

# Competition

*Of all human powers operating on the affairs of mankind, none is greater than that of competition.*

—Henry Clay, 1832

Competition has long been acknowledged as an important force bringing about economic development and growth. In the 18th century Adam Smith pointed out that China's lack of competition with the outside world limited its growth and development prospects at the time and allowed the persistence of the divide between the rich and the poor (box 7.1). The subsequent history of China—a weakened nation invaded and occupied by foreign powers, followed by the Communist Revolution brought on by inequality of wealth and incomes—seems to have illustrated Smith's prescience. The history of Western Europe provides many examples of institutional changes that promoted or restricted competition, or competition that promoted institutional change. In some instances governments initiated institutional changes. In Sweden in the 19th century, for instance, the government abolished the guilds, which supported an urban monopoly in some professions, to promote production in rural areas. In other instances institutional changes to promote competition occurred without government intervention. For example, in 19th century Germany professional guilds progressively lost their power because of competition from the emerging factory system.

Competition—domestic and international—provides incentives for institutional change around the world (chapter 1) by modifying the effect of existing institutions. Competition can also act as a substitute for other institutions. There is evidence that competition can substitute for an effective bankruptcy system

because it exerts pressures on inefficient firms to go into liquidation.<sup>1</sup> There is evidence that competition can substitute for strong shareholder control in firms in raising productivity growth. Greater competition raises productivity growth in a firm with no dominant external shareholder, while competition has no positive impact on productivity performance in the presence of a dominant outside shareholder.<sup>2</sup> There is also evidence that competition can change the nature of labor market institutions (see the discussion below).

At the same time, there may be conflicts between promoting competition and promoting better corporate governance. For example, business groups established to solve information and enforcement problems might restrict entry into markets. Also, not all the institutional changes that arise from competition enhance the well-being of all members of society (chapters 4, 5, and 9).

The central element of competition in product markets is the freedom of traders to use their resources where they choose and to exchange them at a price they choose.<sup>3</sup> Product market competition increases efficiency (and productivity, and the growth of productivity in the economy) by providing incentives for managers to reduce costs, innovate, reduce slack, and improve the institutional arrangements in production.<sup>4</sup> Productivity growth, in turn, is one of the main sources of growth in countries.<sup>5</sup> In industrial countries productivity growth is generally the result of technological advances. In developing countries productivity growth has mostly been attained through technology spillovers from trade, foreign direct investment, licensing, and joint ventures.

Sometimes there may be a conflict between the static and dynamic effects of competition. Or firms may

**Box 7.1****Adam Smith on competition, 1776**

China seems to have been long stationary, and had probably long ago acquired that full complement of riches which is consistent with the nature of its laws and institutions. But this complement may be much inferior to what, with other laws and institutions, the nature of its soil, climate, and situation might admit of. A country which neglects or despises foreign commerce, and which admits the vessels of foreign nations into one or two of its ports only, cannot transact the same quantity of business that it might do with different laws and institutions. In a country, too, where though the rich or the owners of large capitals enjoy a good deal of security, the poor or the owners of small capitals enjoy scarce any . . . the quantity of stock employed in all the different branches of business transacted within it can never be equal to what the nature and extent of that business might admit. In every different branch, the oppression of the poor must establish the monopoly of the rich, who, by engrossing the whole trade to themselves, will be able to make very large profits.

—Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776

not invest in innovations that require high initial investments. Institutions that protect intellectual property rights and reduce competition may be needed to resolve this problem.

A number of studies, concentrated on industrial countries, have found a positive relationship between competition and efficiency (measured by productivity levels), and between competition and the rate of productivity growth.<sup>6</sup> In the presence of competition, firms adjust operations to raise efficiency and thus maintain profitability, and less efficient firms exit the industry. The exit of these firms frees up resources, which can then be used by more efficient firms. Entry and exit has been shown to be an important source of industrywide productivity growth in semi-industrialized countries such as Chile (1979–85) and Morocco (1984–87).<sup>7</sup> In a study of Korea between 1990 and 1998, plant exit and entry accounted for as much as 45 percent of manufacturing productivity growth during cyclical upturns and 65 percent during downturns.<sup>8</sup>

Some studies have found that the benefits of competition do not depend on having large numbers of firms.<sup>9</sup> Studies show that technical efficiency falls with increased market concentration in industrial (Australia, Canada, Japan, the United Kingdom, and the United States) and developing (Korea) countries but that,

below a certain level of concentration, technical efficiency also falls.<sup>10</sup> A study of firms in transition economies finds that competition from one to three rivals is important in explaining innovation such as a firm's decision to launch new products.<sup>11</sup> Those firms with more than three competitors perform better than monopolists, but their advantage is only half as great as those facing one to three competitors.<sup>12</sup>

The preceding discussion suggests that to obtain the benefits of competition—greater efficiency and innovation in product markets—*some degree* of competition, but not always competition by a large number of firms, is needed. Moreover, it is not just market structure but also the threat of entry—either by firms or by products—that determines the degree of competition in domestic markets. It is difficult in practice to measure the extent of actual and potential competition in domestic markets (box 7.2). In developing countries with lim-

**Box 7.2****Measuring competition**

There are three main ways to measure competition. The first approach is to measure the extent to which production is concentrated among a small number of firms. This includes using indicators such as the four or five firm concentration ratios, the percentage of employment by the four largest firms, the Herfindahl index (sum of squares of market shares of firms), and the number of firms in the market.

The second approach is to look at the consequences of market structure rather than the market structure itself. This can be done by estimating the residual elasticity of demand for the firm's own product—the extent to which a price rise by the firm would lead customers to substitute away and buy from rival firms, or turn away from the product altogether.

The third approach is to look directly at the behavior of firms to infer the extent of competition the firms *perceive* they face. The price-cost margin is the most commonly used measure.

These three ways of measuring competition are consistent with one another and are complementary. The concentration measure is probably the easiest to use in developing countries, compared with the other two, which require extensive information. But focusing just on current market structure variables misses the importance of potential competitors—those that could enter the market and therefore act as a discipline on incumbent firms.

*Note:* The idea of contestability was originated in Willig (1980). See Baumol and others (1982).

*Source:* Carlin and Seabright 2000, *World Development Report 2002* background paper.

ited capacity and supporting institutions, the priority for policymakers should be to ensure both the *free entry and exit of firms* and *exposure to international competition*. This chapter looks at institutions that restrict or promote competition in markets. The institutions that enhance the provision of infrastructure services (laws and regulations and the agencies that enforce them) are also important for promoting competition. These institutions are discussed in chapter 8.

There are many potential barriers to competition. In developing countries the main institutional barriers to domestic competition are government regulations on exit and entry of firms.<sup>13</sup> Even in the tradable sector, international competition may not lead to domestic competition, partly because of institutional barriers to competition, such as government regulations in product and factor markets that deter firm entry, exit, and growth. Excessive and costly government regulations also facilitate corruption and lead to adverse distributional consequences by inducing workers and firms to escape into the informal market. Private institutions can also cause barriers to competition. For example, the monopolization of domestic distribution channels can mean that even when a good can be imported freely, there still may not be competition in the domestic market for that good.

Domestic institutions that promote competition include competition laws and competition authorities. In structure and mandate they differ significantly, even among industrial countries—that is, one size does not fit all. These were introduced by governments to tackle private barriers to product market competition, and to ensure that, in sectors characterized by natural monopolies, prices do not diverge too much from costs. Many developing countries suffer from human capital constraints. In resource-constrained countries governments may benefit from focusing on removing barriers to entry and exit in markets and opening the economy to international competition before turning their attention to building competition institutions, particularly for tradable sectors. But many developing countries already have competition laws and agencies. By focusing the agenda for these agencies, these institutions can be made more effective at promoting competition. The priority for competition authorities should usually be the cases that can harm competition, such as cartels and exclusive supply and distribution contracts.

International trade reform itself can be viewed as institutional reform, since it changes the rules of the

game for those affected.<sup>14</sup> International trade promotes competition in markets. Openness to international trade also helps exert pressure on governments to reform those domestic product and factor market institutions that undermine the ability of firms to respond to competitive pressures from abroad. But the effect of this source of competition is mostly limited to tradable goods, such as manufactures. Some products, such as cement and infrastructure services, are by their nature not easily transportable. That is, transport costs are so high that sellers cannot make returns high enough to encourage trade. When infrastructure is poor, only consumers who live near the border can enjoy the benefits of price competition from freely traded products.

Governments worldwide need to build more effective institutions to address aspects of the international trade regime that can undermine competition. At the national level, this includes making further progress in liberalizing services as well as goods, and, for industrial countries, in providing access for developing country exports. At the international level, it includes reducing compliance and certification costs of trade-related product standards (such as food safety standards) and taking advantage of the flexibility allowed in the Agreement on Trade-Related Intellectual Property Rights (TRIPS) to allow developing countries to maximize benefits.

International standards do not always promote competition, and not all standards are appropriate for developing countries. Without attention to country circumstances, some standards, such as those for international property rights, can even have adverse distributional consequences. Moreover, complementary institutions or human capital to enforce these systems do not exist in many countries. In international forums human capital constraints can prevent developing country policymakers from engaging effectively in negotiations. These are areas that need attention if future development of international standards is to reflect developing country priorities and promote competition.

This chapter first discusses constraints on domestic competition—that is, government regulations on firm entry, and competition laws and agencies. It then discusses restrictions affecting international transactions: trade restrictions and intellectual property rights.

### Domestic competition

This section focuses on the two main factors that determine the extent of competition in domestic markets.

The first, and the most important in developing countries, is government regulation of product and factor markets, which can inhibit firm exit, entry, and growth. The second is private or “natural” barriers to domestic product market competition. These include monopolies on domestic distribution or private barriers arising from localized markets, either because products are not transportable or because infrastructure is poor.

### *Regulations on entry and exit*

Governments can inhibit firm entry either through direct restrictions on the establishment of new firms or through an excessive number of entry regulations. The poor functioning of factor markets can also inhibit firm entry. The failure to provide strong property rights for land can reduce firm entry (chapter 2). Poorly functioning credit markets that result in restricted access to credit for some groups—in particular, small and medium-size firms—can also deter firm entry into some activities, restricting firm growth and limiting the extent of competition in the product market (chapter 4).

Governments can also inhibit firm entry by raising exit costs. Firms are less likely to enter a market if exit

costs are high or, in the extreme case, if exit is impossible.<sup>15</sup> Government institutions that raise the cost of exit include factor market regulations, such as labor legislation, that make it costly and sometimes even impossible for firms to lay off workers (box 7.3). Another example is restitution laws in transition countries, which inhibit land transactions and deter firm exit and hence firm entry (chapter 2). Unprofitable businesses may also keep operating when they receive budget subsidies or quasi-fiscal support such as soft loans or are permitted to fall behind in their taxes or other payments, in the process impeding entry and exit.

Removing or relaxing institutional barriers to product market competition promotes competition directly and exerts pressures on governments to remove rigidities in factor markets. Rigidities in land, labor, and capital markets can raise adjustment costs in the domestic economy, for example, causing higher unemployment, as firms are exposed to pressures of competition. It is not uncommon to find product and factor market restrictions coexisting.<sup>16</sup> It can also be argued that uncompetitive product markets allow the persistence of factor market restrictions. Box 7.4 presents an example

### **Box 7.3**

#### **Labor regulations and rigidities in the labor market: the example of India**

Almost all countries have labor laws and regulations to protect workers. These fall into five categories:

- Establishment and protection of workers' rights, including the right to associate and organize, the right to bargain collectively, and the right to engage in industrial action
- Protection for vulnerable groups, including minimum working age requirements, equality of wages, and employment opportunities and special provisions for women
- Establishment of minimum compensation for work, including minimum wages, minimum nonwage benefits, and overtime pay
- Assurance of decent working conditions, including occupational health and safety provisions and maximum hours of work
- Provision of income security, including social security, job security, severance pay, and public works.

*World Development Report 1995* provides a detailed analysis of labor legislation and its effects and shows that not all labor laws achieve their intended objectives. The Report suggests that labor laws in developing countries be simplified and focused on basic human rights and safety issues.

In developing countries excessively restrictive labor laws sometimes have the effect of benefiting a group of relatively

well-off workers at the cost of limiting the employment of others (sometimes the majority) in the formal sector. In some countries labor laws have introduced significant rigidities into the labor market, with adverse consequences for production and growth.

An example is India, with 165 pieces of labor legislation (World Bank, 2000d; Zaghera 1998). Indian labor laws provide for a wide scope for initiating industrial disputes, long procedures for settlement of industrial disputes, inflexible provisions on change in conditions of service, and provisions enabling government interventions in areas such as layoff, retrenchment, and closures. The proliferation of labor laws is made worse by definitional complexities, making their interpretation even more difficult. There are 11 different ways of defining “wages,” and the meaning of “worker,” “employee,” and “employed person” changes depending on the piece of legislation.

Lack of clarity about the rights and obligations of employers and employees, litigiousness, and delays in settling disputes have consequently become key features in the application of India's labor laws. Most disputes take more than 1 year to settle, and 20 years is not infrequent. This legislative framework has impeded large-scale industrial restructuring, relocation, or exit—and hence entry into the formal sector—and even the relocation of labor within an enterprise and often even in the same city or town.

## Box 7.4

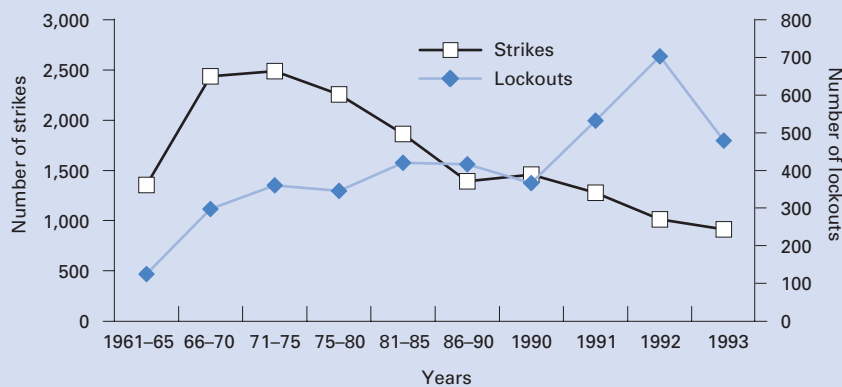
## Increased product market competition and increased labor market flexibility in India

Before India's wide-ranging economic liberalization program began in the early 1990s, the Indian production system was characterized by high rents created by industry licensing and protection from external competition. This system had enabled firms to pass on to consumers the cost of workers' privileges embedded in labor regulations and had eroded firms' incentives to minimize labor costs. Labor, through union activity, had captured part of the rents generated by the restrictions on competition.

With the liberalization of the economy, producers began to face competition in product markets, which restricted their

ability to pass on to consumers the cost of workers' privileges. This made workers more conscious of the employment consequences of their demands. Firms became more adept at circumventing labor market regulations and at resisting union pressure, as reflected in the increase in lockouts (managers shutting down production to deny striking workers their wages). At the same time, incentives for union activity declined, as reflected in the decline in the number of strikes.

**Product market competition raised the number of lockouts and reduced the number of strikes in India**



Source: Zagha 1998.

in which increased product market competition increased the flexibility of labor markets in India. Similar examples are found in industrial countries.<sup>17</sup>

Institutional barriers to firm entry erected by governments include restrictions on the establishment of new firms. For example, in Korea restrictions on the involvement of the *chaebol* in retail activity and an arduous bureaucratic store-opening evaluation process contributed to low productivity in the general merchandise retailing sector.<sup>18</sup> These regulations were established with the objectives of protecting small stores, discouraging consumption, and promoting more investment in the manufacturing sector. The regulations, however, led to the undesirable outcome that some profitable investments were prevented and others were distorted.

Governments can also raise the cost of entry through the procedures they mandate that firms undertake for starting up businesses.<sup>19</sup> Although some of these procedures—such as appropriate safety, health, and envi-

ronmental regulations—could be beneficial, others are not. Even beneficial regulations can inhibit firm entry if they are too numerous, too complex, or too costly, relative to the income level of the country.

A recent study covering 85 countries found that regulations may have unintended effects on business activities or outcomes.<sup>20</sup> For example, on average, neither pollution nor the number of accidental poisoning cases (as an example of work-related accidents) fell as the number of regulations imposed by governments across the world increased. This does not mean that socially beneficial regulations should be eliminated. Instead, it is the quality rather than the quantity of regulations that matters, along with their successful implementation.

The same study found that developing countries generally require more procedures to start a new business than industrial countries. But there are exceptions. Notably, France has the same number of procedures as Russia. Both countries require 16 procedures, com-



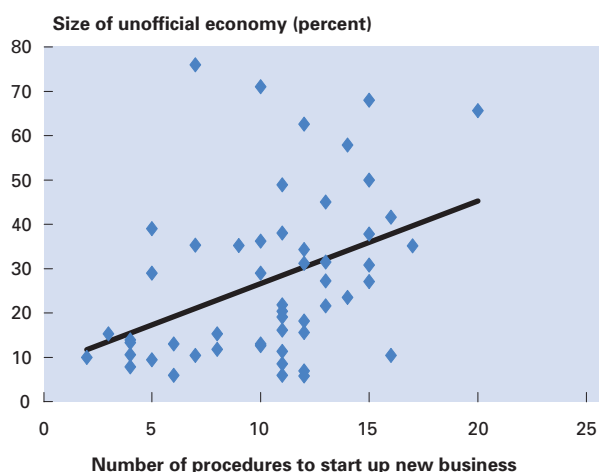
pared with 20 in Bolivia. The countries with the fewest number of procedures or regulations are all industrial countries, with Canada and Australia having the least (two).

The procedures covered by the study fall into five categories: health and safety, environment, taxes, labor, and general screening. Screening—a set of general procedures whose purpose is often unclear—is typically the most onerous. Unsurprisingly, the larger the number of procedures required, the longer it takes to start a business and the greater the cost (relative to per capita income). For example, Mozambique and Bolivia, which are among those countries with the highest number of procedures, are also among the countries where it takes the most days to start a new business (174 and 82, respectively). It is also costly to start a business in these countries, with costs of 116 and 263 percent of GDP per capita, respectively (costs can rise to over 300 percent of GDP per capita in some countries). In comparison, in Canada, where there are two procedures, it takes only two days and costs only 1.4 percent of GDP per capita to start a new business.

Many of these procedures consist of obtaining approvals from several different offices and requiring formal notarizations at various steps, or of overly burdensome inspections for tax and other regulations. This implies that it is more costly for firms in developing countries than in industrial countries to start up new businesses. In those industrial countries where there are more procedures, the effect of more regulation is countered by the presence of a more accountable and transparent administration, and better information and enforcement. Entry regulations are also found to reduce competition in domestic markets, particularly in large countries, even when the country is open to international trade.<sup>21</sup>

The number of procedures is associated with larger unofficial economies and a higher level of corruption (figures 7.1 and 7.2). Many studies have shown that excessive product and labor market regulations induce firms to shift their activities into the informal market to bypass the high costs of doing business and employing labor in the formal sector.<sup>22</sup> Estimates of the size of the informal economy and of the proportion of workers employed in it show that both have been growing over the past decade in many transition and OECD countries. Rising state regulatory activities, labor market regulations, and an increasing burden of taxation and social security payments have driven this process.<sup>23</sup> These estimates also indicate that in general, the size of the

**Figure 7.1**  
**The size of the unofficial economy rises with the number of procedures required to start up new business**



Source: Djankov and others forthcoming. *World Development Report 2002* background paper.

shadow economy as a percentage of GDP is larger in developing than in industrial countries.

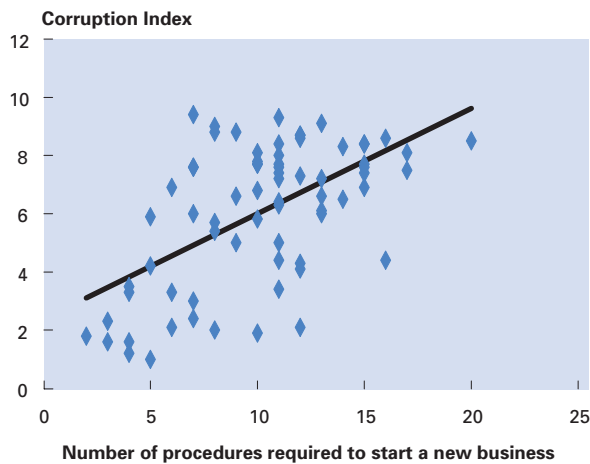
The informal economy increases competition by providing services and small-scale manufacturing and by fostering dynamism and entrepreneurship and thus leads to greater efficiency. But the positive benefits of greater competition can be enhanced if the informal sector has access to the protection of the official judiciary system and to capital markets for finance and insurance.

A larger informal economy also has distributional consequences. Although employment in the informal sector is better than no employment at all, workers in the informal sector do not have access to the same benefits, such as social security and unemployment benefits, as do workers in the formal sector. Workers in the informal sector are predominantly poor (see chapter 9); this means that policies which prevent firm growth and formalization are biased against the more disadvantaged.

#### *Competition laws and competition authorities*

Some of the more prominent examples of private barriers to product market competition are monopolies, cartels, and vertical restraints (for example, contracts between producers and their distributors that prevent the distributors from carrying competitors' products). "Nat-

**Figure 7.2**  
**Corruption rises with the number of procedures required to start a new business**



Source: Djankov and others forthcoming. *World Development Report 2002* background paper.

ural” entry barriers can arise from localized markets, infrastructure services, or natural monopolies. Governments can address private and natural barriers to product market competition using competition laws and competition authorities.

*Building competition institutions.* Canada and the United States were among the first countries to introduce competition law, in 1889 and 1890 respectively. Many European countries introduced competition laws in the 1950s, after World War II. Most developing and transition countries did not introduce competition laws until the 1990s. Around 90 countries have such laws in operation, with several more, including China, the Arab Republic of Egypt, and the Former Yugoslav Republic of Macedonia, drafting and debating competition laws. But the enforcement of competition laws in many developing countries—and in low-income countries in particular—is not very active. This is the result partly of the short tenure of these laws and partly of a lack of complementary institutions that would facilitate enforcement, such as courts or well-established information processing systems for the regulator.

Governments have introduced competition laws, and competition authorities to enforce them, because of concerns about the anticompetitive behavior of firms, in response to economic crises, or because of international pressures, which may or may not be crisis-induced. In the United States the Sherman Antitrust

Act, for example, was introduced with a view to restraining the power of large business conglomerates operating in the country at that time. Sweden introduced an antimonopoly law in 1925 because of concerns about cartel abuses. Denmark, the Netherlands, and Norway gradually transformed their older laws controlling prices or regulating cartels into antitrust-type statutes, also in response to increasing cartelization in the late 1920s and early 1930s.

France, Indonesia, and Romania provide examples of countries that introduced competition laws in response to economic crises. The French government enacted its first modern antitrust measure, the Decree of 1953, in response to economic crisis—including inflationary problems following World War II and the Korean War, the need to attract foreign direct investment (FDI), and the perception that restrictive practices, especially in the distribution sector, were hindering economic recovery. More recently, economic crises in Indonesia and Romania led to the introduction of competition laws as part of overall economic stabilization and reform programs. In these two cases, international development and lending agencies, such as the World Bank, created pressures for adopting competition laws.

Japan, Germany, and most countries in Central and Eastern Europe are examples of countries that introduced competition laws because of international pressure. Japan and Germany enacted antitrust legislation following World War II, despite local objections. The Anti-monopoly Law of Japan and the De-cartelization and De-concentration Law of Germany were both enacted in 1947. They were significantly amended by later legislation, moving away from their U.S. origins to regimes considered more suitable to local conditions, particularly through a higher degree of tolerance for some types of cartel activities. Similarly, after the fall of the Berlin Wall in 1989, the countries of Central and Eastern Europe that aimed to join the European Union began enacting antitrust legislation, under some pressure from the European Commission. Most of these countries later amended their laws to make explicit matters that their advisers had originally taken for granted. In other words, the supporting legal framework for competition policy in these countries was missing, and there was a different understanding of the reach of the law. For example, the legal authority of an antitrust body to come to an agreement with a private party to settle a case had to be clarified. This was particularly the case where the private party had to go through a formal

administrative or enforcement process within the competition authority or in the courts.

The European Union is a unique case. Its members have collective and national antitrust legislation, with the competition regime of the European Union incorporated into the national laws of individual member states. The primary focus of the European Union's competition regime—incorporated in articles of the Treaty of Rome and enforced by the European Commission—is economic integration among the member countries. Therefore the most serious prohibitions concern practices that would create or preserve fragmentation along national lines, such as country-specific vertical restraints and restrictions on the use of intellectual property.

*Variations in competition laws and their enforcement.* A survey of competition laws in 50 countries conducted for this report shows that different conceptions of competition exist across countries. This is reflected in two key elements of competition law: what constitutes dominance—the ability of a firm to unilaterally control price and output in the market—and how countries deal with cartels. Differences are also reflected in the way competition laws are enforced.

**DOMINANCE.** The survey reveals that 28 out of 50 countries have qualitative definitions of dominance, while the remaining 22 countries have a wide range of market shares as their benchmarks (table 7.1). Most OECD countries define dominance qualitatively. Several Latin American countries also define dominance qualitatively, but other developing countries tend to have quantitative benchmarks. Even though competi-

tive processes in different industries differ, only one of the countries surveyed—Tanzania—has separate specifications for benchmarks of dominance for different sectors.

Given the importance of potential competition, as well as actual competition, and differences about what is needed to ensure competition based on industry characteristics, ideally a qualitative approach toward determining dominance is appropriate. But assessing dominance qualitatively is a difficult procedure, requiring sophisticated information and human resource capacity, both of which may be lacking in many developing countries. In these cases, quantitative benchmarks can provide important information. The priorities for developing countries in promoting competition should be liberalizing international trade and reducing government-erected entry and exit barriers in product markets. Building competition institutions is a lesser priority for many countries. But a large number of countries have already adopted competition laws and agencies. The issue in these countries is how to make these institutions more effective at enhancing competition in markets.

**CARTELS.** There are two main ways in which cartels can be treated in competition law. The first is to treat all cartels as illegal, meaning that practices such as price-fixing and other cartel-related behavior violate the law regardless of the market power of participants, their motives, or the purported business justifications. This stringent treatment of cartels is found in 13 of the 50 countries surveyed, including the United States. The second way is to use the rule-of-reason analysis, meaning that it is up to the competition authorities to prove the harmful economic effects of cartels. This less stringent way of treating cartels is found in most countries. European Union competition law has an automatic prohibition against anticompetitive practices and agreements. It is up to the competition authorities or national courts to prove that there has been an infringement and that the behavior (in the case of an agreement) does not qualify for an exemption.

**ENFORCEMENT.** Along with differences in competition law, differences in enforcement determine the ways in which countries treat competition.<sup>24</sup> The two dominant systems, which have been transplanted to many developing countries, are the U.S. and the European Union systems. The major difference between U.S. and European Commission cartel enforcement is in the levels and nature of enforcement. In the United States

**Table 7.1**  
**Benchmarks of product market dominance**  
**in competition laws around the world**

Country group	Market share of the firm
<b>Developing and transition countries</b>	
East Asia	50–75 percent
Eastern Europe and Central Asia	30–40 percent
Africa	20–45 percent
<b>Industrial countries</b>	
United States	Two-thirds or more
European Union	40–50 percent

*Source:* Competition laws, national competition authorities. American Bar Association Antitrust Section. 2001. "Competition Laws Outside the U.S." Chicago.



**Box 7.5****Differences between the United States and the EU on competition law and its enforcement**

The differences in U.S. and EU competition laws and enforcement stem from their different objectives.

In the United States antitrust policy is primarily designed to protect consumer welfare and the production of a variety of products at reasonable prices. There is a modest element of fairness (the right of firms to be free of coercion) and hostility to vast concentrations of economic power. The underlying assumption of U.S. enforcement agencies and courts is that a robust competitive market is automatically efficient.

By contrast, in the EU, the dominant objective of competition policy is the economic integration of the member nations, which is closely linked to the principle of free movement of goods and services among member states. The EU also considers competitive opportunities for small and medium-size firms, raising the economic level of worse-off nations, and general notions of “fairness.” Furthermore, EU member countries also consider that joint ventures, mergers, and other collaborations may be necessary to enhance technological development and therefore to allow European firms to compete effectively in global markets. However, there are strict guidelines for these.

In contrast with U.S. legislation, the EU’s competition regime emphasizes equity objectives as well, such as employment and measures that encourage cooperation among small and medium-size enterprises.

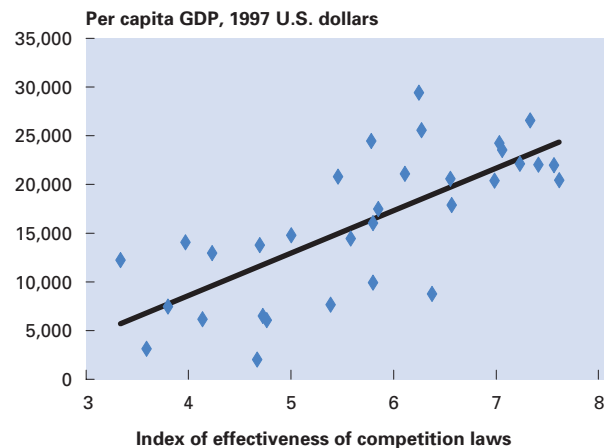
Source: Graham and Richardson 1997.

price-fixing and other cartel behaviors are commonly treated with criminal sanctions, with potentially large fines and damages to injured parties. The U.S. Department of Justice devotes substantial staff in its head office and in regional offices in major cities to detecting and challenging cartels. The European Commission staff for cartel enforcement is much smaller, but they work together with staff in member states. There is no investigative staff, and as a result, cartels are normally investigated only following a complaint.<sup>25</sup>

In part, this weaker enforcement of cartels in the EU could be a legacy of the past. Before the 1957 Treaty of Rome, which codified European competition law, cartels were customary in Europe. The differences in the treatment of cartels between the United States and the EU also reflect the general differences in their objectives for competition policy (box 7.5). These differences are important for developing countries, which have modeled their institutions after those of the United States or the EU.

**Figure 7.3**

**Effectiveness of competition law increases with per capita income**



Source: For index of effectiveness of competition law, *World Competitiveness Yearbook* (2000); for per capita GDP, World Bank data.

*Building more effective competition institutions.* The effectiveness of competition laws and competition authorities in promoting fair competition varies substantially around the world. Results from the survey conducted for this report indicate that the higher the per capita income of the country, the more effective is the competition law (figure 7.3). Also, the longer the competition authority has been in place, the more effective it tends to be, since learning by doing is important. The average tenure of competition authorities in industrial countries in the survey is 27 years, while that for developing countries is 10 years. On average, competition authorities in industrial countries are 40 percent more effective than competition authorities in developing countries, according to the *World Competitiveness Yearbook* (2000) index of effectiveness of competition law, which is based on surveys of top and middle management of firms in each country.<sup>26</sup> This is not surprising. As stressed throughout this report, institution building takes time and resources.

These two factors aside, there are many actions that governments can take to build more effective competition laws and authorities. Competition agencies need the statutory authority to force firms to supply necessary information. For example, the first competition law in Venezuela did not provide the competition agency with such authority, which seriously undermined the

ability of the agency to perform its functions. Competition agencies need to have legal enforcement powers so that the agency can make decisions on competition cases without referring the simpler ones to the courts. This is true even in countries where courts work well because the competition authority has the technical expertise to make decisions. Where courts do not work, as in many developing countries, giving competition authorities the power of enforcement is even more crucial. For example, in Hungary in the early transition years, the court system was so slow that creative litigants began finding ways to bring their cases under the competition law rather than other laws so they could obtain a timelier ruling from the competition office. In India one of the least controversial proposals in the drafting of a replacement for the Monopolies and Trade Practices Acts is that new cases will be heard by a new, time-bound tribunal rather than going to the courts or waiting in queue behind old competition cases awaiting resolution. Competition authorities need to be accountable, and there needs to be checks and balances on these authorities. One possibility is to allow appeals to higher courts, particularly for the larger cases.

Governments need to ensure the independence of the competition authority. One suggestion is that the head of the authority be appointed by a committee or the parliament rather than by the president or the prime minister. Another suggestion is that the competition authority should be independent of a government ministry and should have its own budget. Independence of competition authorities from government ministries may be more important in developing than industrial countries, where there are more checks and balances in the political systems and where greater transparency protects the independence of competition authorities. Of the countries surveyed, 63 per cent of industrial countries have competition authorities independent of any ministry, compared with 59 percent in developing countries.

Competition authorities need adequate budgets and staff to perform their functions. On average, competition authorities in industrial countries have 75 percent more staff (relative to the size of the economy) than developing countries. For example, the competition authorities in Colombia and Peru have fewer than six professionals dealing with antitrust.<sup>27</sup>

The competition agency and the private sector should have the authority to lodge suits. For instance, in Tunisia only the ministry can initiate cases. If the government is the only agent with this authority, the effec-

tiveness of the competition law in promoting competition can be undermined. Decisions by competition authorities should be publicly available. Public availability of competition decisions has a deterrent effect on potential future violations of the competition law, which should help promote the effectiveness of the law and, by providing checks and balances, could also help ensure the fairness of the proceedings. One of the most important factors underlying the effectiveness of competition laws—as for any institutions—is recognition of the importance of the law and a willingness to enforce it by both the government and civil society at large.

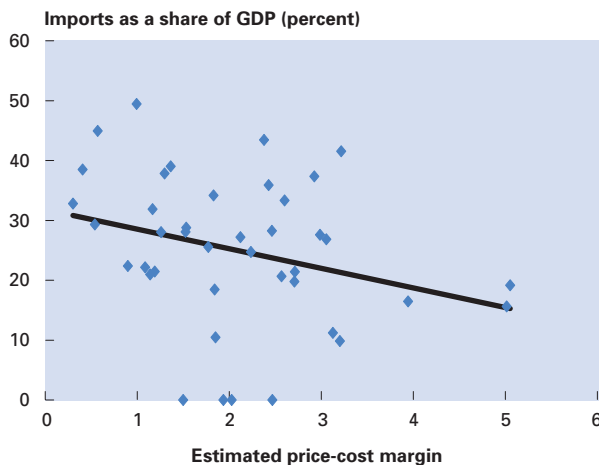
In light of the human resource constraints in developing countries, those nations that already have competition authorities may want to focus their efforts on issues such as cartels and exclusive supply or distribution contracts. Other issues—such as price discrimination, predatory pricing (pricing below cost to drive out competitors), or complex vertical restraint cases (such as tie-ins, where a product can be purchased from a supplier only if related products are purchased from the same supplier)—are more complicated and less critical. Moreover, they tax the capacities of competition authorities even in industrial countries.

### International competition

Exposure to international markets plays a central role in promoting competition in domestic markets. Imports directly introduce international competition pressures to domestic markets. This pressure is also introduced indirectly, through exports, since domestic firms have to compete in the global marketplace.

There is a sizable body of empirical work based on microeconomic data (firm or plant-level) that provides evidence that trade liberalization increases competition and, consequently, efficiency and productivity growth.<sup>28</sup> Case studies show that even in a large industrial country such as the United States, international competition raises productivity. One study compares productivity in Germany, Japan, and the United States and finds that international competition has a greater impact than regional or local competition in raising productivity because international competition exposes countries to the most efficient production techniques.<sup>29</sup> A recent cross-country empirical study also found that openness promotes competitive domestic markets, measured by estimates of average economywide price-cost margins (figure 7.4).<sup>30</sup> Moreover, this empirical work finds that the impact of openness on markups is smaller in large coun-

**Figure 7.4**  
**Openness reduces price-cost margins**



Note: Four observations with extreme values were not included in the graph.

Source: Hoekman and others 2001. *World Development Report 2002* background paper.

tries. There is also cross-country evidence that openness promotes economic growth through technology-embodied imports and because the larger potential market raises the returns to innovation.<sup>31</sup> The evidence shows that economic growth reduces poverty, which suggests that openness, on average, reduces poverty.<sup>32</sup>

International trade is particularly useful in promoting competitive markets in developing countries, where there are information difficulties, inadequate contract enforcement, and human capital constraints. These circumstances imply that it would be easier to use an instrument to promote competition that depends strictly on rules, such as international trade, compared with an instrument like competition law, which requires investigations and adjudication.

International trade also creates pressures for governments to address institutional barriers to competition in the domestic product and factor markets because these barriers undermine the domestic economy's ability to respond to foreign competition. India provides a good example of the role of international trade in liberalizing domestic regulations on entry (box 7.6). In Latin America trade reform was accompanied by labor market reforms to facilitate adjustment to global integration.<sup>33</sup>

While trade liberalization confers the benefits of enhanced competition and growth, trade reforms, like any reforms, can have adverse distributional consequences.<sup>34</sup>

### **Box 7.6** **Open trade and institutional change: product markets in India**

Before the 1990s India had one of the most highly protected economies in the world, supported by an extremely restrictive industrial licensing regime that regulated firm entry and exit. Beginning in the early 1990s India undertook a wide-ranging reform program that included substantial liberalization of trade. Restrictions of various kinds have remained in the economy. One of the most severe examples has been the garment industry. The garment industry was covered by the Small-Scale Industry Act, which restricts production to small-scale firms in more than 1,000 products. In the garment sector, besides restricting garment production to small-scale firms, it capped foreign direct investment in the industry at 24 percent of total equity.

In 2000, because of its membership in the World Trade Organization (and in anticipation of the elimination of quotas set by industrial countries on garment imports under the Multi-Fiber Agreement), India took a major step in liberalizing the garment sector. It removed garments from the list of industries covered by the Small-Scale Industry Act and removed restrictions on foreign direct investment. The objective of this policy change—which allows investment to expand the scale of production—is to enable the Indian garment industry to become more competitive in the world market.

Source: Kathuria, Martin, and Bhardwaj 2000.

In particular, some segments of the population may be temporarily thrown into unemployment or poverty. Flexible product and labor markets reduce adjustment costs (see discussion above). Other measures to address these adjustment costs include safety nets, as discussed in *World Development Report 2000/2001*.

The merits of international competition are now widely accepted among policymakers. Accordingly, governments worldwide significantly reduced tariff and nontariff barriers on goods in the 1980s and the 1990s, although significant scope exists for further reduction in tariff and nontariff barriers in many countries (box 7.7). The World Trade Organization (WTO) and its predecessor, the General Agreement on Tariffs and Trade (GATT), have helped secure gains in unilateral trade liberalization through multilateral negotiations. (*World Development Report 1999/2000* includes a detailed discussion of the role of the WTO.)

In addition to further reductions in tariff and nontariff barriers in both industrial and developing countries, governments need to build more effective institutions to

**Box 7.7****Benefits of liberalization of industrial country markets for agriculture and textiles**

The benefits of trade liberalization for developing countries would be significantly enhanced if industrial countries also reduced their tariff and nontariff barriers, especially on agriculture and textiles. Uruguay Round agreements in these areas have yet to yield benefits for developing countries. The replacement of quotas by tariffs on agricultural products by industrial countries, in accordance with the Agreement on Agriculture, only minimally reduced the protection of agriculture (and in some cases increased protections). Because of the complexities of the agreement, industrial country support to agriculture rose from 31 percent of gross farm receipts in 1997 to 40 percent in 1999, without violating the Uruguay Round agreement. Industrial countries have until 2005 to liberalize trade under the Agreement on Textiles and Clothing. Much of the liberalization to date in these areas has been on products that were not under restraint to begin with (Finger and Nogues 2000).

Further improvements in access to industrial country markets for exports can substantially increase welfare in developing countries. World Bank estimates indicate that benefits to developing countries from abolishing their own protection amount to around \$65 billion a year. If, in addition, industrial countries also abolished protectionist measures, including the Multi-Fiber Agreement quotas, developing countries would gain an added \$43 billion a year—\$12 billion from removing barriers to agricultural exports and \$31 billion a year from the abolition of tariffs on manufactures, one-third of which would come from removing barriers on the sensitive textile and clothing sectors.

Recently, industrial countries, including European Union members, Canada, and the United States, have announced several initiatives to liberalize market access for the least-developed countries. While this marks progress in liberalizing market access for developing countries, free access needs to be extended to all products by the EU, the United States, Japan, and Canada (the QUAD countries) if developing countries are to gain material benefits. For instance, the World Bank estimates that the United States' Africa initiative would increase Africa's exports by only 0.1 percent. The increase would double to 0.2 percent if the United States extended duty-free access to all products. African exports would increase by as much as 5 percent (or \$2 billion) if all the other QUAD countries extended duty-free access to all products.

Even after the elimination of the MFA quotas, developing countries will still face significant tariffs on their textile and clothing exports because of some remaining tariff peaks (tariffs of 15 percent and higher), that are obscured by the low average most favored nation (MFN) tariffs of industrial countries. World Bank estimates suggest that granting developing countries free access to U.S. markets would increase total developing country exports by around 5 percent. Tariff peaks also occur in Canada and Japan, affecting 10 and 3 percent of total developing country exports, respectively.

*Source:* Hoekman, Ng, and Olarreaga 2001; Ianchovichina, Mattoo, and Olarreaga 2001.

deal with forces that can undermine competition. For example, there are troubling signs that progress in trade liberalization in developing countries is being rolled back through the increasing use of antidumping measures.<sup>35</sup> Other examples include the use of product standards, limited liberalization of services such as financial services and telecommunications, intellectual property rights, and private international cartels. Aside from their important effect on trade and competition, these issues are selected for discussion in this report because they help clearly illustrate the key factors about institution building highlighted in chapter 1.

**Product standards**

Standards can improve information flows and facilitate production and exchange. International standards have the potential to facilitate trade beyond what bilateral standards may achieve. But in practice, countries may also use standards to block trade. For example, mandatory regulations may discriminate against foreign suppliers or exclude both domestic and foreign entrants from a market. Technical regulations may also be

stronger than is necessary for achieving a particular level of social protection, thus imposing excess costs on consumers and eroding the benefits of liberalized trade.

Product standards have increasingly been used as a technical barrier to trade in recent years.<sup>36</sup> This issue was explored in detail in a recent World Bank report.<sup>37</sup> This section focuses on the purpose of product standards and what can be done to reduce or eliminate their potential negative effects on international trade.

The term *product standards* refers to the characteristics that goods should possess. Process standards refers to the conditions under which products are manufactured, packaged, or refined. Labeling requirements deal with the provision of information about product characteristics or conditions of production. Standards can be voluntary, such as those in the International Organization for Standardization (ISO) 9000 series on quality. Or they can be mandatory, such as domestic regulations that affect imports through technical requirements, testing, certification, and labeling.

Implementing standards is costly. Costs include the one-time expense of product redesign, building an ad-

ministrative system, and the continuing cost of monitoring compliance. Firms must decide whether to establish an expensive platform design, which can be easily modified to accommodate particular markets, or to design a product initially solely for the home market, with modifications for export. Compliance costs can provide an advantage to large multinational firms, which can afford expensive platform design.

Conformity assessment—the verification that regulations are met—can also be an expensive procedure. Governments in importing countries may refuse to recognize tests performed by exporting firms or their public authorities and may not accept conformity declarations. Conformity assessment is vulnerable to bureaucratic and nontransparent rulemaking and is highly susceptible to capture by domestic companies seeking protection. Moreover, the uncertainty in complying with such procedures can reduce the willingness of firms to compete in markets.

Governments could endorse the wider use of “suppliers’ declaration of conformity” to regulatory requirements, with a systematic review of products currently subject to mandatory government testing and certification that can be moved to declaration of conformity status. Products accorded this status would require only that suppliers *declare* that they meet certain standards, and importing countries would have to accept such declarations. A multilateral “Global Conformity Agreement” could then be developed, based on this list, for negotiation and agreement at the WTO. It is critical that developing countries participate in this agreement and that the distributional impacts of these standards across countries be explicitly considered. As an enforcement mechanism, postmarket surveillance systems by governments of importing countries could ensure that the standards are actually being met.

In agriculture the lack of progress toward harmonized, internationally accepted standards has the potential to undermine the gains made by removing traditional barriers because countries are erecting new barriers through the unilateral introduction of standards for traded agricultural products. In such a situation the creation of international standards for these products could enhance the welfare of developing countries, but only if developing countries participate in the setting of standards as equal partners.

### *Trade and investment in services*

The benefits of liberalization of trade in goods are often limited by the lack of competition in services. This is

particularly true of those services that are basic inputs or components of the economic infrastructure, including financial services, telecommunications, transport, and business services. The increasing share of services in production and employment in both industrial and developing countries underscores the importance of liberalizing services. Many of the fastest-growing sectors are services—telecommunications, health, and finance—and foreign direct investment in services currently makes up more than half of annual global FDI flows.

The WTO’s General Agreement on Trade in Services (GATS) has not produced significant liberalization. Current levels of protection in services are as high as, if not higher than, those applied to goods 10 or 15 years ago. In many instances the available information on the level of protection suggests that ad valorem tariff equivalents range from 50 to 100 percent.<sup>38</sup> In general, barriers in transport, financial, and telecom services are higher than in business and distribution services. Barriers are higher in developing countries than in industrial countries.

Liberalization of services can significantly enhance the gains from liberalization of merchandise trade (box 7.8). For instance, if trade is liberalized but exclusive distribution remains in place, this in effect transfers the rents previously captured as tariff revenues by the government to the private interests that control the distribution of imports.

Most industries use services as inputs to production.<sup>39</sup> A study of the telecommunications sector in Egypt shows that adopting a more competitive regula-

### **Box 7.8**

#### **Lack of competition in services restricts gains from merchandise trade liberalization**

In Egypt the lack of competition in services that facilitate trade reduces the gains from the liberalization of merchandise trade. Only Egyptian nationals are allowed to engage in the business of importing, which clearly reduces competition in distribution and competition in domestic markets. Also, the lack of competition in the provision of port services in Egypt, which are provided by public companies, has resulted in handling and storage fees 30 percent higher than in neighboring countries, which have broadly similar quality of services (Hoekman and Messerlin 1999). There is also no competition in maritime shipping in Egypt, which is monopolized by a state-owned firm. According to a 1994 survey, the cost of shipment and handling in Egypt of a standard container was 20 to 30 percent higher than in the nearby countries of Jordan, Syria, and Turkey (Hoekman and Konan 1999).



tory regime would generate a net welfare gain of around \$800 million (1.2 percent of GDP).<sup>40</sup> A similar study of Tunisia shows that liberalization of services would raise both GDP and welfare by about 7 percent.<sup>41</sup> It is interesting to note that in Tunisia's case the gains from having foreign service providers establish local operations would far exceed those from cross-border supply of services from suppliers remaining abroad.

Liberalization of services should aim to establish a more uniform system of intervention and greater competition in markets. Priority in liberalization should be given to "backbone" sectors such as transport, telecommunications, and financial services, as well as to clusters of interdependent services vital to economic development and participation in the world economy, such as transport and express courier services. The primary objective should be to ensure that potential entrants are free to enter service markets and that policies do not discriminate against foreign, as opposed to domestic, entrants.

### *Intellectual property rights*

Intellectual property rights (IPRs) include patents, trademarks, copyrights, geographic indications, undisclosed information (such as trade secrets), industrial designs, and layout designs of integrated circuits, and plant variety protection (see also chapter 2 for a discussion of IPRs).<sup>42</sup> By granting an exclusive right to control the commercial use of inventions, IPRs restrict product market competition so as to create incentives for innovation.

IPRs have gained prominence in global economic policymaking over the last 15 years, most notably because of the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights, which harmonizes minimum standards of IPRs in WTO member countries. Industrial countries were obliged to comply with TRIPS provisions by January 1, 1996. Developing countries were obliged to comply by January 1, 2000, while least-developed countries have until January 1, 2006, to meet TRIPS requirements.

All WTO members have made a commitment to implement TRIPS, and there is a broad consensus that some form of intellectual property safeguards is needed to protect innovation. But the empirical evidence on the potential benefits of IPRs is weaker than might be expected. Research in industrial countries does not provide strong evidence that IPRs are necessary to stimulate R&D or innovation in most sectors. One frequently quoted survey of 100 U.S. firms reported that patents seem to be very

important to R&D investment decisions mainly in the pharmaceutical and chemicals industries.<sup>43</sup> Other studies report that first mover advantages are more important in high technology industries and that competitive markets are a greater stimulus to innovation than patents.<sup>44</sup>

Proponents of IPRs argue that stronger IPRs benefit developing countries by promoting technology transfer through foreign direct investment, trade, licensing, and vertical integration of multinational firms. But the empirical support for these potential benefits is mixed. Various studies document positive associations between foreign direct investment and IPRs, but others are unable to identify a relationship.<sup>45</sup> The empirical evidence provides somewhat stronger support for the argument that IPRs promote technology transfer through trade flows. Some studies find that imports of IPR-sensitive goods in large developing economies increase with the strength of IPRs.<sup>46</sup>

IPRs are generally more beneficial to industrial countries than to developing countries. Developing countries are net importers of technology, while, in general, industrial countries are the producers of technology. Industrial countries therefore reap the static benefits of higher prices resulting from the market power provided by IPRs, at the expense of developing countries. It has been estimated that the United States stands to gain \$5.7 billion in net transfers from TRIPS, while Germany, Sweden, and Switzerland are also expected to receive substantial net inward transfers. In contrast, developing countries are expected to experience net outward transfers, amounting to \$430 million for India, \$434 million for Korea, \$481 million for Mexico, and \$1.7 billion for Brazil.<sup>47</sup>

Although ensuring a core level of IPR protection may increase developing country access to foreign technologies by safeguarding returns for foreign technology producers, excessively strong IPRs can inhibit the diffusion of knowledge. In developing countries, knowledge is built more through access, imitation, and diffusion of foreign technologies rather than only local research. Legitimate ways to transfer technology under some IPR systems such as reverse engineering or "inventing around" patents are restricted under strong IPRs. The importance of adopting appropriate IPR policies that allow access to technologies can be seen for some East Asian countries in their early stages of development (box 7.9). This principle is generally followed worldwide, with countries adopting more flexible IPRs at lower levels of per capita income. Figure 7.5 shows that patent strength rises with per capita income.

### Box 7.9

#### Weak IPR systems promoted access to technology and growth in East Asia

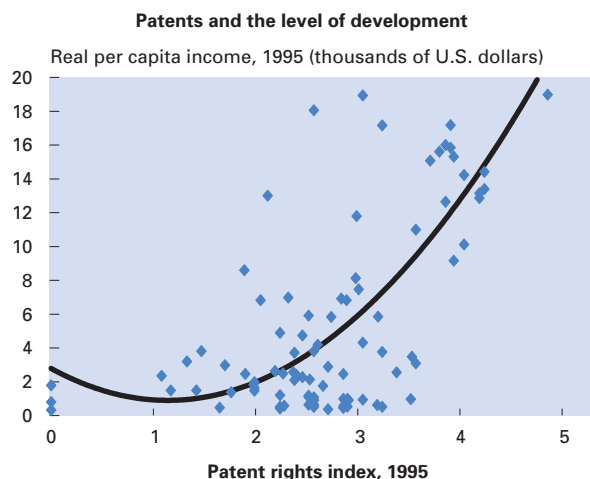
The experiences of some East Asian countries suggest that having IPR systems that maximize access to and diffusion of technologies is appropriate in the early stages of industrialization. In Malaysia and Korea, growth in industrial sectors took place under weak IPR regimes, and in later periods governments emphasized incentives for innovation in IPRs as sophisticated local technology sectors developed. Japan introduced patents in the early 20th century after reviewing IPR systems in Europe and the United States. The Japanese system adapted other patent regimes to suit local needs. Emphasis was placed on securing access to foreign technologies, incremental technology development, and diffusion of innovation, through features such as strong antitrust guidelines for technology licensing and a central licensing office as a countervailing influence on foreign bargaining power pressuring for change in its IPR system.

IPR systems may be less effective in poorer countries because these will have less administrative, human, and financial capacity to implement IPRs as well as fewer complementary institutions. In particular, it is more difficult for developing countries to combat the potential anticompetitive abuse of IPRs than for industrial countries, because the former generally have weaker regulatory capacity, competition laws, and enforcement agencies. In many industrial countries intellectual property is subject to general competition law, IPR statutory provisions, or other regulations and guidelines. In some countries, such as Canada, IPRs and their enforcement are central to competition law. Attention to the link between IPRs and competition policy has been on the rise in industrial countries. For example, the EU and the United States have released further guidelines for applying competition policy to IPRs in recent years.

In developing countries competition laws and policies in general do not address monopoly abuse of IPRs. A survey of competition laws in developing countries found that only 5 out of 33 countries ban IPR agreements that restrict competition, compared with 9 out of 21 industrial countries. A lack of capacity to enforce competition laws also constrains the ability to control restrictive practices. Unless developing countries rapidly establish adequate competition frameworks and regulatory institutions that also address monopoly abuse of IPRs, it is possible that increasing IPR protection could result in welfare losses from monopoly behavior.

Figure 7.5

#### Patent strength rises with per capita income



Note: The index of patent rights is based on the strength of patent laws and includes whether the laws have provisions for enforcement (for example, whether the government can impound the goods while investigating whether the law has been violated).

Source: For index of patent rights, Park, Vijaya, and Wagh (2001); for per capita income, World Bank data.

But there are also some potential gains to developing countries from stronger IPR protection. For example, if adaptation of imported technology to local needs requires a significant amount of investment, local firms will be willing to undertake the investment if they can be assured that their intellectual property rights are protected. IPR systems may also benefit developing countries by protecting indigenous property rights and traditional knowledge. Developing countries hold approximately 90 percent of world biological resources, which are particularly important in the development of new pharmaceuticals. Mechanisms for sharing the proceeds from commercializing genetic resources can be written into the IPR law, as for Costa Rica. Alternatively, institutions can be built to protect the collective intellectual property rights for traditional knowledge held by cultural groups, as is proposed in Venezuela.

*How to maximize developing country benefits from TRIPS.* Developing countries have made a commitment to implement TRIPS. To maximize their net gains, these countries need to take advantage of the flexibility built into TRIPS. There are several areas of flexibility within TRIPS that provide the potential for developing countries to maximize benefits by promoting access to technology and preventing anticompetitive

abuses while maintaining incentives to innovate, tackle piracy, and still meet TRIPS minimum standards.

**SCOPE AND EXCLUSION.** Developing countries can narrow the scope of what falls under IPRs in the following areas in conformity with TRIPS. First, developing countries can adopt a narrow interpretation of what constitutes an invention and hence what needs to be patented. For example, Argentina, Brazil, and China have elected not to extend patent protection to software. Second, developing countries can take advantage of the TRIPS article that allows limitations and exceptions to copyright. For example, some countries permit unauthorized use for social purposes such as education and scientific research. Third, developing countries can avoid patenting life forms (see also chapter 2) and can apply special provisions under TRIPS to exempt public goods from IPR protection. Finally, developing countries can expand IPR scope to protect genetic resources, traditional knowledge and folklore, as is promoted by the World Intellectual Property Organization.

**COMPULSORY LICENSING.** Countries can use compulsory licensing, allowed by TRIPS under some circumstances, to control anticompetitive behavior that results from IPRs or in national emergencies, such as public health crises. The license, issued by national authorities, authorizes the use of IPR-protected subject matter without the consent of the rights holder, with compensation to the latter to be determined by the government. Every OECD country has legal provisions for compulsory licensing under some conditions, and many developing countries, including Argentina, Chile, China, Poland, and South Africa, have already introduced such provisions. The United States has granted thousands of licenses under antitrust decrees.

**PARALLEL IMPORTS.** Parallel imports refers to IPR-protected products imported into a country after being released legitimately in another country. Parallel imports therefore allow international competition in IPR-protected goods. Proponents of parallel imports argue that free trade in IPR-protected goods ensures competition in product markets, reduces prices, and enhances consumer access to new technologies. But trade in IPR-protected products may restrict access to new technologies for developing countries. Under a system with parallel imports and uniform protection of IPRs, prices are set to maximize global profit. This means that technology producers will set prices using aggregate demand, rather than individual country demand. As a result countries with small markets and elastic demand—typ-

ically the case of developing countries—could be priced out of the market.

TRIPS neither endorses nor prohibits parallel imports. In the absence of comprehensive empirical analysis on the impact of parallel imports, a policy of regional exhaustion with respect to parallel imports is one possibility that may create value. Under such a policy, parallel trade is permitted among a group of nations—but not beyond that group. Since the structure of demand is likely to be similar within a region, parallel trade limited to regions can simultaneously encourage competition in IPR-protected product markets and avoid the negative effects of countries being priced out of the market. The EU provides an example of how parallel imports under a policy of regional exhaustion has helped prevent price discrimination and encourage competition among the member countries.

**PRICE REGULATION.** Some countries regulate price levels and price increases—as is allowed under TRIPS—to ensure that IPRs do not restrict consumer access through excessively high prices, particularly in pharmaceutical products. But price regulations do not always work. When prices are regulated on a “cost-plus” basis, foreign pharmaceutical firms simply inflate the import price to their local subsidiary, as was found to be the case in India. Even when price regulations do work, as they do in various European countries, they may lead to less competition from generic producers of pharmaceuticals, less R&D spending, and lower productivity of drug production.

**COMPETITION LAW.** Countries can use competition laws to combat the potential anticompetitive abuse of IPRs. They can do so by introducing IPR provisions into their competition laws and strengthening their competition authorities.

### *Complementary actions*

The impact of IPRs depends on the broader institutional and policy environment. IPRs are more likely to create wealth if they are complemented by open trading rules. There is some empirical evidence that IPRs can promote growth in open economies. More liberal trading rules also reduce the risk of monopoly abuse of IPRs by domestic firms. Human capital development is also important. IPRs are more likely to increase technology transfer and encourage domestic innovation in countries with higher levels of human capital. Another factor is the promotion of national innovation systems. Integration of IPR rules with complementary policies, to foster

innovation such as public sector research involvement where appropriate (chapter 2), can stimulate growth by increasing the commercialization of inventions.<sup>48</sup>

Under TRIPS Article 67, industrial country members are obligated to provide technical and financial support for implementing the agreement. Only limited assistance has been provided so far to fulfill this commitment: mostly training and technical assistance in drafting IPR laws. The World Intellectual Property Organization (WIPO) has supplied much of the technical assistance to date. Going forward, more technical support that is geared toward helping developing countries take advantage of the flexibility allowed in the TRIPS agreement is needed. Concrete financial assistance targets and grants of patents to developing countries (especially for emergency human development needs such as HIV/AIDS treatment) are some of the proposals made for better implementation of Article 67. Others include increased technology transfer assistance and fiscal incentives, such as guaranteed purchase of new drugs for developing countries.

Another factor that will affect TRIPS implementation is bilateral agreements on IPRs. Since bilateral agreements usually provide for stronger IPRs than TRIPS—which mandates only minimum standards—these agreements may impede the ability of developing countries to implement the flexibility permitted in TRIPs. For example, in 1998 the United States had signed bilateral agreements on IPRs with 21 countries and had included many IPR provisions in science and technology agreements and bilateral investment treaties.<sup>49</sup> In general, the validity of international agreements and standards loses force if bilateral agreements proliferate, superseding the international agreement. The political and economic balance of power does not usually tip in favor of poorer developing countries in negotiating cross-border agreements, and this imbalance is probably accentuated when they enter bilateral agreements.

## Conclusions

Competition in markets promotes equal opportunity. With free entry, smaller entrepreneurs and those who lack social or network connections, often the poorer members of society, have a better chance at undertaking productive activities. With more international competition and trade, and greater access to industrial country markets and technology, poor countries have a

better chance at developing their markets. Competition is an important force in promoting institutional change as well as economic development and growth. Competition can create demand for more effective institutions, and it can sometimes also substitute for complicated regulation—a very important benefit, given the often limited capacities of developing country governments. Sometimes, however, the degree of competition may need to be limited in markets in order to encourage innovation—particularly in those areas where technology developers are unable to gain sufficient profits to cover costs in the absence of such protection.

The priority for countries in promoting competition in product markets is trade liberalization—and removal of entry and exit barriers for firms. For example, increases in market openness in industrial countries can help provide impetus to developing country markets and institutions. International standards in trade can help promote trade. They can also help limit potential inefficiencies and distributional effects created by a proliferation of bilateral agreements between nations. The distributional impact of standards across countries, and within countries, as well as their efficiency impacts, depends on which standards are chosen. The costs to developing countries need to be considered in international spheres when standards are established. Developing countries need to be empowered to play a stronger role in the development of standards, and to implement provisions in current standards that would benefit them. For example, the TRIPS agreement allows for some flexibility in IPR systems, and technical assistance to take advantage of such flexibility is important.

In many developing countries, barriers to competition in domestic markets arise from public policy: onerous regulations on potential new entrants or exit barriers can deter entry. Such regulations often discriminate against poor or small entrepreneurs, who are least able to pay the higher costs associated with them as well as the costs of corruption, which is facilitated by overregulation of business activity. Competition laws and competition authorities who enforce these laws, diverse across countries, are also important. While many developing countries have recently adopted competition laws and established competition agencies, the scarcity of human capital implies that such authorities may do well to focus their attention on a smaller set of issues: an important concern in many countries would be addressing exclusive supply or distribution contracts.