for Liberty and Democracy in Peru to register a fictitious garment plant in the 1980s. It took 289 days to register the factory and the equivalent of 23 months of minimum wages to complete the task. (de Soto, 1989). The task for foreign firms can be equally daunting. The Confederation of Indian Industry reports that a typical power project investment requires 34 clearances from the Central Government, and a further 47 from the State government. Such a system not only introduces enormous delays into the system, it also opens the door to possibilities for corruption. Clearly, streamlining such procedures will have benefits – not just in attracting FDI, but for new domestic firms too.

Smarzynska and Wei (2000) use data on 720 multinational affiliates across 22 countries in Eastern Europe and Central Asia. They look at two questions: whether corruption deters entry and if it affects the mode in which foreigners enter. Corruption and the need to navigate numerous bureaucratic mazes favors having a local partner. However, if firms question the protection of their intangible assets, they will either be discouraged from entering entirely, or prefer to maintain wholly owned ventures. They do find a country’s level of corruption reduces likelihood of foreign investment. And, for a given level of corruption, the more R&D intensive the firm, the more likely it is to enter via greenfield investment rather than through an acquisition or joint venture.

The preference for greenfield investments over acquisitions is striking when comparing developing and developed countries. Among OECD countries, the vast bulk of foreign transactions take the form of M&As\(^\text{17}\) (see figure 13), but the share is much

\(^{17}\) Data is available both for FDI and for mergers and acquisitions (M&A). The two measure somewhat different concepts, but their comparison is insightful and gives an indication, albeit imprecise, the relative importance of greenfield investment as a mode of entry of foreign investors. FDI is measured on an annual basis and reports the net flows between the parent company and its affiliate. Only those resources that flow across borders are included; i.e. if a affiliate raises capital locally, it is not included in FDI. There are two modes of entry for FDI. One is greenfield investment whereby the foreign firm establishes an entirely new affiliate. The other is mode is through acquisition whereby the foreign firm acquires part or all of an existing firm. M&As is conceptually related to this second mode of FDI entry. However, it differs in several important respects. Typically, the M&A is reported in a single amount (either at the time of the announcement or at the conclusion of the deal) regardless of the time over which the financial transactions
lower for low income countries. Thus, if the hope is to generate technology spillovers from a greater foreign presence, a larger share of greenfield investments reduces the scope for such externalities relative to joint ventures. (Smarzynska 2000, Djankov and Hoeckman 2000)

Wei suggests that openness itself may provide a means of curbing corruption. He finds evidence that countries that are more open are less corrupt. (Natural Openness) The process of liberalizing will force policy makers to address a number of vested political interests. Those who have benefited under protection are likely to be well organized. The stronger these interests and the greater the domestic corruption, the more difficult it can be to gather sufficient support to liberalize the economy. However, if liberalization is successful, those benefiting from the new system will provide a countervailing lobbying presence. Also, the process can highlight the costs of corruption, particularly if they impede the benefits of attracting new firms and allowing entry of domestic producers.  

3. Focus on liberalizing services, not just manufacturing

Traditionally, much of the focus of liberalization has been on the manufacturing sector. However, the service sector highlights both the scope for potential benefits and the risks from undertaking greater globalization. In particular, participation in the international market in services itself can help bolster the domestic conditions necessary to take full advantage of wider liberalization.

Services account for almost two-thirds of global GDP and only 20% of global trade. Many services, by their nature, are non-traded goods. They require either extensive contact with the provider, are intangible, cannot be stored or require immediate use. Much of the foreign participation would thus be through FDI. FDI in services had lagged far below that of manufacturing, although the increase in privatization, particularly in Eastern Europe and in Latin America have led to substantial increases in FDI in services. (see figure 14). The composition of the service investments is also encouraging, the vast majority are indeed in areas that are inputs to other businesses. In the late 1990s, financial services, telecommunications and infrastructure were among the top sectors attracting foreign investors, and dominate the inflows in mergers and acquisitions in developing countries.

Services play a special role too as they are important inputs into almost all other businesses. Infrastructure, transportation, communication, financial services and business support services can be key to determining the success of manufacturing and agricultural ventures – as well as to other service providers. The high skill nature of many service sectors also suggests that the potential for greater knowledge spillovers from FDI are high. Thus, the overall benefits of more efficient service provision can be enormous.

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18 There are counter-examples, indicating the relationship is not necessarily a straightforward one. Indonesia provides an example where the economy was able to shift from oil dependence to a more diversified economy – despite extensive corruption.
Examples show that foreign participation contribute substantially to lower prices and improved delivery. Hoekman and Primo Braga (1997) document how increased competition in the provision of port services in Veracruz, Mexico reduced costs by 30% within one year and container turnover increased 50%. Privatization and foreign participation in Aeromexico and Mexicana raised labor productivity 50-100%. Argentina also saw marked improvements in telecommunication services in the 1990s with FDI in the privatized market. (GEP 1997)

However, greater openness on service provision also raises special challenges. Many service areas are natural monopolies, and as they are non-traded, it is less clear how to bring foreign competition to discipline behavior. One route is through negotiations on license renewals. However, if too much uncertainty revolves around the terms of agreements, investors will be unwilling to undertake the substantial fixed costs involved with establishing their operations. On the other hand, greater foreign participation holds out the promise of greater efficiency as greater experience and more market oriented principles are brought to bear on the service delivery.

In this context, there are two issues in turning to the market to provide better infrastructure. If governments have decided to privatize, they still must determine whether to allow foreigners as bidders. Another decision is whether to structure the industry as a monopoly or with competition. It is hypothesized that competition among service providers will foster greater investment than under monopoly providers, leading to faster, cheaper and higher quality provision. However, the potential costs include a loss of scale economies, reduced potential for cross subsidies across locations or groups. There is also the potential that the proposal to introduce competition will lower government revenue from the sale as bidders see less opportunity for profit and so will demand lower price to compensate for the risk. Bidders may also ask for ‘temporary’ exclusive license – an arrangement that may be politically difficult to change and may later be seen as no longer efficient depending on the investment pattern of the incumbent in the intervening time.

In their analysis of privatization of telecommunications in Africa, Haggarty and Shirley (2000) show that countries are more likely to choose competition if historically service has been poor, access has been limited relative to other countries in the region and profitability has been low. Poor service will help push governments to consider more drastic changes and public opinion is less likely to favor the incumbent with a poor track record. If prior access has been limited, there is also more scope for a rival to enter and challenge a dominant position. Foreign bidders offer additional expertise and often higher quality services. However, they are also more likely to ask for exclusive contracts. In assessing the trade-offs, officials must determine their ability to regulate the foreign firm to ensure quality does improve and that markups are not excessive.

One area of government services that has received particularly widespread criticism is customs administration. This has long been seen as one of the agencies seen as most likely to be corrupt. In recent years, companies such as the Swiss company SGS have been established, offering contracts to do pre-shipment inspections to provide an independent verification of the value of imports. While such contracts have the potential to reduce corrupt behavior, they are not fool proof. Aside from the obvious danger that
SGS employees themselves could be open to bribes, exporters still know that there are odds of not being caught, or that import officials would be open to bribes when reconciling reports. Again, the quality of domestic institutions still matters in the likely success of these contracts. (Johnson 2000) If indeed other agencies are less corrupt, such contracts with such a firm could provide a useful means of bringing customs administration more into line.

Given the concerns regarding market power in non-trade service sectors, government regulation and oversight will be important to ensure that quality services continue to be offered at reasonable prices. Privatization itself is not a sufficient guarantor of improvements, the nature of the regulatory framework will be important in ensuring benefits are indeed realized. But, the preliminary evidence points to the potential for reliance on the international market itself to bolster weak institutions, thereby strengthening the very framework needed to maximize the benefits of wider liberalization.

V. Conclusion

This chapter has examined the micro evidence of the effects of greater foreign competition on domestic firms, emphasizing the potential for both dynamic and static gains from liberalization. To complement openness to foreign competition, it is important that attention must be paid to the domestic investment climate. This will facilitate the adjustment process and the entry of new, more productive firms. The fewer the distortions and barriers to factor movements, the greater the speed and the lower the costs of adjustment. Strong domestic competition and well functioning regulations both decrease the risks of new foreign monopolies, while also increasing the ability of local firms to benefit from spillovers from the larger foreign presence in the economy.

Proponents of greater competition often see instances of imperfect competition as signals of market failure that could justify government intervention. However, endogenous growth theories also highlight the importance of increasing returns to scale as a source of continued higher growth. In analyzing the role of imperfect competition such tensions need to be addressed, with examinations of the potential for positive externalities, the incentives firms face from government regulations and the extent of competitive pressures through free entry. Imperfect competition can bring the potential for higher productivity gains, but it also raises the need to monitor firm behavior to ensure market positions are not abused and that barriers to entry are not erected to stifle competition.

One clear lesson is openness to trade itself is one of the most effective means of protecting against monopoly power and substantial mark-ups. Particularly if there is foreign investment, open trade policies offer the best means of ensuring competitive forces will minimize the potential for MNCs to abuse their local market position to drive competitors out of business or to charge prices much above world rates.

For less developed countries, the benefits of liberalizing export growth and allowing the importation of inputs, particularly of capital goods, offer the most potential for greater productivity growth. Technology diffusion from FDI, despite difficulties measuring its exact impact, still offers potential benefits. However, the evidence does point to such spillovers likely being greatest for countries with more sophisticated domestic firms and
countries with better regulatory environments. In such conditions, foreign firms are more likely to enter with more advanced technology and local firms are better position to absorb the potential for spillovers.

Policy makers should also be cautioned against policies that offer substantial benefits to foreign firms – resources would often be better spent assisting domestic firms more broadly, whether that is infrastructure spending, reducing barriers to imported equipment or simplifying regulatory burdens.

Good quality infrastructure and efficient institutions are key to attracting foreign firms and to encouraging entry more generally. However, it is not the case that countries should necessarily refrain from pursuing greater integration until they have reformed and improved their infrastructure. In many cases, there is a real possibility of using the international market itself to help improve the quality of infrastructure and the investment climate more generally.
Bibliography


Figure 1
Rising trade flows increases exposure to foreign competition

Imports/GDP, 1960-1997

Exports/GDP, 1960-1997
Figure 2

FDI flows have surged...

...but, 70% of FDI to developing countries goes to 10 recipients
Figure 3

FDI as Share of Gross Domestic Investment, 1970-1997
Figure 4: A Strong Rule of Law is Attractive to Foreign Investors

While high levels of corruption discourages foreign investment

Partial correlations control for GDP, GDP per capita, openness to trade, infrastructure services, primary education levels, black market premium, monetary depth, and inflation. (Hallward-Driemeier 2001)
Figure 5:

Mexican Liberalization: 1984-1990
Changes in Import Penetration and Productivity, by Industry

Source: Tybout and Westbrook, 1995
Figure 6

Greater import penetration leads to lower markups

coef = -.31, (robust) se = .18, t = -2.62

Figure 7: Evidence of Import-as-Discipline: Chile 1980s vs. 1990s

Output Markup vs. Import Penetration in Output

coef = -0.075 (robust) se = 0.023, t = -3.48

Value Added Markup vs. Import Penetration in Value Added

coef = -0.36, (robust) se = 0.086, t = -4.16
Figure 8:

Imports-as-Discipline
Colombia Manufacturing Industries 1977-81

Change in Import Penetration

Change in Markup

Change in Markup vs. Change in Import Penetration
Figure 9

Relative Productivity of Foreign vs Domestic Oriented Firms

- Indonesia
- Philippines
- Thailand
- Korea

Imported Inputs
Foreign Technology
Foreign Ownership
Exporters

Figure 10

Relative Practices of Exporters vs. Domestic Oriented Firms

- Korea
- Thailand
- Philippines
- Indonesia

Imported Inputs
Foreign Tech
Training
Audit
Figure 11

Ranking of investment climate across Indian states

% ranking best minus % ranking worst
Figure 12: India Productivity and Investment Climate (IC)

Regional productivity gaps by source

Explaining TFP differences
Figure 13:

Cross-border M&As as a percentage of FDI inflows, 1997-1999 (percentage)
Figure 14:

M&As in Services, 1997-1999

Major Service Sectors in M&As, 1997-1999