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International Trade Theory and Development Strategy

The South needs the North, and increasingly the North needs the South.

—United Nations Development Programme, Human Development Report, 2013

Diversification and industrialization remain the best means in the long run for countries to reduce their vulnerability to the adverse growth effects of commodity price volatility.

—UNCTAD, 2012

You become what you export.

—Ricardo Hausmann and Dani Rodrik, 2006

However misguided the old model of blanket protection intended to nurture import substitute industries, it would be a mistake to go to the other extreme and deny developing countries the opportunity of actively nurturing the development of an industrial sector.

—Report of the High-Level Panel on Financing for Development (Zedillo Commission), 2001

The upshot is an agricultural trading system in which success depends less on comparative advantage than on comparative access to subsidies.

—Kevin Watkins and Joachim von Braun, 2002–2003 IFPRI Annual Report Essay

12.1 Economic Globalization: An Introduction

Over the past several decades, the economies of the world have become increasingly linked, through expanded international trade in services as well as primary and manufactured goods, through portfolio investments such as international loans and purchases of stock, and through direct foreign investment, especially on the part of large multinational corporations. At the same time, foreign aid has increased much less in real terms and globally has become dwarfed by the now much larger flows of both private capital and remittances. These linkages have had a marked effect on the developing world. But developing countries are importing and exporting more from each other, as well as from the developed countries, and in some parts of the developing world, most prominently East Asia but also Latin America and in this century, investments have poured in from developed countries such as the United States, the United Kingdom, and Japan. We shall review how developing countries have been affected by these trends and examine theories of the effects of expanded international linkages for the prospects of development.

Globalization is one of the most frequently used words in discussions of development, trade, and international political economy.¹ As the form of the word implies, globalization is a *process* by which the economies of the world become more integrated, leading to a global economy and, increasingly, global economic policymaking, for example, through international agencies such as the **World Trade Organization (WTO)**. *Globalization* also refers to an emerging “global culture,” in which people consume similar goods and services across countries and use a common language of business, English; these changes facilitate economic integration and are, in turn, further promoted by it. But in its core economic meaning, *globalization* refers to the increased openness of economies to international trade, financial flows, and direct foreign investment, which are topics of this and the following two chapters. The growing interconnection of all kinds across national governments and firms and directly between peoples is a process that affects everyone in the world, even if so far it still seems more visible in the developed countries. But globalization can in many ways have a greater impact in developing countries.

For some people, the term *globalization* suggests exciting business opportunities, efficiency gains from trade, more rapid growth of knowledge and innovation, and the transfer of such knowledge to developing countries, facilitating faster growth, or the prospect of a world too interdependent to engage in war. In part, globalization may well turn out to be all of these things.

For other people, however, globalization raises troubling concerns: that inequalities may be accentuated both across and within countries, that environmental degradation may be accelerated, that the international dominance of the richest countries may be expanded and locked in, and that some peoples and regions may be left further behind. Nobel laureate Muhammad Yunus captured some of these sentiments when he wrote in 2008, “Global trade is like a hundred-lane highway criss-crossing the world. If it is a free-for-all highway, with no stop lights, speed limits, size restrictions, or even lane markers, its surface will be taken over by the giant trucks from the world’s most powerful economies.”² Appropriate policies and agreements are needed to forestall such potential problems.

Thus, globalization carries benefits and opportunities as well as costs and risks. This is true for all peoples in all countries but especially for poor families in low-income countries, for whom the stakes are much higher. The potential upside is perhaps also greatest for developing countries; globalization does present new possibilities for broad-based economic development. By providing many types of interactions with people in other countries, globalization can potentially benefit developing countries directly and indirectly through cultural, social, scientific, and technological exchanges, as well as through conventional trade and finance. A faster diffusion of productive ideas, such as a shorter time between innovation and adoption of new technologies around the world, might help developing countries catch up more quickly. In short, globalization makes it possible, at least in principle, for the less developed countries to more effectively absorb the knowledge that is one of the foundations of the wealth of developed countries. In addition, as Adam Smith wrote in 1776, “the division of labor is limited by the extent of the market.” The larger the market that can be sold to, the greater the gains from trade and the division of labor. Moreover, the greater is the incentive for innovation, because the potential return is much larger.

Globalization The increasing integration of national economies into expanding international markets.

World Trade Organization

(WTO) Geneva-based watchdog and enforcer of international trade agreements since 1995; replaced the General Agreement on Tariffs and Trade (GATT).

The potential downside of globalization is also greater for poorer countries if they become locked into a pattern of dependence, if dualism within developing countries sharpens, or if some of the poor are entirely bypassed by globalization. Critics have raised the legitimate worry that many people living in poverty could find it all the harder to break out of poverty traps without concerted public action—for example, if human capital fell below the minimum needed to engage the global economy. The share of international investment received by the poorest countries has been on a long-term trend of falling rather than rising. All countries may be affected by increased vulnerability to capital flows, as the 2008 financial crisis has seemed to confirm, but developing countries more so. All countries may experience certain threats to their cultural identities, but developing countries the most.

Certainly, some very important developing countries, accounting for a large fraction of the world's population, notably China and India, have recently been using globalization as an opportunity to accelerate their rate of catch-up by growing faster than the developed world, thereby reducing some international inequalities. But by other measures, inequality may be accentuated both across and within countries. The two-decade decline in Africa from the early 1980s to the beginning of this century and the extreme disparities that opened up between coastal and inland China are important cases in point.

Widespread and understandable concerns about globalization are based on the fact that previous great waves of globalization, associated with the colonial period, were extraordinarily uneven in their impact. The worst affected areas, such as Africa, are still reeling. The argument that there will be widespread general benefits from at least some form of globalization today must rest on what is different about this current wave. It is not enough simply to say that previous waves were associated with conquest and subordination by colonialism. Critics can and do contend that today's globalization is only superficially different. A claim that "things are different this time" must stand or fall on evidence that there are now effective rules of the game for international trade, investment, finance, and assistance to the poor—or if not, that these rules are steadily, convincingly, and irreversibly being put into place.

Formal processes of trade liberalization have been key to the encouragement of globalization thus far. A significant series of rounds of trade negotiations were held under the **General Agreement on Tariffs and Trade (GATT)**, initiated in 1947, which led eventually to the creation of the WTO in 1995. The trade rules negotiated under the auspices of the WTO are key examples of how rules of the game are being created. So far, however, the rules have not been balanced. They have greatly benefited some countries but have benefited less the poor countries still trying to gain a foothold in growth and development through agriculture and facing barriers put up by the very countries that are most promoting the benefits of trade openness: Trade protectionism as practiced by developed countries tends to fall most heavily on the poorest developing countries because developed-country protection focuses on agriculture. Tariffs placed by developed countries on imports from developing countries—though currently not very high by historical standards—were by 2010 still about double those placed on imports coming from other developed countries. The Organization for Economic Cooperation and Development (OECD) estimates that in 2010, its members' agricultural producer support was \$227 billion; although this was about 10% less than the

General Agreement on Tariffs and Trade (GATT) An international body set up in 1947 to explore ways and means of reducing tariffs on internationally traded goods and services; replaced in 1995 by the World Trade Organization.

previous three years, it far exceeded the level of aid from these countries, which was about \$130 billion in 2010. And nontariff barriers are also much higher.³ The damage this tactic does to developing countries is immense.

To create genuinely fair as well as efficient rules of the game, much more needs to be done. International agreements are needed to level the globalization playing field for the poor. Some of this leveling process involves international change, and some involves national changes that can be facilitated by the international community—for example, to prevent propping up corrupt governments that violate human rights, and violent and exploitative rebels that stay in power through international trade in legal goods such as diamonds (which may be mined under conditions that violate the most basic of rights) as well as in illegal goods such as narcotics. Codes of conduct for multinational corporations, regarding political and other behavior, can be developed further. And reasonable limits on the applicability of international property rights must be agreed to, such as those concerning provision of life-threatening medicines in poor countries that cannot afford to pay monopoly **rent**, prices that far exceed production costs. In Chapter 14, you will see that direct foreign investment by multinational corporations (MNCs) may contribute to development, but a country also eventually needs its own modern-sector firms or at least a way of inducing international firms to treat the country as a home base.

It has also been asked whether more cannot be done for the poorest countries than merely leveling the playing field. Many development advocates are calling for more genuine and fuller opening of developed-country markets to exports from the poorest countries. It may also be said that among the worst possible outcomes for a poor country is for the current round of globalization to bypass the country entirely. This is largely the situation in much of sub-Saharan Africa—although a number of countries have benefited substantially from the commodity boom of recent years. Nevertheless, adversely affected by previous waves of globalization, most countries in this region have been much less affected by the present wave.

Rent In macroeconomics, the share of national income going to the owners of the productive resource, land (i.e., landlords). In everyday usage, the price paid for the use of property (e.g., buildings, housing). In microeconomics, economic rent is the payment to a factor of production over and above its highest opportunity cost. In public choice theory, rent refers to those excess payments that are gained as a result of government laws, policies, or regulations.

12.2 International Trade: Some Key Issues

International trade has often played a central role in the historical experience of the developing world. As with many other topics in development, there is a great deal of diversity in developing countries' experiences with trade. In recent years, much of the attention to trade and development issues has been focused on understanding the spectacular export success of East Asia. Taiwan, South Korea, and other East Asian economies pioneered this strategy, which has been successfully followed by their much larger neighbor, China. The experiences of these economies are an important plotline in the unfolding trade and development drama and will be examined later in the chapter.

At the same time, throughout Africa, the Middle East, and Latin America, primary product exports have traditionally accounted for a sizable proportion of individual gross domestic products. In some of the smaller countries, a substantial percentage of the economy's income is derived from the overseas sale of agricultural and other **primary products** or commodities such as coffee, cotton, cacao, sugar, palm oil, bauxite, and copper. In the special circumstances of the

Primary products Products derived from all extractive occupations—farming, lumbering, fishing, mining, and quarrying, foodstuffs, and raw materials.

Export dependence A country's reliance on exports as the major source of financing for development activities.

oil-producing nations in the Persian Gulf and elsewhere, the sale of unrefined and refined petroleum products to countries throughout the world accounts for over 70% of their national incomes—despite obvious benefits, specialization in oil production frequently has brought with it substantial, if sometimes hidden, economic costs, including both economic and political distortions. Many other developing countries must still depend on nonmineral primary-product exports for a relatively large fraction of their foreign-exchange earnings. This is a particularly serious problem in sub-Saharan Africa. Because the markets and prices for these exports are often unstable, primary-product **export dependence** carries with it a degree of risk and uncertainty that few nations desire. This is an important issue, because despite strength since 2002 and some rebounding after the 2008 crisis, the long-term trend for prices of primary goods is downward, as well as very volatile (as we examine later in this section).

Some African countries, including Burkina Faso, Burundi, Central African Republic, Gambia, Niger, and São Tomé and Príncipe, received 8% or less of their merchandise export earnings from manufactures in 2011 (WDI); none of these countries received more than 2% of their export earnings from fossil fuels in 2011. Some other countries such as Nicaragua have similarly low manufacturing export shares.

Indeed, some developing countries have been receiving at least two-fifths of their export earnings from one or two agricultural or nonfuel mineral products. And as noted by David Harvey and his coauthors, “For 40 countries, the production of three or fewer commodities explains all export earnings.”⁴ And the United Nations Conference on Trade and Development (UNCTAD) reported in 2006 that “out of 141 developing countries, 95 are more than 50% dependent on commodity exports.... In most sub-Saharan African countries, the figure is 80%.”⁵

Some developing countries are overwhelmingly dependent on fuel exports. For example, in 2011, Venezuela, Yemen, and Algeria each received 97% of their export earnings from fossil fuels; Nigeria and Iran each received 89% of their export earnings from fossil fuels. Despite the apparent bonanza, high reliance on oil and other fuel exports has also brought with it substantial, if often hidden, economic costs and political distortions. An outsize oil sector often acts as an enclave in the economy, benefiting relatively few citizens, yet resulting in reduced exports from other sectors of the economy that might do more to benefit development in the long term.

Export dependence also extends to services, notably tourism, which is “exported” when foreign visitors purchase domestically produced services, including hotel stays, restaurant meals, local transportation, theme park admissions, tour packages, and value added in retail (such as wages of workers in stores when tourists purchase goods). These expenditures are paid for by money from other countries, such as the dollars that Americans spend in destinations like beaches in Grenada and wildlife parks in Tanzania. This dependence is clearest in Small Island Developing States (SIDS), a special UN category. But a sudden loss of income from service exports can be as devastating as the loss of other export revenues. This happened in 2011 in the Middle East and North Africa (MENA) region during and after the conflicts associated with the “Arab Spring,” which heavily affected tourism. In Egypt, which is highly dependent on earnings from tourism, “tourist arrivals” fell by 32% in 2011, and tourist expenditures correspondingly fell from about \$51 billion to about

\$43 billion, and remained at depressed levels. In 2011, tourism revenues in Tunisia fell by nearly 30%.⁶ In addition to demonstrating the economic advantages of democratic political institutions that do not rely upon repression and violence, such experiences also illustrate the benefits of diversification.

In addition to their export dependence, many developing countries rely, generally to an even greater extent, on the importation of raw materials, machinery, capital goods, intermediate producer goods, and consumer products to fuel their industrial expansion and satisfy the rising consumption aspirations of their people. For a majority of developing nations, import demands exceeded their capacity to generate sufficient revenues from the sale of exports for much of the post–World War II period. This led to chronic deficits on their balance of payments position vis-à-vis the rest of the world. Whereas such deficits on the **current account** (an excess of import *payments* over export *receipts* for goods and services) were compensated for on their balance of payments table by a surplus on the **capital account** (a receipt of foreign private and public lending and investment in excess of repayment of principal and interest on former loans and investments), the debt burden of repaying earlier international loans and investments often becomes acute. In a number of developing countries, severe deficits on current and capital accounts have led to a depletion of international monetary reserves, currency instability, and a slowdown in economic growth.

In the 1980s and 1990s, this combination of rising trade deficits, growing foreign debts, accelerated capital flight, and diminished international reserves led to the widespread adoption of fiscal and monetary austerity measures, especially in Africa and Latin America (often with the involvement of the International Monetary Fund, or IMF), which may have further exacerbated the slowdown in economic growth and the worsening of poverty and unemployment in much of the developing world. These various concepts of international economics will be explained in more detail later in this chapter and in the next. Here the point is merely that a chronic excess of foreign expenditures over receipts (which may have nothing to do with a developing country's inability to handle its financial affairs but rather may be related to its vulnerability to global economic disturbances) can significantly retard development efforts. It can also greatly limit a low-income nation's ability to determine and pursue its most desirable economic strategies.

Many indebted countries went into surplus as they paid down some of their debt. In the new century, a pattern of trade surpluses has strengthened for many, though by no means all, developing countries. Developing countries have sought to avoid repeats of the crisis conditions of Latin America in the 1980s, sub-Saharan Africa in the 1980s and 1990s, and East Asia in 1997–1998. The sudden collapse of export earnings during the 2008 financial crisis provided a glimpse of the dangers. This pattern carries its own risks; for example, it means that developing countries are effectively exporting capital, and it leaves economies vulnerable to a sharp correction when the large and chronic U.S. balance of payments deficits are reversed.⁷

But international trade and finance must be understood in a much broader perspective than simply the intercountry flow of commodities and financial resources. By opening their economies and societies to global trade and commerce and by looking outward to the rest of the world, developing countries

Current account The portion of a country's balance of payments that reflects the market value of the country's "visible" (e.g., commodity trade) and "invisible" (e.g., shipping services) exports and imports.

Capital account The portion of a country's balance of payments that shows the volume of private foreign investment and public grants and loans that flow into and out of the country.

invite not only the international transfer of goods, services, and financial resources but also the developmental or antidevelopmental influences of the transfer of production technologies; consumption patterns; institutional and organizational arrangements; educational, health, and social systems; and the more general values, ideals, and lifestyles of the developed nations of the world. The impact of such technological, economic, social, and cultural transfers on the character of the development process can be either consistent or inconsistent with broader development objectives. Much will depend on the nature of the political, social, and institutional structure of the recipient country and its development priorities. Whether it is best for developing countries to look primarily outward (as single economies or as blocs) and promote more exports, either passively or actively; to emphasize looking inward and substitute domestic production for imports, as the protectionists and cultural nationalists propose; or to be simultaneously and strategically outward- and inward-looking in their international economic policies cannot be stated a priori. Individual nations must appraise their present and prospective situations in the world community realistically in the light of their specific development objectives. Only thus can they determine how to design the most beneficial trade strategy. Although participation in the world economy is all but inevitable, there is ample room for policy choice about what *kind* of participation to promote and what policy strategies to pursue. As you will see, WTO membership comes with prohibitions or restrictions on some policies, but there remains a great deal of scope for policy choice for developing countries.

Five Basic Questions about Trade and Development

Our objective in the next few sections is to focus on traditional and more contemporary theories of international trade in the context of five basic themes or questions of particular importance to developing nations.

1. How does international trade affect the rate, structure, and character of economic *growth*? This is the traditional “trade as an engine of growth” controversy, set in terms of contemporary development aspirations.
2. How does trade alter the *distribution* of income and wealth within a country and among different countries? Is trade a force for international and domestic equality or inequality? In other words, how are the gains and losses distributed, and who benefits?
3. Under what conditions can trade help a nation to achieve its *development* objectives?
4. Can a developing country by its own actions determine how much it trades or which products and services it sells?
5. In the light of past experience and prospective judgment, should a developing country adopt an outward-looking policy (freer trade, expanded flows of capital and human resources, etc.) or an inward-looking one (protectionism in the interest of self-reliance), or some combination of both, for example, in the form of regional economic cooperation and strategic export policies? What are the arguments for and against these alternative trade strategies for development?

Clearly, the answers or suggested answers to these five questions will not be uniform throughout the diverse economies of the developing world. The whole economic basis for international trade rests on the fact that countries do differ in their resource endowments, their preferences and technologies, their scale economies, their economic and social institutions, and their capacities for growth and development. Developing countries are no exception to this rule. Some are rapidly ascending through the income rankings as they expand their industrial capacities. Some are very populous yet deficient in both natural resources and human skills, at least in large regions of the country. Others are sparsely populated yet endowed with abundant mineral and raw material resources. Yet others are small and economically weak, still having at present neither adequate human capital nor the material resources on which to base a sustained and largely self-sufficient strategy of economic and social development.

We begin with a statistical summary of recent trade performance of developing countries and patterns. There follows a simplified presentation of the basic neoclassical theory of international trade and its effect on efficiency, equity, stability, and growth (four basic economic concepts related to the central questions outlined here). We then provide a critique of the relevance of pure free-trade theories for developing countries in the light of both historical experience and the contemporary realities of the world economy. Like free markets, **free trade** has many desirable theoretical features, not the least of which is the promotion of static economic efficiency and optimal resource allocation. But also like free markets and perfect competition, free trade exists more in theory than in practice—and today's developing nations have to function in the imperfect and often highly unequal real world of international commerce. Consequently, we will briefly discuss alternative trade models that focus on imperfect competition, unequal trade, and the dynamic effects of differential human resource and technological growth. Later in the chapter and in the next chapter, we examine the balance of payments, review some issues in international finance, engage in an in-depth analysis of debt crises, and explore the range of commercial policies (tariffs, subsidies, quotas, exchange-rate adjustments, etc.) that a developing country might wish to adopt within the broader context of the ongoing debate about the relative merits of export promotion versus import substitution. We then examine a wide range of commercial policies used in developing countries, including import tariffs, physical quotas, export promotion versus import substitution, policies to directly or indirectly influence exchange rates, bargaining over technology licensing and market access, strategy for export upgrading, international commodity agreements, and economic integration. Our objective is to ascertain the conditions under which these policies might help or harm developing countries in their dealings with the developed world and with one another. We then summarize the various positions in the ongoing debate between the "trade optimists" and "trade pessimists," and between outward- and inward-looking strategies of development. Finally, we look at the trade policies of developed countries to see in what ways they directly and indirectly affect the economies of the developing world. An outstanding example of the benefits of world trade is illustrated at the conclusion of this chapter, where the sources of the pioneering success of now high-income Taiwan are examined.

Free trade The importation and exportation of goods without any barriers in the form of tariffs, quotas, or other restrictions.

Importance of Exports to Different Developing Nations

Although the overall figures for export volumes and values of developing countries are important indicators of patterns of trade for the group as a whole, we will see throughout this chapter that *what* a country exports can matter as much as the *dollar value* of its exports. Table 12.1 has been compiled to provide a capsule picture of the relative importance of merchandise export earnings to various developing nations of different sizes and in different regions. For purposes of comparison, some developed countries are included.

As with most development topics, there is high diversity among developing countries. Traditionally, however, developing countries are typically more dependent on trade than developed countries. As Table 12.1 indicates, while large countries are understandably less dependent on trade than small countries, at any given size, many developing countries tend to devote a large share of their output as merchandise exports. We see that some large countries, most importantly Brazil, which have had unusually closed economies, tend to be less dependent on foreign trade in terms of national income than most relatively small countries.

And some very low income countries, such as Burundi and Ethiopia, remain markedly divorced from the global economy. As a group, however, less developed nations are typically more dependent on foreign trade in terms of its share in national income than the very highly developed countries are. This is reflected in the case of traditionally export-oriented Japan, whose merchandise exports amounted to roughly 13% of GDP in 2012. In contrast, many developing countries with similar sized populations export a much higher share of output, including Nigeria, Bangladesh, Russia, Mexico, Philippines, and Vietnam, and have a merchandise export share that is substantially higher than that of Japan.

The greater recorded share of developing-country exports in GDP is probably due in part to the much higher relative prices of nontraded services in developed than in developing countries. Nevertheless, the point remains that developing countries are generally more dependent on trade in international economic relations because most trade is in merchandise, for which price disparities are smaller across countries. Moreover, in general, the exports of developing countries are much less diversified than those of the developed countries (though some upper-middle-income countries are very highly diversified). While total exports and the share of manufactures in merchandise exports have been rising for many developing countries, it is important to keep this rise in perspective. A few newly industrializing countries (NICs) still command a dominant position in developing-country exports. For example, in 2011, South Korea alone exported far more merchandise than either all of South Asia (including India) or all of sub-Saharan Africa; and, in fact, South Korea exported more manufactured goods than South Asia and sub-Saharan Africa *combined*.⁸ At the same time, the emergence of China as “workshop of the world” highlights the connection between manufactured export share and high growth in developing countries, as examined further in section 12.6 and explored in the China, Taiwan, and South Korea case studies in Chapters 4, 12, and 13, respectively.

The composition of exports differs markedly across countries. For developed countries such as Japan, the United Kingdom, and the United States, manufactures comprise 90%, 66%, and 63% of merchandise exports, respectively—higher than the developing country average. But developing countries are also diverse in their exports. For example, among the five so-called BRICS countries,

TABLE 12.1 Structure of merchandise exports: Selected Countries, 2012

Country	GDP, \$ billions, 2012	Merchandise exports, \$ billions, 2012	Merchan- dise Exports, % of GDP, 2012	Food, % of Total, 2012	Agricul- tural raw materials, % of total, 2012	Fuels, % of to- tal, 2012	Ores and Metals, % of total, 2012	Manufac- tures, % of totals, 2012
Algeria	205.8	74.0	36	0	0	97	0	2
Benin	7.6	1.4	18	61	24	0	1	15
Bolivia	27.0	10.9	40	14	1	55	25	5
Brazil	2252.7	242.6	11	32	4	11	16	35
Burkina Faso	10.4	2.4	23	38	52	0	1	8
Burundi	2.5	0.1	5	74	5	0	8	13
Central African Republic	2.2	0.2	10	1	31	1	62	4
China	8227.1	2048.8	25	3	0	2	1	94
Cote d'Ivoire	24.7	12.4	50	51	13	26	0	10
Ecuador	84.0	23.9	28	30	4	58	1	8
Egypt, Arab Rep.	262.8	29.4	11	14	2	32	6	45
Ethiopia	41.6	3.0	7	78	9	0	1	10
Gambia, The	0.9	0.1	11	82	2	0	9	7
Ghana	40.7	12.0	29	48	2	39	2	9
India	1841.7	293.2	16	11	2	19	3	65
Indonesia	878.0	188.1	21	18	6	34	6	36
Iran, Islamic Rep.	514.1	95.5	19	4	0	70	2	12
Japan	5959.7	798.6	13	1	1	2	3	90
Malawi	4.3	1.3	30	76	5	0	9	9
Malaysia	305.0	227.4	75	13	2	20	2	62
Mexico	1178.1	370.9	31	6	0	14	4	74
Mozambique	14.2	4.1	29	20	5	16	51	7
Nicaragua	10.5	2.7	25	90	2	1	2	6
Niger	6.8	1.5	22	14	3	1	76	6
Nigeria	262.6	114.0	43	2	6	89	0	3
Peru	203.8	45.6	22	21	1	14	50	14
Philippines	250.2	52.0	21	9	1	2	5	83
Russian Federation	2014.8	529.3	26	3	2	70	4	14
Rwanda	7.1	0.5	7	51	5	0	34	10
South Africa	384.3	87.3	23	8	2	12	32	45
United Kingdom	2471.8	468.4	19	6	1	14	4	66
United States	16244.6	1547.3	10	10	2	10	4	63
Vietnam	155.8	114.6	74	19	4	11	1	65
Yemen, Rep.	35.6	8.5	24	7	0	89	0	3

Source: World Bank, World Development Indicators, 2013, Table 4.4, at: <http://wdi.worldbank.org/table/4.4>, accessed 18 February 2014.

for India and especially China, manufactures make up a substantial majority of exports; but Brazil, South Africa, and especially Russia are much more specialized (and dependent) in commodity exports. Manufactured exports themselves are highly diverse in the extent of their skill and technology content.

As introduced earlier in the chapter, many developing countries are also dependent on one or a few commodity exports. In addition to losing the benefits of maintaining a competitive manufacturing sector, this carries substantial risks of facing falling relative prices in the long run and highly unstable prices in the short run.

Demand Elasticities and Export Earnings Instability

Income elasticity of demand

The responsiveness of the quantity of a commodity demanded to changes in the consumer's income, measured by the proportionate change in quantity divided by the proportionate change in income.

Price elasticity of demand

The responsiveness of the quantity of a commodity demanded to a change in its price, expressed as the percentage change in quantity demanded divided by the percentage change in price.

Export earnings instability

Wide fluctuations in developing-country earnings on commodity exports resulting from low price and income elasticities of demand leading to erratic movements in export prices.

Most statistical studies of world demand patterns for different commodity groups reveal that in the case of primary products, the **income elasticity of demand** is relatively low: The percentage increase in quantity of primary agricultural products and most raw materials demanded by importers (mostly rich nations) will rise by less than the percentage increase in their gross national incomes (GNIs). By contrast, for fuels, certain raw materials, and manufactured goods, income elasticity is relatively high.⁹ For example, it has been estimated that a 1% increase in developed-country incomes will normally raise their imports of foodstuffs by a mere 0.6% and of agricultural raw materials such as rubber and vegetable oils by 0.5% but will raise imports of manufactures by about 1.9%. Consequently, when incomes rise in rich countries, their demand for food, food products, and raw materials from the developing nations goes up relatively slowly, whereas demand for manufactures goes up relatively rapidly. The net result of these low income elasticities of demand is the tendency for the relative price of primary products to decline over time.

Moreover, since the **price elasticity of demand** for (and supply of) primary commodities also tends to be quite low (i.e., inelastic), any shifts in demand or supply curves can cause large and volatile price fluctuations. Together these two elasticity phenomena contribute to what has come to be known as **export earnings instability**. A 2012 UNCTAD study found that commodity price volatility faced by developing countries clearly increased over the past half century—and in the post 2003 period, in particular—potentially increasing vulnerability for exporters dependent on commodity exports. And instability (or volatility) in export earnings and the terms of trade can lead to lower and less predictable rates of economic growth.¹⁰

While almost all attention goes to merchandise exports, there has been a slow rise in the share of commercial services in the exports of both developed and developing countries. For the former, these are more likely to represent highly skilled activities such as investment banking and management consulting, while for the latter, construction and other less skill-intensive activities are more common.

The Terms of Trade and the Prebisch-Singer Hypothesis

The question of changing relative price levels for different commodities brings us to another important quantitative dimension of the trade problems historically faced by developing nations. The total value of export earnings depends not only on the volume of these exports sold abroad but also on the price paid for them. If export prices decline, a greater volume of exports will have to be sold merely to keep total earnings constant. Similarly, on the import side, the total foreign exchange expended depends on both the quantity and the price of imports.

Clearly, if the price of a country's exports is falling relative to the prices of the products it imports, it will have to sell that much more of its exports and enlist more of its scarce productive resources merely to secure the same level of imported goods that it purchased in previous years. In other words, the real

or social opportunity costs of a unit of imports will rise for a country when its export prices decline relative to its import prices.

Economists have a special name for the relationship or ratio between the price of a typical unit of exports and the price of a typical unit of imports. This relationship is called the **commodity terms of trade**, and it is expressed as P_x/P_m , where P_x and P_m represent the export and import price indexes, respectively, calculated on the same base period (e.g., 2012 = 100). The commodity terms of trade are said to deteriorate for a country if P_x/P_m falls, that is, if export prices decline *relative to* import prices, even though both may rise. Most scholarship has broadly confirmed that historically, the prices of primary commodities have declined relative to manufactured goods.¹¹ As a result, the terms of trade have on the average tended to worsen over time for the non-oil-exporting developing countries while showing a relative improvement for the developed countries. Moreover, recent empirical studies suggest that real primary-product prices declined at an average annual rate of 0.6% in the twentieth century, although the commodity price boom prior to the financial crisis was the largest boom since 1900. But the strong increases since 2002 have not nearly negated the long-term trends; and this period of price rises already may have peaked.¹²

The main theory for the declining commodity terms of trade is known as the **Prebisch-Singer hypothesis**, after two famous development economists who first explored its implications in the 1950s.¹³ They argued that there was and would continue to be a secular (long-term) decline in the terms of trade of primary-commodity exporters due to a combination of low income and price elasticities of demand. This decline would result in an ongoing transfer of income from poor to rich countries that could be combated only by efforts to protect domestic manufacturing industries through a process that came to be known as *import substitution*, considered later in this chapter. As noted in Box 12.1, recent research has added new evidence in support of the hypothesis.

Both because of this theory and because of the unfavorable terms-of-trade trends, developing countries have been doing their utmost over the past several decades to diversify into manufactures exports. After a slow and costly start, these efforts have resulted in a dramatic shift in the composition of developing-country exports, especially among middle-income countries. Led at first by the East Asian Tiger economies of South Korea, Taiwan, Hong Kong, and Singapore and now followed by many other countries, including China, the share of merchandise exports accounted for by manufactured goods has risen strongly in many developing countries.

Unfortunately, this structural change has not brought as many benefits to most developing countries as they had hoped, because relative prices within manufactures have also diverged: Over the past few decades, the prices of the basic manufactured goods exported by developing countries fell relative to the advanced products exported by rich countries. The price of textiles fell especially precipitously, and low-skilled electronic goods were not far behind.

Using alternative methods, the United Nations found that the real decline in developing-country export prices of manufactures in the 1980s was about 3.5% per year, or about 30% for the decade. In a detailed study, Alf Maizels discovered that the terms of trade in manufacturing goods for developing countries vis-à-vis the United States deteriorated over the 1981–1997 period.¹⁴ The declines in textile prices accelerated dramatically starting in the late 1990s.

Commodity terms of trade

The ratio of a country's average export price to its average import price.

Prebisch-Singer hypothesis

The argument that the commodity terms of trade for primary-product exports of developing countries tends to decline over time.



BOX 12.1 FINDINGS Four Centuries of Evidence on the Prebisch-Singer Hypothesis

There is a broad consensus among development economists that if a long-term negative trend in prices of a developing country's main commodity exports *relative* to its imports can be confirmed, diversification of the nation's mix of exports should be encouraged. Traditionally, developing economies, and particularly the least developed countries, have exported commodities and imported manufactures. Commodity prices are so volatile—and some hypothesized commodity price cycles potentially so long—that it is difficult to prove a long-term trend, but studies have generally tended to confirm the broad outlines of the Prebisch-Singer hypothesis (including a well-known 1994 International Monetary Fund study). But even though the unanticipated boom in commodity prices in the first years of this century has a long way to go before it will reverse the twentieth-century trend, some have questioned whether the decline in the relative price of commodities to manufactures can be reversed.

To obtain a reliable answer, it is best to have longer periods of data than have previously been available. To make matters even more difficult, empirical work has also been challenging because most tests depend on assumptions about the statistical properties of the data over time.^a In a 2010 article in the *Review of Economics and Statistics*, David Harvey and his colleagues applied new techniques that require fewer statistical assumptions and also collected data going

remarkably farther back in time—in some cases, back to 1650. This makes it much easier to disentangle long-term trends from cycles.

In a striking example of their findings, the authors concluded that “the relative price of an important commodity like coffee has been declining at an annual rate of 0.77% for approximately 300 years!” More generally, they found that “overall, eleven major commodities show new and robust evidence of a long-run decline in their relative price.” These commodities are aluminum, coffee, hides, jute, silver, sugar, tea, tobacco, wheat, wool, and zinc.

As the authors summarize:

In our opinion, this provides much more robust support that the Prebisch-Singer hypothesis is relevant for commodity prices. For the remaining fourteen commodities, no positive and significant trends could be detected over all or some fraction of the sample period. These zero-trending commodities suggest that the Lewis hypothesis may also play a part in explaining the behavior of certain commodity prices;...conversely, however, in the very long run, there is simply no statistical evidence that relative commodity prices have ever trended upward.

^aTesting issues include whether the time series contains a unit root and whether there have been structural breaks.

Source: Based on David I. Harvey, Neil M. Kellard, Jakob B. Madsen, and Mark E. Wohar, “The Prebisch-Singer hypothesis: Four centuries of evidence,” *Review of Economics and Statistics* 92 (2010): 367–377.

Having reviewed some of the international trade issues that developing countries face, we turn next to consider alternative theories of the role that trade plays in economic development.

12.3 The Traditional Theory of International Trade

The phenomenon of transactions and exchange is a basic component of human activity throughout the world. Even in the most remote villages of Africa, people regularly meet in the marketplace to exchange goods, either for money

or for other goods through simple **barter transactions**. A transaction is an exchange of two things—something is given up in return for something else. In an African village, women may barter food such as cassava for cloth or simple jewelry for clay pots. Implicit in all transactions is a price. For example, if 20 kilos of cassava are traded for 1 meter of bark cloth, the implicit price (or terms of trade) of the bark cloth is 20 kilos of cassava. If 20 kilos of cassava can also be exchanged for one small clay pot, it follows that clay pots and 1-meter pieces of bark cloth can be exchanged on a one-to-one basis. A price system is already in the making.

Barter transactions The trading of goods directly for other goods in economies not fully monetized.

Comparative Advantage

Why do people trade? Basically, because it is profitable to do so. Different people possess different abilities and resources and may want to consume goods in different proportions. Diverse preferences as well as varied physical and financial endowments open up the possibility of profitable trade. People usually find it profitable to trade the things they possess in large quantities relative to their tastes or needs in return for things they want more urgently. Because it is virtually impossible for individuals or families to provide themselves with all the consumption requirements of even the simplest life, they usually find it profitable to engage in the activities for which they are best suited or have a **comparative advantage** in terms of their natural abilities or resource endowments. They can then exchange any surplus of these home-produced commodities for products that others may be relatively more suited to produce. The phenomenon of **specialization** based on comparative advantage arises, therefore, to some extent in even the most subsistence economies.

Comparative advantage Production of a commodity at a lower opportunity cost than any of the alternative commodities that could be produced.

These same principles of specialization and comparative advantage have long been applied by economists to the exchange of goods between individual nations. In answer to the questions of what determines which goods are traded and why some countries produce some things while others produce different things, economists since the time of Adam Smith have sought the answers in terms of international differences in costs of production and prices of different products. Countries, like people, specialize in a limited range of production activities because it is to their advantage to do so. They specialize in activities where the gains from specialization are likely to be the largest.

Specialization Concentration of resources in the production of relatively few commodities.

But why, in the case of international trade, should costs differ from country to country? For example, how can Germany produce cameras, electrical appliances, and automobiles cheaper than Kenya and exchange these manufactured goods for Kenya's relatively cheaper agricultural produce (fruits, vegetables, cut flowers, coffee, and tea)? Again, the answer is to be found in international differences in the structure of costs and prices. Some things (manufactured goods) are relatively cheaper to produce in Germany and can profitably be exported to other countries like Kenya; other things (agricultural goods) can be produced in Kenya at a lower relative cost and are therefore imported into Germany in exchange for its manufactures.

The concept of *relative* cost and price differences is basic to the theory of international trade. The *principle of comparative advantage*, as it is called, asserts that a country should, and under competitive conditions will, specialize in the export of the products that it can produce at the lowest *relative cost*. Germany

Absolute advantage Production of a commodity with the same amount of real resources as another producer but at a lower absolute unit cost.

may be able to produce cameras and cars as well as fruits and vegetables at lower *absolute* unit costs than Kenya, but because the commodity cost differences between countries are greater for the manufactured goods than for agricultural products, it will be to Germany's advantage to specialize in the production of manufactured goods and exchange them for Kenya's agricultural produce. So even though Germany may have an **absolute advantage** in the cost of both commodities, its comparative cost advantage lies in manufactured goods. Conversely, Kenya may be at an absolute disadvantage vis-à-vis Germany in both manufacturing and agriculture in that its absolute unit costs of production are higher for both types of products. It can nevertheless still engage in profitable trade because it has a comparative advantage in agricultural specialization (or alternatively, because its absolute disadvantage is less in agriculture). It is this phenomenon of differences in comparative advantage that gives rise to beneficial trade even among the most unequal trading partners.

Relative Factor Endowments and International Specialization: The Neoclassical Model

Factor endowment trade theory

The neoclassical model of free trade, which postulates that countries will tend to specialize in the production of the commodities that make use of their abundant factors of production (land, labor, capital, etc.).

The classical comparative advantage theory of free trade is a static model based strictly on a one-variable-factor (labor cost), complete-specialization approach to demonstrating the gains from trade. This nineteenth-century free-trade model, primarily associated with David Ricardo and John Stuart Mill, was modified and refined in the twentieth century by two Swedish economists, Eli Hecksher and Bertil Ohlin, to take into account differences in factor supplies (mainly land, labor, and capital) on international specialization. The Hecksher-Ohlin neoclassical (or variable-proportions) **factor endowment trade theory** also enables us to describe analytically the impact of economic growth on trade patterns and the impact of trade on the structure of national economies and on the differential returns or payments to various factors of production.

Unlike the classical labor cost model, however, where trade arises because of fixed but differing labor productivities for different commodities in different countries, the neoclassical factor endowment model assumes away inherent differences in relative labor productivity by postulating that all countries have access to the same technological possibilities for all commodities. If domestic factor prices were the same, all countries would use identical methods of production and would therefore have the same relative domestic product price ratios and factor productivities. The basis for trade arises not because of inherent technological differences in labor productivity for different commodities between different countries but because countries are endowed with different factor supplies. Given relative factor endowments, relative factor prices will differ (e.g., labor will be relatively cheap in labor-abundant countries), and so will domestic commodity price ratios and factor combinations. Countries with cheap labor will have a relative cost and price advantage over countries with relatively expensive labor in commodities that make intensive use of labor (e.g., primary products). They should therefore focus on the production of these labor-intensive products and export the surplus in return for imports of capital-intensive goods.

Conversely, countries well endowed with capital will have a relative cost and price advantage in the production of manufactured goods, which tend to require relatively large inputs of capital compared with labor. They can thus

benefit from specialization in, and export of, capital-intensive manufactures in return for imports of labor-intensive products from labor-abundant countries. Trade therefore serves as a vehicle for a nation to capitalize on its abundant resources through more intensive production and export of commodities that require large inputs of those resources while relieving its factor shortage through the importation of commodities that use large amounts of its relatively scarce resources.

To summarize, the factor endowment theory is based on two crucial propositions:

1. *Different products require productive factors in different relative proportions.* For example, agricultural products generally require relatively greater proportions of labor per unit of capital than manufactured goods, which require more machine time (capital) per worker than most primary products. The proportions in which factors are actually used to produce different goods will depend on their relative prices. But no matter what factor prices may be, the factor endowment model assumes that certain products will always be relatively more capital-intensive while others will be relatively more labor-intensive. These relative factor intensities will be no different in India than in the United States; primary products will be the relatively labor-intensive commodities compared with secondary manufactured goods in both India and the United States.
2. *Countries have different endowments of factors of production.* Some countries, like the United States, have large amounts of capital per worker and are therefore designated capital-abundant countries. Others, like India, Egypt, or Colombia, have little capital and much labor and are designated labor-abundant countries. In general, developed countries are relatively capital-abundant (one could also add that they are well endowed with skilled labor), while most developing countries are labor-abundant.

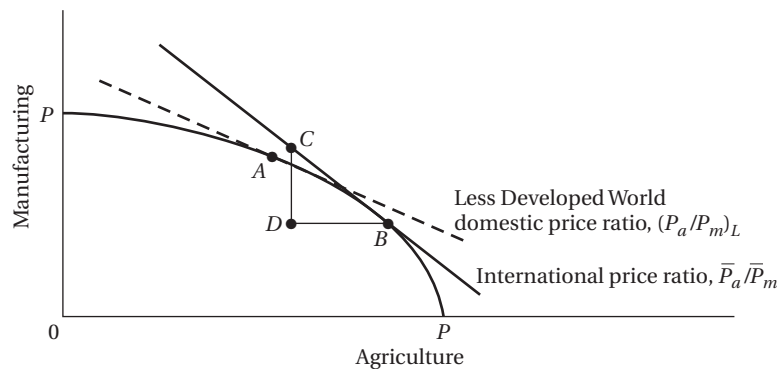
The factor endowment theory goes on to argue that capital-abundant countries will tend to specialize in such products as automobiles, aircraft, sophisticated electronics, communication goods, and computers, which use capital intensively in their technology of production. They will export some of these capital-intensive products in exchange for the labor- or land-intensive products like food, raw materials, and minerals that can best be produced by countries that are relatively well endowed with labor or land.

This theory, which played a predominant role in the early literature and policy advice on trade and development, encouraged developing countries to focus on their labor- and land-intensive primary-product exports. It was argued that by trading these primary commodities for the manufactured goods that developed countries were theoretically best suited to produce, developing nations could realize the enormous potential benefits to be had from free trade with the richer nations of the world. Little attention was given in this literature to diversification as an objective or the productivity benefits of expanding manufactures' share.

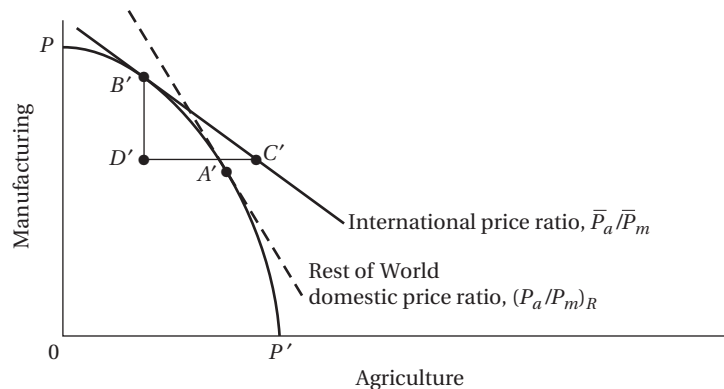
The mechanism whereby the benefits of trade are transmitted across national boundaries under the factor endowment approach is analogous to that of the classical labor cost approach. However, in the factor endowment

case, with the possibility of differing factor combinations for producing different commodities, nations are assumed to be operating initially at some point on their concave (or increasing opportunity cost) production possibility frontier, determined by domestic demand conditions. For example, consider the standard two-country, two-commodity model. Let the two countries be “Less Developed World” and “Rest of World” and the two commodities be agricultural goods and manufactured goods. Figure 12.1 portrays the theoretical benefits of free trade with Less Developed World’s domestic (no-trade) production possibility frontier shown in Figure 12.1a and Rest of World’s frontier in Figure 12.1b. Point A on the Less Developed World production possibility frontier PP in Figure 12.1a provides the illustration. With full employment of all resources and under perfectly competitive assumptions, Less Developed World will be producing and consuming at point A, where the relative price ratio, P_a/P_m , will be given by the slope of the dotted line, $(P_a/P_m)_L$, at point A.¹⁵

FIGURE 12.1 Trade with Variable Factor Proportions and Different Factor Endowments



(a) Less Developed World (without trade, production and consumption occur at A; with trade, production is at B, consumption is at C; exports = BD ; imports = DC)



(b) Rest of World (without trade, production and consumption occur at A'; with trade, production is at B', consumption is at C'; exports = $B'D'$; imports = $D'C'$)

Similarly, Rest of World may be producing and consuming at point A' in Figure 12.1b, with a domestic price ratio, $(P_a/P_m)_R$, that differs (agricultural goods are relatively more costly, or conversely, manufactured goods are relatively cheaper) from that of Less Developed World. Note that with a closed economy, both countries will be producing both commodities. However, Less Developed World, being poorer, will produce a greater proportion of food products in its (smaller) total output.

The relative difference in costs of production and prices at points A and A' (i.e., their different slopes) gives rise once again to the possibilities of profitable trade. As in the classical labor cost model, the international free-trade price ratio, \bar{P}_a/\bar{P}_m , will settle somewhere between $(P_a/P_m)_L$ and $(P_a/P_m)_R$, the domestic price ratios of Less Developed World and Rest of World, respectively. The lines \bar{P}_a/\bar{P}_m in both graphs in Figure 12.1 denote the common world price ratio. For Less Developed World, this steeper slope of \bar{P}_a/\bar{P}_m means that it can get more manufactured goods for a unit of agriculture than in the absence of trade; that is, the world price of agricultural goods in terms of manufactures is higher than Less Developed World's domestic price ratio. It will therefore reallocate resources away from its costly capital-intensive manufacturing sector and specialize more in labor-intensive agricultural production. Under perfectly competitive assumptions, it will produce at point B on its production frontier, where its relative production (opportunity) costs are just equal to relative world prices. It can then trade along \bar{P}_a/\bar{P}_m , the prevailing international price line, exporting BD agricultural products in return for DC manufactured imports and arrive at a final consumption point C with more of *both* goods than before trade. To give a numerical example, suppose that the free-trade international price ratio, \bar{P}_a/\bar{P}_m , were 2 to 1. In other words, a unit of agricultural goods sells at a price twice that of a unit of manufactured goods. This means that for every unit of agriculture that Less Developed World exports to Rest of World, it can import 2 units of manufactured goods. The slope of the international price line graphically portrays this trading ratio, these terms of trade. If Less Developed World exports BD agriculture (say, 30 units), it will receive DC manufactures (60 units) in return.

Similarly, for Rest of World, the new international price ratio means more agricultural products in exchange for manufactured goods than at domestic prices. Graphically, the international price ratio has a lesser slope than Rest of World's domestic price ratio (see Figure 12.1b). Rest of World will therefore reallocate its abundant capital resources so as to produce more manufactured goods and less agriculture, as at point B' , where its relative domestic production costs are just equal to relative world prices. It can then trade $B'D'$ ($=DC$) of these manufactures for $D'C'$ ($=BD$) of Less Developed World's agricultural products. Rest of World can therefore also move outside the confines of its production frontier and end up consuming at a point like C' in Figure 12.1b. Trade is balanced—the value of exports equals the value of imports for both regions. Moreover, it has resulted in increased consumption of both goods for both regions, as shown by a comparison between free-trade points C and C' and no-trade points A and A' in Figure 12.1.

The main conclusions of the neoclassical model of free trade are that all countries gain from trade and world output is increased. However, there are several others in addition to these two basic conclusions. First, due to increasing

opportunity costs associated with resource shifting among commodities with different factor intensities of production, complete specialization will not occur as in the classical comparative-advantage model. Countries will tend to specialize in products that use their abundant resources intensively. They will compensate for their scarce resources by importing products that use these scarce resources most intensively. But rising domestic costs and therefore prices in excess of world prices will prevent complete specialization from occurring.

Second, given identical technologies of production throughout the world, the equalization of domestic product price ratios with the international free-trade price ratio will tend to **factor price equalization** across trading countries. Wage rates, for example, will rise in labor-abundant Less Developed World as a result of the more intensive use of human resources in the production of additional agricultural output. But the price of scarce capital will decline due to the diminished production of manufactured goods, which are heavy users of capital. In Rest of World, the price of its abundant capital will rise relative to its scarce labor as more emphasis is placed on the production of capital-intensive manufactured goods and less on labor-intensive agriculture.

The neoclassical factor endowment theory therefore makes the important prediction that international real wage rates and capital costs will gradually tend toward equalization. Much of the direct competition is in the low-skilled labor that developing countries have in relative abundance; many low-skilled manufacturing jobs have indeed been lost outright in developed countries, and wage growth has at best been slow, if not declining, in real terms. In recent years, many highly paid manufacturing workers in the more developed countries have been concerned that freer trade and greater international competition would drive their wages down to developing-country levels. However, on average, with the exception of a few Asian economies, the wage gap between developed and less developed country manufacturing workers has remained persistently wide. This is due in part to higher skills and in part to complementary factors such as the higher general knowledge base embedded within corporations, so wages can remain higher commensurate with the resulting higher productivity.¹⁶ But some part is likely due to protectionism.

Third, within countries, the factor endowment theory predicts that the economic return to owners of the abundant resources will rise in relation to owners of scarce resources as the abundant factor is more intensively used; in developing countries, this would generally mean a rise in the share of national income going to labor. In the absence of trade, labor's share might be smaller. Thus, trade tends to promote more equality in domestic income distributions.

Finally, by enabling countries to move outside their production possibility frontiers and secure capital as well as consumption goods from other parts of the world, trade is assumed to stimulate economic growth. If developed countries have the comparative advantage in producing higher-skill capital goods, trade would lower the price of equipment and machinery and stimulate investment and growth for developing countries. Developing-country exporters learn from their customers in developed countries, who may also alert them to other products they might produce given their mix of skills, as the experience of Taiwan shows. Trade also enables a nation to obtain the domestically expensive raw materials and other products (as well as knowledge, ideas, new

Factor price equalization In factor endowment trade theory, the proposition that because countries trade at a common international price ratio, factor prices among trading partners will tend to equalize.

technologies, etc.) with which it is relatively less well endowed at lower world market prices. It can thus create the conditions for a more broadly based and self-sustaining growth of its industrial output.

Trade Theory and Development: The Traditional Arguments

We are now in a position to summarize the theoretical answers to our five basic questions about trade and development, derived from the neoclassical free-trade model.

1. Trade is an important stimulator of economic growth. It enlarges a country's consumption capacities, increases world output, and provides access to scarce resources and worldwide markets for products without which developing countries would be unable to grow.
2. Trade tends to promote greater international and domestic equality by equalizing factor prices, raising real incomes of trading countries, and making efficient use of each nation's and the world's resource endowments (e.g., raising relative wages in labor-abundant countries and lowering them in labor-scarce countries).
3. Trade helps countries achieve development by promoting and rewarding the sectors of the economy where individual countries possess a comparative advantage, whether in terms of labor efficiency or factor endowments. It also lets them take advantage of economies of scale.
4. In a world of free trade, international prices and costs of production determine how much a country should trade in order to maximize its national welfare. Countries should follow the principle of comparative advantage and not try to interfere with the free workings of the market through government policies that either promote exports or restrict imports.
5. Finally, to promote growth and development, an outward-looking international policy is required. In all cases, self-reliance based on partial or complete isolation is asserted to be economically inferior to participation in a world of unlimited free trade.

12.4 The Critique of Traditional Free-Trade Theory in the Context of Developing-Country Experience

The conclusions of traditional international trade theory are derived from a number of explicit and implicit assumptions that in many ways are often contrary to the reality of contemporary international economic relations. This is not to deny the potential benefits of a world of free trade but rather to recognize that the real world is beset by national protectionism, international non-competitive pricing policies, and other market failures.

What are the major and crucial assumptions of the traditional factor endowment theory of trade, and how are these assumptions violated in the

real world? What are the implications for the trade and financial prospects of developing nations when a more realistic assessment of the actual mechanism of international economic and political relations is made?

Six basic assumptions of the traditional neoclassical trade model must be scrutinized:

1. All productive resources are fixed in quantity and constant in quality across nations, and are fully employed.
2. The technology of production is fixed (classical model) or similar and freely available to all nations (factor endowment model). Moreover, the spread of such technology works to the benefit of all. Consumer tastes are also fixed and independent of the influence of producers (international consumer sovereignty prevails).
3. Within nations, factors of production are perfectly mobile between different production activities, and the economy as a whole is characterized by the existence of perfect competition. There are no risks or uncertainties.
4. The national government plays no role in international economic relations; trade is carried out among many atomistic and anonymous producers seeking to minimize costs and maximize profits. International prices are therefore set by the forces of supply and demand.
5. Trade is balanced for each country at any point in time, and all economies are readily able to adjust to changes in the international prices with a minimum of dislocation.
6. The gains from trade that accrue to any country benefit the nationals of that country.

We can now take a critical look at each of these assumptions in the context of the contemporary position of developing countries in the international economic system. Some of these criticisms form the rationale for other, non-neoclassical theories of trade and development, including vent-for-surplus, structuralist, and North-South models.

Fixed Resources, Full Employment, and the International Immobility of Capital and Skilled Labor

Trade and Resource Growth: North-South Models of Unequal Trade This initial assumption about the static nature of international exchange—that resources are fixed, fully utilized, and internationally immobile with product production functions everywhere identical—is central to the traditional theory of trade and finance. In reality, the world economy is characterized by rapid change, and factors of production are fixed neither in quantity nor in quality. Critics point out that this is especially true with respect to resources that are most crucial to growth and development, such as physical capital, entrepreneurial abilities, scientific capacities, the ability to carry out technological research and development, and the upgrading of technical skills in the labor force.

It follows, therefore, that relative factor endowments and comparative costs are not given but are in a state of constant change. Moreover, they are often determined by, rather than themselves determine, the nature and character of international specialization. Any initial state of unequal resource endowments may be reinforced and exacerbated by the very trade that these differing resource endowments were supposed to justify. Specifically, if rich nations (the *North*) as a result of historical forces, are relatively well-endowed with the vital resources of capital, entrepreneurial ability, and skilled labor, their continued specialization in products and processes that use these resources intensively can create the necessary conditions and economic incentives for their further growth. By contrast, developing-world countries (the *South*), endowed with abundant supplies of unskilled labor, by specializing in products that intensively use unskilled labor and for which world demand prospects and terms of trade may be very unfavorable, often find themselves locked into a stagnant situation that perpetuates their comparative advantage in unskilled, unproductive activities. This, in turn, inhibits the domestic growth of needed capital, entrepreneurship, and technical skills. As some developing-country scholars have effectively argued, static efficiency can become dynamic inefficiency, and a cumulative process is set in motion in which trade exacerbates already unequal trading relationships, distributes the benefits largely to the people who are already relatively well off, and perpetuates the physical and human resource underdevelopment that characterizes most low-income nations. As one well-known developing-country scholar put it, "With few exceptions, the technological distance between the developing and the developed countries is widening. Neoclassical international trade theory, by postulating identical production functions for different products in various countries, assumes this problem away."¹⁷

In recent years, some economists have therefore challenged the static neoclassical model with alternative dynamic models of trade and growth that emphasize the process of factor accumulation and uneven development along the lines suggested in the preceding paragraphs. These so-called **North-South trade models** focus specifically on trade relations between rich and poor countries, whereas the traditional model was assumed to apply to all nations. The typical North-South model argues, for example, that initial higher endowments of capital in the industrialized North generate external economies in manufacturing output and higher profit rates. This, in combination with the rise in monopoly power, stimulates higher Northern growth rates (in accordance with Harrod-Domar and factor share growth models discussed earlier) through further capital accumulation. As a result, the rapidly growing North develops a cumulative competitive advantage over the slower-growing South. If we then add differential income elasticities of demand (higher for Northern "capital goods" than for Southern "consumption goods") and capital mobility to the model (in the form of South-to-North capital flight, as occurred in the 1980s), the basis for the developing-world trade pessimism would be further enhanced. Nobel laureate Paul Krugman and other modern trade theorists have also introduced models incorporating imperfect competition and other more realistic features.¹⁸

Some economies, like the Four Asian Tigers (Taiwan, South Korea, Singapore, and Hong Kong), have succeeded in transforming their economies through

North-South trade models

Trade and development theories that focus on the unequal exchange between the North developed countries and the South developing countries in an attempt to explain why the South gains less from trade than the North.

purposeful effort from unskilled-labor to skilled-labor to capital-intensive production. Other Asian countries, notably China, are following in their footsteps. However, for the vast majority of low-income nations, the possibility of trade itself stimulating similar structural economic changes is more remote without the application of judicious development policies.

Another interesting example of the new, postneoclassical genre of international trade models is contained in Michael Porter's *Competitive Advantage of Nations*.¹⁹ Porter's fundamental departure from the standard, neoclassical factor endowment theory is to posit a *qualitative* difference between basic factors and advanced factors of production. He argues that standard trade theory applies only to basic factors like undeveloped physical resources and unskilled labor. For the advanced factors, which are more specialized and include highly trained workers with specific skills, and knowledge resources such as government and private research institutes, major universities, and leading industry associations, standard theory does not apply. Porter argues that "the central task facing developing countries is to escape from the straitjacket of factor-driven national advantage...where natural resources, cheap labor, locational factors and other basic factor advantages provide a fragile and often fleeting ability to export." He concludes that "creation of advanced factors is perhaps the first priority."²⁰

Unemployment, Resource Underutilization, and the Vent-for-Surplus Theory of International Trade

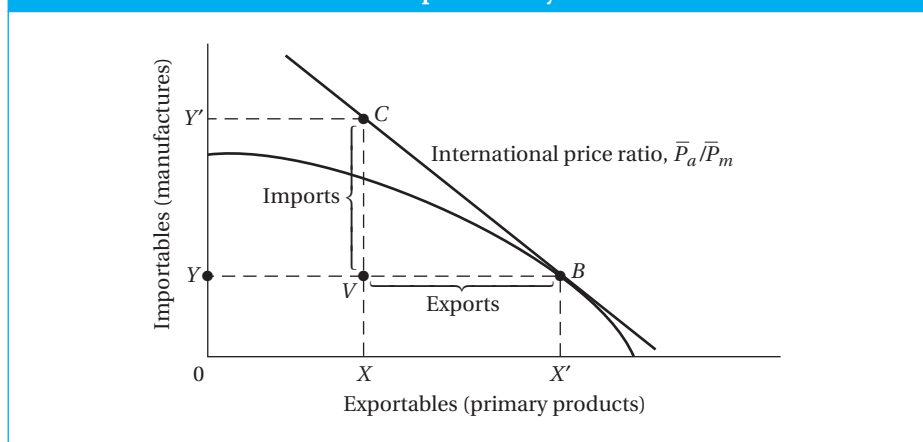
The assumption of full employment in traditional trade models, like that of the standard perfectly competitive equilibrium model of microeconomic theory, violates the reality of unemployment and underemployment in developing nations. Two conclusions could be drawn from the recognition of widespread unemployment in the developing world. The first is that underutilized human resources create the opportunity to expand productive capacity and GNI at little or no real cost by producing for export markets products that are not demanded locally. This is known as the **vent-for-surplus theory of international trade**. First formulated by Adam Smith, it was expounded in the context of developing nations by the Burmese economist Hla Myint.

According to this theory, the opening of world markets to remote agrarian societies creates opportunities not to reallocate fully employed resources as in the traditional models but rather to make use of formerly *underemployed* land and labor resources to produce greater output for export to foreign markets. The colonial system of plantation agriculture, as well as the commercialization of small-scale subsistence agriculture, were made possible, according to this view, by the availability of unemployed and underemployed human resources. In terms of our production possibility analyses, the vent-for-surplus argument can be represented by a shift in production from point *V* to point *B* in Figure 12.2, with trade enlarging final domestic consumption from *V* to *C*.

We see that before trade, the resources of this closed developing-world economy were underutilized. Production was occurring at point *V*, well within the confines of the production possibility frontier, and *OX* primary products and *OY* manufactures were being produced and consumed. The opening up of the nation to foreign markets (probably as a result of colonization) provides the economic impetus to utilize these idle resources (mostly excess land and

Vent-for-surplus theory of international trade The contention that opening world markets to developing countries through international trade allows those countries to make better use of formerly underutilized land and labor resources so as to produce larger primary-product outputs, the surpluses of which can be exported.

FIGURE 12.2 The Vent-for-Surplus Theory of Trade



labor) and expand primary-product exportable production from OX to OX' at point B on the production frontier. Given the international price ratio, \bar{P}_a/\bar{P}_m , $X' - X$ (equal to VB) primary products can now be exported in exchange for $Y' - Y$ (equal to VC) manufactures, with the result that the final consumption point, C , is attained with the same primary products (X) being consumed as before but with $Y' - Y$ more imported manufactures now available.

Unfortunately, in the short run, the beneficiaries of this process were often colonial and expatriate entrepreneurs rather than developing-country nationals. And, in the long run, the structural orientation of the developing-country economy toward primary-product exports in many cases created an export "enclave" and inhibited needed structural transformation in the direction of a more diversified economy.

Fixed, Freely Available Technology and Consumer Sovereignty

Just as capital resources are rapidly growing and being dispersed to maximize the returns of their owners throughout the world, rapid technological change is profoundly affecting world trading relationships. One of the most obvious examples of the impact of developed-country technological change on developing-country export earnings is the development of synthetic substitutes for many traditional primary products. Since World War II, **synthetic substitutes** for such diverse commodities as rubber, wool, cotton, sisal, jute, hides, and skins have been manufactured in increasing quantities. The developing world's market shares of these sectors have fallen steadily.

On the other side of the ledger, however, is the argument that the worldwide availability of new technologies developed in the West has given many newly industrializing countries the opportunity to capitalize on Western research and development expenditures. By first imitating products developed abroad but not on the frontiers of technological research, certain middle-income countries with sufficient human capital (e.g., the Asian NICs) can follow the **product cycle** of international trade. Using their relatively lower

Synthetic substitutes Commodities that are artificially produced but can be substituted for the natural commodities (e.g., manufactured rubber, cotton, wool, camphor, and pyrethrum).

Product cycle In international trade, the progressive replacement of more developed countries by less developed countries in the production of manufactures of increasing complexity.

wages, they move from low-tech to high-tech production, filling manufacturing gaps left vacant by the more industrialized nations. Eventually, the hope is to catch up with the developed countries, as in the case of Japan, Singapore, and South Korea. China has made striking progress through this strategy.

The assumption of fixed worldwide consumer tastes and preferences dictating production patterns to market-responsive atomistic producers is unrealistic. Not only are the capital and production technologies disseminated throughout the world by means of the multinational corporations often aided by their home governments, but also consumer preferences and tastes are often created and reinforced by the advertising campaigns that dominate local markets. By creating demands for imported goods, market-dominating international enterprises can create the conditions for increased profitability. This is particularly significant in developing countries, where limited and imperfect information in both production and consumption creates a situation of highly incomplete markets. For example, it has been estimated that in many developing nations, more than 90% of all advertising is financed by foreign firms selling in the local market.

Internal Factor Mobility, Perfect Competition, and Uncertainty: Increasing Returns, Imperfect Competition and Issues in Specialization

The traditional theory of trade assumes that nations are readily able to adjust their economic structures to the changing dictates of world prices and markets. Movements along production possibility frontiers involving the reallocation of resources from one industry to another may be easy to make on paper, but according to structuralist arguments, such reallocations are extremely difficult to achieve in practice. This is especially true in developing nations, where production structures are often rigid and factor movements are largely restricted. The most obvious example of this is plantation and small-farm commercial agriculture. In economies that have gradually become heavily dependent on a few primary-product exports, the whole economic and social infrastructure (roads, railways, communications, power locations, credit and marketing arrangements, etc.) may be geared to facilitate the movement of goods from production locations to shipping and storage depots for transfer to foreign markets. Over time, cumulative investments of capital may have been sunk into these economic and infrastructure facilities, and they cannot easily be transferred to manufacturing activities located elsewhere. Thus, the more dependent nations become on a few primary-product exports, the more inflexible their economic structures become, and the more vulnerable they are to the unpredictabilities of international markets. It may take many years to transform an underdeveloped economy from an almost exclusively primary-product, export-oriented reliance to a more diversified, multisector structure. More generally, structuralist critics argue that all kinds of politically and institutionally generated structural rigidities, including product supply inelasticities, lack of intermediate products, fragmented money markets, limited foreign exchange, government licensing, import controls, poor transport and distribution facilities, and scarcities of managerial and skilled labor, often inhibit a developing country's ability to respond to changing international price signals in the smooth and frictionless way of the neoclassical trade model.²¹

Thus, the internal processes of adjustment and resource reallocation that are necessary to capitalize on changing world economic conditions are much more difficult for the less diversified developing economies to realize than for their rich counterparts in the North. And yet, curiously enough, developing countries that begin to expand their capacities to produce low-cost, labor-intensive manufactured goods for export in industries such as textiles, shoes, sporting goods, handbags, processed foodstuffs, wigs, and rugs have often found these exports blocked by tariff and nontariff barriers erected by developed countries to restrict the entry of such low-cost goods into their home markets.²² The reasons usually given by the North are that this low-cost foreign competition will create unemployment among the higher-cost domestic industries of the developed country and that the problems of internal economic adjustment are too serious to permit such unfettered foreign competition! And while notable improvements have been made through the WTO and bilateral offers (discussed later in the chapter), protectionism in various forms remains a serious impediment to growth in the developing world, especially for the least developed countries.

Moreover, by assuming either fixed or diminishing **returns to scale** (fixed or increasing production costs as output is expanded), the labor cost and factor endowment theories of trade neglect one of the most important phenomena in international economic relations. This is the pervasive and income-widening effect of increasing returns to scale and hence decreasing costs of production. Decreasing production costs mean simply that large existing firms are able to underprice smaller or new firms and thus exert monopolistic control over world markets. Far from being a rare exception, economies of scale are a common factor in determining trade patterns. Economies of large-scale production lead to monopolistic and oligopolistic control of world supply conditions (just as they do in domestic markets) for a wide range of products.

In addition, **monopolistic** and **oligopolistic market control** of internationally traded commodities, along with widespread product differentiation, intraindustry trade, and external economies of production, means that large individual corporations are able to manipulate world prices and supplies (and often demands as well) in their own private interest. Instead of competition, we find joint producer activities and oligopolistic bargaining among giant buyers and sellers as the most pervasive price- and quantity-determining force in the international economy.²³ But from the perspective of developing nations trying to diversify their economies and promote industrial exports in particular, the phenomenon of **increasing returns** and **product differentiation** (monopolistic competition), combined with the noneconomic power of large multinational corporations (their political influence with many governments—see Chapter 14), means that the first nations to industrialize (the rich nations) are often able to take advantage of these economies of scale and differentiated products to perpetuate their dominant position in world markets.²⁴

The second major limitation of the perfectly competitive assumption of trade models is its exclusion of **risk** and **uncertainty** in international trading arrangements. It may not be in a low-income country's long-run interest to invest heavily in primary-product export promotion, given the historical instability of world markets for primary commodities in comparison with those for manufactured goods. As was already pointed out, concentration on one

Returns to scale How much output expands when all inputs are proportionately increased.

Monopolistic market control A situation in which the output of an industry is controlled by a single producer (or seller) or by a group of producers who make joint decisions.

Oligopolistic market control A situation in which a small number of rival but not necessarily competing firms dominate an industry.

Increasing returns A disproportionate increase in output that results from a change in the scale of production.

Product differentiation Attempts by producers to distinguish their product from similar ones through advertising or minor design changes.

Risk A situation in which the probabilities of the various possible outcomes are known, but the actual outcome is not known.

Uncertainty A situation in which neither the actual outcome nor even the precise probabilities of the various possible outcomes are known.

or two vital primary exports can play havoc with development plans when foreign-exchange earnings are largely unpredictable from one year to the next.

Patterns of specialization in the process of economic development are still not fully understood, and theory gives ambiguous answers. On the one hand, traditional theory suggests that developing nations can reach higher levels of income by specializing in the world economy according to comparative advantage and that as globalization proceeds, the opportunity and benefits of doing so increase. On the other hand, as countries develop, they gain a wider range of skills and technologies and can move beyond producing a few primary goods to become competitive in a range of relatively advanced goods. In fact, a careful empirical study by Jean Imbs and Romain Wacziarg found that sectoral concentration generally follows a U-shaped pattern in relation to the level of per capita income: "Countries first diversify, in the sense that economic activity is spread more equally across sectors, but there exists, relatively late in the development process, a point at which they start specializing again."²⁵ And this pattern goes well beyond the tendency to move from dependence on primary goods alone to manufacturing and services. The policy implications also remain ambiguous. But their results are consistent with the view that development is not driven by a simple process of gains from specialization.

The Absence of National Governments in Trading Relations

In domestic economies, the coexistence of rich and poor regions, of rapidly growing and stagnating industries, and of the persistent disproportionate regional distribution of the benefits of economic growth can all, at least in theory, be counteracted and ameliorated by the intervention of the state. Cumulative processes for inequality within nation-states by which **growth poles** may expand rapidly while other regions stagnate can be modified by government through legislation, taxes, transfer payments, subsidies, social services, regional development programs, and so forth. But since there is no effective international government to play a comparable role across countries, the highly uneven gains from trade can easily become self-sustaining. This result is then reinforced by the uneven power of national governments to promote and protect their own interests. Despite the advice to developing countries, the developed countries protect their own favored industries when they find it advantageous or politically expedient, as in the U.S. bailout of the auto industry in 2009, to name just one high-profile case. The protection of the financial industry in the United States and the United Kingdom protect not just the domestic financial system but an industry that generates high-paying jobs.

Government has also played a strong role in cases of successful rapid developments. Spectacular export successes such as South Korea were in no small way aided and abetted by government promotion of export industries. (See the case studies in Chapters 4, 12, and 13, respectively.) Governments are often partisan players whose activist interventions in this area of **industrial policy** (guiding the market through strategic coordination of business investments to increase export market shares) are specifically designed to create a comparative advantage where none existed before but where world demand is likely to rise in the future. The history of industrial growth in Japan in the 1950s and 1960s with its famous Ministry of International Trade and Industry (MITI) is a

Growth poles Regions that are more economically and socially advanced than others around them, such as urban centers versus rural areas or highway corridors in developing countries.

Industrial policy Deliberate effort by governments to guide the market by coordinating and supporting specific industrial activities.

widely cited example of industrial policy.²⁶ Yet, for various reasons, a majority of developing countries outside of East Asia have either not attempted, or have tried but failed to achieve, the potential advantages of applying this approach systematically. This approach to industrialization strategy as widely practiced in East Asia is examined later in this chapter.

Governments may also employ various instruments of commercial policy, such as **tariffs**, import **quotas**, and export **subsidies**, and can manipulate commodity prices and thus their trade position vis-à-vis the rest of the world. Moreover, when developed-nation governments pursue restrictive economic policies that are designed to deal with purely domestic issues like inflation or unemployment, these policies can have profound negative effects on the economies of developing nations. The reverse, however, is not true. Developing nations' domestic economic policies generally have little impact on the economies of rich nations.

Governments often serve to reinforce the unequal distribution of resources and **gains from trade** resulting from differences in size and economic power. Rich-country governments can influence world economic affairs by their domestic and international policies, shaped by their often common interests. Despite the growing role of the World Trade Organization, there is no supranational or world government to protect and promote the interests of the weaker parties—especially the least developed countries—in such international affairs. A trade and industrialization strategy must therefore take into account the powerful governmental forces of the developed world.

Balanced Trade and International Price Adjustments

The theory of international trade, like other perfectly competitive general-equilibrium models in economics, is not only a full-employment model but also one in which flexible domestic and international product and resource prices always adjust instantaneously to conditions of supply and demand. In particular, the terms of trade (international commodity price ratios) adjust to equate supply and demand for a country's exportable and importable products so that trade is always balanced; that is, the value of exports (quantity times price) is always equal to the value of imports. With **balanced trade** and no international capital movements, balance of payments problems never arise in the pure theory of trade. But in some periods, as seen following the rapid increase in international oil prices in the 1970s, balance of payments deficits and the consequent depletion of foreign reserves (or the need to borrow foreign funds to cover commodity deficits) become a major cause of concern for all nations, rich and poor.

Trade Gains Accruing to Nationals

The sixth and final major assumption of traditional trade theory, that trade gains accrue to nationals in the trading countries, is more implicit than the other five. It is rarely spelled out, nor need it be if we accept the assumption that factors are internationally immobile. But we need to examine the implicit notion that if developing countries benefit from trade, it is the people of these countries who reap the benefits. The issue thus revolves around the question of who owns the land, capital, and skills that are rewarded as a result of trade. Are they nationals or foreigners? If both, in what proportions are the gains distributed?

Tariff A fixed-percentage tax on the value of an imported commodity levied at the point of entry into the importing country.

Quota In international trade, a physical limitation on the quantity of any item that can be imported into a country.

Subsidy A payment by the government to producers or distributors in an industry for such purposes as preventing the decline of that industry, expanding employment, increasing exports, or reducing selected prices paid by consumers.

Gains from trade The increase in output and consumption resulting from specialization in production and free trade with other economic units, including persons, regions, or countries.

Balanced trade A situation in which the value of a country's exports and the value of its imports are equal.

Enclave economies Small, economically developed regions in developing countries in which the remaining areas have experienced much less progress.

In some **enclave economies** in developing countries, such as those with substantial foreign-owned mining and plantation operations, foreigners often pay very low rents for the rights to use land, bring in their own foreign capital and skilled labor, hire local unskilled workers at subsistence wages, and have a minimal effect on the rest of the economy, even though they may generate significant export revenues. Much depends on the bargaining power of multinational corporations and developing-country governments. There are still some foreign-owned mining and plantation enclaves and many “manufacturing export enclaves” (personal computer assembly, shoe and toy manufacture, etc.) with few linkages to the wider economy, run by or for multinational corporations. The distinction, therefore, between gross domestic product (GDP), which is a measure of the value of output generated within defined geographic boundaries, and gross national income (GNI), which measures the income actually earned by nationals of that country, becomes extremely important. As the 2009 Stiglitz-Sen-Fitoussi (“Sarkozy”) Commission on the Measurement of Economic Performance and Social Progress put it, “GDP is the most widely used measure of economic activity....However, it has often been treated as if it were a measure of economic well-being....production can expand while income decreases or vice versa when account is taken of...income flows into and out of a country.”²⁷ To the extent that the export sector, or, for that matter, any sector of the economy, is foreign owned and operated, GDP will be that much higher than GNI, and fewer of the benefits of trade will actually accrue to nationals of developing countries.

With the proliferation of multinational corporations and increasing foreign ownership of companies in a wide range of countries, aggregate statistics for developing-country export earnings (and, indeed, GDP) may mask the fact that a country’s own citizens, especially those in lower income brackets, may not benefit from these exports. The major gains from trade may instead accrue to nonnationals, who often repatriate large proportions of these earnings. The inter- and intraindustry trade that is being carried out may look like trade between rich and poor nations. But, in reality, such trade may be conducted between rich nations and *other nationals of rich nations* operating in developing countries! Manufactures exports are generally more effective at generating modern-sector enlargement, but some export enclave manufacturing activities in developing countries may merely be masking the fact that a large proportion of the benefits are still being reaped by foreign enterprises. In short, a developing country’s export performance can be deceptive unless we analyze the character and structure of export earnings by ascertaining who owns or controls the factors of production that are rewarded as a result of export expansion.

Some Conclusions on Trade Theory and Economic Development Strategy

We can now attempt to provide some preliminary general answers to the five questions posed early in the chapter. We must stress that our conclusions are general and set in the context of the diversity of developing countries.

First, with regard to the rate, structure, and character of economic growth, our conclusion is that trade can be an important stimulus to rapid economic growth. This has been amply demonstrated by the successful experiences over the past half century of countries like China, Malaysia, Thailand, Brazil,

Chile, Taiwan, Singapore, and South Korea. Access to the markets of developed nations (an important factor for developing nations bent on export promotion) can provide an important stimulus for the greater utilization of idle human and capital resources. Expanded **foreign-exchange earnings** through improved export performance also provide the wherewithal by which a developing country can augment its scarce physical and financial resources. In short, where opportunities for profitable exchange arise, foreign trade can provide an important stimulus to aggregate economic growth.²⁸

But, as noted in earlier chapters, growth of national output may have little impact on development. An export-oriented strategy of growth, particularly in commodities with few linkages and when a large proportion of export earnings accrue to foreigners, may not only bias the structure of the economy in the wrong directions (by not catering to the real needs of local people) but also reinforce the internal and external dualistic and inequalitarian character of that growth. It all depends on the nature of the export sector, the distribution of its benefits, and its linkages with the rest of the economy and how these evolve over time.

Factors such as the widespread existence of increasing returns, the highly unequal international distribution of economic assets and power, the influence of large multinational corporations, and the combined ability of both governments and businesses to manipulate international prices, levels of production, and patterns of demand are crucial. Together, they lead us to the general conclusion that many developing countries have in the past benefited disproportionately less from their economic dealings with developed nations.

It should be apparent by now that the answer to the third question—the conditions under which trade can help a developing country achieve development aspirations—is to be found largely in the ability of developing nations—for example, as a caucus within WTO negotiations or G20 forums to extract and maintain favorable trade concessions from the developed nations. As we will address shortly, progress through the World Trade Organization and its predecessor, along with bilateral programs, such as the U.S. Africa Growth and Opportunity Act (AGOA) and the European Everything but Arms (EBA) initiative, provided a helpful but still very incomplete start. Also, the extent to which exports can efficiently utilize scarce capital resources while making maximum use of abundant but presently underutilized labor supplies will determine the degree to which export earnings benefit the ordinary citizen in developing countries. Again, links between export earnings and other sectors of the economy are crucial. Finally, much will depend on how well a developing nation can influence and control the activities of private foreign enterprises. The ability to deal effectively with multinational corporations in guaranteeing a fair share of the benefits to local citizens is extremely important. These issues are further examined later in this chapter and in Chapter 14.

The answer to the fourth question—whether developing countries can determine how much they trade—can only be speculative. For small and poor countries, the option of not trading at all, by closing their borders to the rest of the world, is obviously not realistic. Not only do they lack the resources and market size to be self-sufficient, but also their very survival, especially in the area of food production, often depends on their ability to secure foreign goods and resources. Some 32 of the least developed countries face annual threats of severe famine for which international assistance is not a choice but a necessity.

Foreign-exchange earnings

The sum total of all foreign currency receipts less expenditures during a given fiscal year.

Whether to trade or to remain in isolation is not the issue; the real issue turns out to be the balance between selling for the domestic market and exporting and, if the latter is chosen, whether to encourage exporting across the board or to promote targeted sectors.²⁹

Moreover, for most developing nations, the international economic system still offers the only real source of scarce capital and needed technological knowledge. The conditions under which such resources are obtained will greatly influence the character of the development process. Finally, for countries rich in mineral resources and raw materials, especially those that have been able to establish an effective international bargaining stance against the large corporations that purchase their exports (e.g., the members of OPEC), trade has been and continues to be a vital source of development finance.

The fifth question—whether on balance it is better for developing countries to look outward toward the rest of the world or more inward toward their own capacities for development—turns out not to be an either-or question at all.³⁰ While exploring profitable opportunities for trade with the rest of the world, developing countries can effectively seek ways to expand their share of world trade *and* extend their economic ties with one another. For example, by pooling their resources, small countries can overcome the limits of their small individual markets and their serious resource constraints while retaining an important degree of autonomy in pursuing their individual development aspirations. In this way, groups of small countries may have a better chance of achieving what China has been able to do in recent years: leveraging the bargaining power of its large market to insist on the best deal from potential foreign exporters and investors. Indeed, this strategy has likely been one of the factors helping China realize very high growth rates in recent decades. Benefits are still to be had from further expansion of trade among developing countries themselves.

Although the preceding argument is often overstated, it seems clear that if interregional political rivalries can be transcended, increased regional cooperation among developing nations offers an important component of a trade and industrialization strategy. Explicit developing-country policies, including free-trade areas such as the Association of Southeast Asian Nations (ASEAN) in Southeast Asia and Mercosur in South America, are at least partly responsible for this trend. Of course, the trend also reflects the development successes in Asia, many of whose economies have been growing faster than those in North America and Europe in recent years. Renewed efforts are being made in Africa, through the African Union and the New Partnership for Africa's Development (NEPAD) peer review program, but there is a long way to go.

We turn now to consider the advantages and disadvantages of alternative trade policies for developing countries in more detail.

12.5 Traditional Trade Strategies and Policy Mechanisms for Development:

Export Promotion versus Import Substitution

A traditional way to approach the complex issues of appropriate trade policies for development is to set these specific policies in the context of a broader

strategy of looking outward or looking inward.³¹ In the words of Paul Streeten, **outward-looking development policies** “encourage not only free trade but also the free movement of capital, workers, enterprises and students..., the multinational enterprise, and an open system of communications.” By contrast, **inward-looking development policies** stress the need for nations to evolve their own styles of development and to control their own destiny. This means setting policies to encourage indigenous “learning by doing” in manufacturing and developing technologies appropriate to a country’s resource endowments. According to proponents of inward-looking trade policies, greater self-reliance can be accomplished, in Streeten’s words, only if “you restrict trade, the movement of people, and communications and if you keep out the multinational enterprise, with its wrong products and wrong want-stimulation and hence its wrong technology.”³²

A lively debate regarding these two philosophical approaches has been carried on in the development literature since the 1950s. The debate pits the free traders, who advocate outward-looking export promotion strategies of industrialization, against the protectionists, who are proponents of inward-looking import substitution strategies. The latter predominated into the 1970s; the former gained the upper hand, especially among Western and World Bank economists, in the 1980s and early 1990s.

Basically, the distinction between these two traditional, trade-related development strategies is that advocates of **import substitution (IS)** believe that a developing economy should initially substitute domestic production of previously imported simple consumer goods (first-stage IS) and then substitute through domestic production for a wider range of more sophisticated manufactured items (second-stage IS)—all behind the protection of high tariffs and quotas on these imports. In the long run, IS advocates cite the benefits of greater domestic industrial diversification (“balanced growth”) and the ultimate ability to export some previously protected manufactured goods as economies of scale, low labor costs, and the positive externalities of learning by doing cause domestic prices to become more competitive with world prices.

By contrast, advocates of **export promotion (EP)** of both primary and manufactured goods cite the efficiency and growth benefits of free trade and competition, the importance of substituting large world markets for narrow domestic markets, the distorting price and cost effects of protection, and the tremendous successes of such export-oriented economies as South Korea, Taiwan, Singapore, Hong Kong, China, and others in Asia. They stress that firms in these economies have learned a great deal from the firms in the United States, Japan, and other developed-country economies that have been their long-term customers. Sometimes a distinction is made between “strong export promotion,” in which policies are explicitly geared to expansion of exports (in general, such as through a weak currency), rather than production for the domestic market, and “weak export promotion,” which emphasizes free trade and a level playing field and is viewed by advocates as likely to promote exports by comparison with previous import substitution policies (which tend to discourage exports in relative terms). Beyond this, many Asian countries also have adopted a more nuanced approach that draws on some elements of both to develop targeted sectors, which will be examined later in the chapter.

Outward-looking development policies Policies that encourage exports, often through the free movement of capital, workers, enterprises, and students; a welcome to multinational corporations; and open communications.

Inward-looking development policies Policies that stress economic self-reliance on the part of developing countries, including domestic development of technology, the imposition of barriers to imports, and the discouragement of private foreign investment.

Import substitution A deliberate effort to replace consumer imports by promoting the emergence and expansion of domestic industries.

Export promotion Governmental efforts to expand the volume of a country’s exports through increasing export incentives, decreasing disincentives, and other means in order to generate more foreign exchange and improve the current account of its balance of payments or achieve other objectives.

In practice, the distinction between IS and EP strategies is much less pronounced than many advocates would imply. Most developing economies have employed both strategies with different degrees of emphasis at one time or another. For example, in the 1950s and 1960s, the inward-looking industrialization strategies of the larger Latin American and Asian countries such as Chile, Peru, Argentina, India, Pakistan, and the Philippines were heavily IS-oriented. By the end of the 1960s, some of the key sub-Saharan African countries like Nigeria, Ethiopia, Ghana, and Zambia had begun to pursue IS strategies, and some smaller Latin American and Asian countries also joined in.³³ However, since the mid-1970s, the EP strategy has been increasingly adopted by a growing number of countries. The early EP adherents—South Korea, Taiwan, Singapore, and Hong Kong—were thus joined by the likes of Brazil, Chile, Thailand, and Turkey, which switched from an earlier IS strategy. It must be stressed, however, that most successful East Asian export promoters have pursued protectionist IS strategies sequentially and simultaneously in certain industries, so it is inaccurate to call them free traders, even though they are outward-oriented.³⁴

Against this background, we can now examine the issue of outward-looking export promotion versus inward-looking import substitution in more detail by applying the following fourfold categorization:

1. Primary outward-looking policies (encouragement of agricultural and raw-materials exports)
2. Secondary outward-looking policies (promotion of manufactured exports)
3. Primary inward-looking policies (mainly agricultural self-sufficiency)
4. Secondary inward-looking policies (manufactured commodity self-sufficiency through import substitution)

Then we turn our attention to eclectic strategies, particularly export-oriented strategic industrialization, and South-South economic integration.

Export Promotion: Looking Outward and Seeing Trade Barriers

The promotion of primary or secondary exports has long been considered a major ingredient in any viable long-run development strategy. The colonial territories of Africa and Asia, with their foreign-owned mines and plantations, were classic examples of primary outward-looking regions. It was partly in reaction to this enclave economic structure and partly as a consequence of the industrialization bias of the 1950s and 1960s that most developing countries put great emphasis on the production of manufactured goods initially for the home market (secondary inward) and then for export (secondary outward).

Primary-Commodity Export Expansion: Limited Demand As noted earlier in this chapter, many low-income countries still rely on primary products for a majority of their export earnings. With the notable exception of petroleum exports and a few needed minerals, primary-product exports have grown more slowly than total world trade.

On the demand side, there appear to be at least five factors working against the rapid expansion of primary-product and especially agricultural exports. First, the income elasticities of demand for agricultural foodstuffs and raw materials are relatively low compared with those for fuels, certain minerals, and manufactures. For example, the income elasticities of demand for sugar, cacao, tea, coffee, and bananas have all been estimated at less than 1, with most in the range of 0.3–0.6. Inelastic demand means that only a sustained high rate of per capita income growth in the developed countries can lead to even modest export expansion of these particular commodities from the developing countries. (Many primary exporters have benefited from the boom in China since about 2002—excepting the 2008–2009 debacle—and this will be followed carefully.)

Second, developed-country population growth rates are now at or near the replacement level, so little expansion can be expected from this source. Third, the price elasticity of demand for most primary commodities is relatively low. When relative agricultural prices are falling, as they have been during most of the past five decades, such low elasticities mean less total revenue for exporting nations.

With the exception of oil and a few minor commodities, **international commodity agreements** have not fared well. Such agreements are intended to set overall output levels, stabilize world prices, and assign quota shares to various producing nations for such items as coffee, tea, copper, lead, and sugar. To work effectively, they require cooperation and compromise among participants. Commodity agreements can also provide greater protection to individual exporting nations against excessive competition and the overexpansion of world production. Such overexpansion of supply tends to drive down prices and curtail the growth of earnings for all countries. In short, commodity agreements attempt to guarantee participating nations a relatively fixed share of world export earnings and a more stable world price for their commodity. But proposals by the United Nations Conference on Trade and Development (UNCTAD) for the establishment of a common fund to finance “buffer stocks” to support the prices of some 19 primary commodities (including sugar, coffee, tea, bauxite, jute, cotton, tin, and vegetable oil) produced by various developing nations have made little progress. Most existing non-oil commodity agreements have either failed (tin) or been largely ignored by producers (coffee, sugar). Even in the best scenarios, such agreements cannot be effective for perishable commodities. Imagine trying to operate a buffer stock of bananas!

The fourth and fifth factors working against the long-run expansion of primary-product export earnings—the development of synthetic substitutes and the growth of agricultural protection in the developed countries—are perhaps the most important. Synthetic substitutes for commodities like cotton, rubber, sisal, jute, hide, skins, and copper (replaced by glass fiber optics for communication networks) act both as a brake against higher commodity prices and as a direct source of competition in world export markets. The synthetic share of world market export earnings has generally risen over time, while the share of natural products has fallen. In the case of agricultural protection, which usually takes the form of tariffs, quotas, and, increasingly, nontariff barriers such as sometimes arbitrary sanitary laws regulating food and fiber imports, or

International commodity agreement A formal agreement by sellers of a common internationally traded commodity (e.g., coffee, sugar) to coordinate supply to maintain price stability.

cryptic rules of origin, the effects can be devastating to developing countries' export earnings. Such nontariff barriers can all but negate the otherwise promising moves by rich countries to nearly abolish conventional exports for most developing-country exports. The common agricultural policy of the European Union (EU), for example, has resulted in greater subsidies that have harmed the competitiveness of developing countries.

On the supply side, a number of factors also work against the rapid expansion of primary-product export earnings. The most important is the structural rigidity of many rural production systems in developing countries. We discussed rigidities—such as limited resources; poor climate; bad soils; antiquated rural institutional, social, and economic structures; and nonproductive patterns of land tenure—in Chapter 9. Whatever the international demand situation for particular commodities (which will differ from commodity to commodity), little export expansion can be expected when rural economic and social structures militate against positive supply responses from peasant farmers who are averse to risk. Furthermore, in developing nations with markedly dualistic farming structures (i.e., large, corporate capital-intensive farms existing side by side with thousands of fragmented, low-productivity peasant holdings), any growth in export earnings is likely to be distributed very unevenly among the rural population. Small farmers have been further disadvantaged in countries (mostly in Africa) in which agricultural marketing boards act as middlemen between the farmers and export markets. These boards—or at least their practices of significantly suppressing prices that farmers can receive—have been largely dismantled in recent years.

Primary export growth has remained modest, partly due to the pernicious effects of developed-country trade policies (such as the United States' sugar and cotton subsidies) and foreign-aid policies that depress agricultural prices in the least developed countries and discourage production. For example, the EU's policy of selling subsidized beef to the nations of West Africa in the guise of foreign assistance has devastated cattle prices in those countries. As summarized by Kevin Watkins and Joachim von Braun of the International Food Policy Research Institute:

Small farmers in developing countries suffer on several counts from rich-country farm policies. Northern production subsidies lower prices for farm produce. Unable to compete against subsidized competition, the world's poorest farmers are often pushed out of international and even domestic markets. The upshot is an agricultural trading system in which success depends less on comparative advantage than on comparative access to subsidies. Small farmers are efficient, innovative, and potentially competitive, and creatively combine farming with off-farm work. But the world's poorest farmers cannot compete against the world's richest treasuries, nor should they have to.³⁵

We may conclude, therefore, that the successful promotion of primary-product exports in low-income countries and for the benefit of the poor cannot occur unless there is a reorganization of rural social and economic structures along the lines suggested in Chapter 9 to raise total agricultural productivity and distribute the benefits more widely. The primary objective of any rural development strategy is widely accepted to be *first* to provide sufficient food to feed local people and only then to be concerned about export expansion. Given the structure of world demands for primary products, the threat of local

food shortages and thus the desire of potential importers to focus on agricultural self-sufficiency, the inevitability of the development of further synthetic substitutes, and the (tragic) unlikelihood of significantly lower levels of agricultural protection among developed nations in light of the stalled trade talks, the real scope for primary-product export expansion in individual developing nations seems limited.³⁶

Expanding Exports of Manufactured Goods

The expansion of manufactured exports has been encouraged by the spectacular export performances of countries like South Korea, Singapore, Hong Kong, Taiwan, and China. For example, for decades, Taiwan's total exports grew at an annual rate of over 20%, and exports from South Korea grew even faster. In both cases, this export growth was led by manufactured goods, which contributed over 80% of both nations' foreign-exchange earnings. For the developing world as a whole, manufactured exports grew from 6% of their total merchandise exports in 1950 to almost 64% by 2000. Taken together, by 2011, the low- and middle-income countries accounted for about 29% of the world's manufactured exports; China commanded a fast-growing share. However, the low-income countries accounted for just under 1% of the world total.³⁷

The export successes of recent decades, especially among the Asian Tigers, have provided impetus for arguments by market fundamentalists (see Chapter 3) that economic growth is best served by allowing market forces, free enterprise, and open economies to prevail while minimizing government intervention. However, evidence from East Asia does not support this view of how export success was achieved. In South Korea, Taiwan, and Singapore (as in Japan earlier and to a large degree China more recently), the production and composition of exports was not left to the market but resulted from planned intervention by the government while making ample use of the profit incentive.³⁸ We return to this consideration later in the chapter.

The demand problems for export expansion of many manufactured goods, though different in basic economic content from those for primary products, can still pose similar problems for developing countries. For many years, there was widespread protection in developed nations against the manufactured exports of developing countries, which was in part the direct result of the successful penetration of low-cost, labor-intensive manufactures from countries like Taiwan, Hong Kong, and South Korea during the 1960s and 1970s. And as noted earlier, relative prices of the most basic manufactured goods have also fallen.

Industrial-nation trade barriers have been extensive. During the 1980s, for example, 20 of the 24 industrialized countries *increased* their protection against developing countries' manufactured or processed products. Moreover, their rates of protection were considerably higher against developing-country exports than against those of high-income countries. Then there are the nontariff barriers, which came to form the main protection against manufactured exports from developing countries, affecting at least one-third of them. A major example was the **Multifiber Arrangement (MFA)**, in effect until 2005, a complex system of mostly bilateral quotas against exports of cotton, wool, and synthetic fiber products. The United Nations Development Programme

Multifiber Arrangement

(MFA) A set of nontariff quotas established by developed countries on imports of cotton, wool, synthetic textiles, and clothing from individual developing countries.

estimated that the MFA cost the developing world \$24 billion a year in lost textile and clothing export earnings. The end of the MFA has benefited China most, though some other developing countries, notably Bangladesh, have been able to hold their market share. Much-publicized initiatives for opening markets to the least developed countries, most prominently through the African Growth and Opportunities Act in the United States and Everything but Arms in the European Union, noted earlier, are bilateral offers that can later be withdrawn. These programs also have impediments such as a time horizon that is too short to be effective at encouraging investment or requiring costly and cumbersome documentation, which creates a high hurdle for low-income countries.³⁹

Whether displaced high-wage workers in developed-country manufacturing (and now services) will continue to permit the unimpeded entry of low-wage products remains to be seen. WTO rules have eliminated many formal barriers, but many implicit barriers remain. The encouraging pace of tariff reductions at the time of the Uruguay Round and the early years of the WTO has in recent years slowed almost to a halt. Antidumping “investigations” increased significantly, reaching a peak in 1999, with the United States the largest user of these protectionist measures. Although the number of new investigations subsequently declined in the early years of the new century, they remain an important weapon in the protectionist arsenal. For example, as the global recession got underway in 2007, antidumping investigations surged until the end of 2009. Countervailing duty investigations are also on the rise: “Buy American” and analogous legislation that garnered much publicity in stimulus packages following the 2008 crisis are of dubious legality but can have major impacts on developing-country investments, at least for as long as they remain in place, and can also function in the protectionist arsenal as a deterrent. Regional trading agreements, including the North American Free Trade Agreement (NAFTA) and the EU, may also have the effect of discriminating against exports from nonmember developing countries.⁴⁰ Analysts also questioned how long the United States could continue to act as the “consumer of last resort” in the wake of its large and chronic **trade deficits** and how developing countries would respond to the apparently inevitable decline in the value of the U.S. dollar; the rebounding U.S. trade deficit after the financial crisis surprised many analysts, but at some point, this export opportunity for developing nations might well be reduced. It was also widely doubted how many other developed-country markets would open to the extent seen in the United States during this period (this topic is discussed further in Chapter 13).

As in the case of agricultural and other primary production, the uncertain export outlook should be no cause for curtailing the needed expansion of manufacturing production to serve local markets. There is also great scope for mutually beneficial trade in manufactures among developing countries themselves within the context of the gradual economic integration of their national economies. South-South trade in minerals and agriculture has been rising much more quickly than South-South manufactures trade. China’s primary-goods investments in, and exports from, Africa are the most visible, but the emergence of manufacturing zones in Africa working under contract with Chinese firms is also significant. On the other hand, antidumping and other trade complaints against China by other developing nations are rising rapidly.

Trade deficit An excess of import expenditures over export receipts measured on the current account.

Import Substitution: Looking Inward but Still Paying Outward

Observing weak world markets for their primary products and subscribing to the widespread belief in the magic of industrialization and the Prebisch-Singer hypothesis, developing nations turned to an import substitution strategy of urban industrial development in the post-World War II decades. Some countries still follow this strategy for both economic and political reasons, although pressure from the WTO, IMF, and World Bank imposes high opportunity costs on such endeavors. As noted earlier, import substitution entails an attempt to replace commodities that are being imported, usually manufactured consumer goods, with domestic sources of production and supply. The typical strategy is first to erect tariff barriers or quotas on certain imported commodities and then to try to set up a local industry to produce these goods—items such as radios, bicycles, or household appliances. Typically, this involves joint ventures with foreign companies, which are encouraged to set up their plants behind the wall of tariff protection and given all kinds of tax and investment incentives. Although initial costs of production may be higher than former import prices, the economic rationale put forward for the establishment of import-substituting manufacturing operations is either that the industry will eventually be able to reap the benefits of large-scale production and lower costs (the so-called **infant industry** argument for tariff protection) or that the balance of payments will be improved as fewer consumer goods are imported. Often a combination of both arguments is advanced. Eventually, it is hoped, the infant industry will grow up and be able to compete in world markets. It will then be able to generate net foreign-exchange earnings once it has lowered its average costs of production. Let us see how the theory of protection can be used to demonstrate this process.

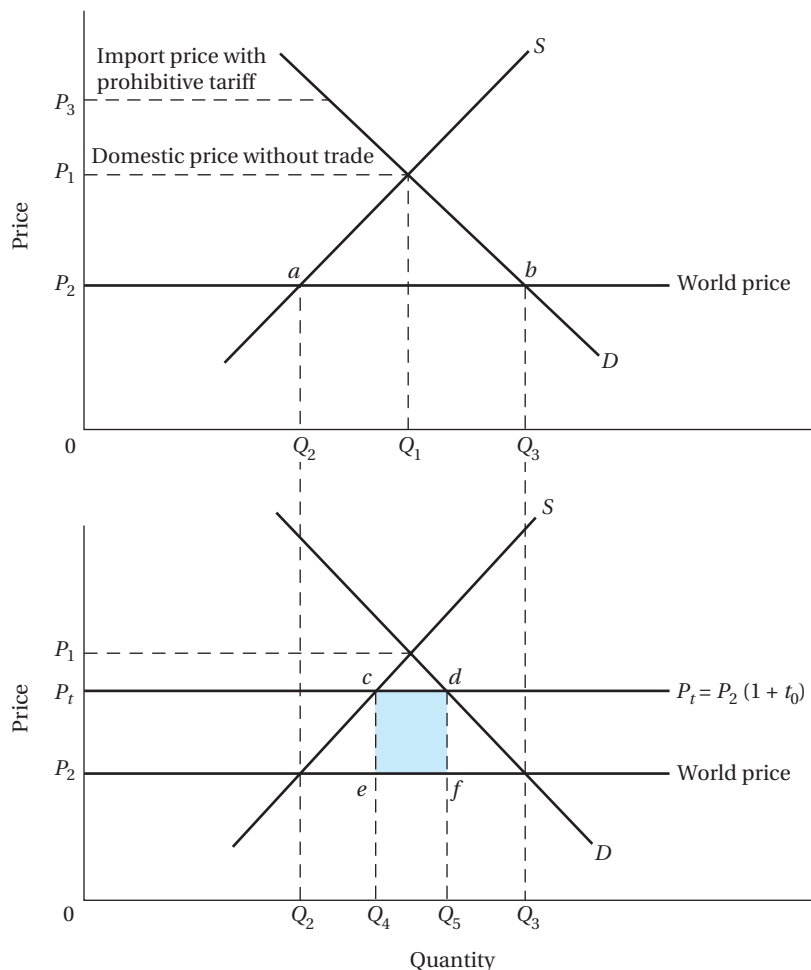
Infant industry A newly established industry, usually protected by a tariff barrier as part of a policy of import substitution.

Tariffs, Infant Industries, and the Theory of Protection

A principal mechanism of the import substitution strategy is the erection of protective tariffs (taxes on imports) or quotas (limits on the quantity of imports) behind which IS industries are permitted to operate. The basic economic rationale for such protection is the infant-industry argument. Tariff protection against the imported commodity is needed, so the argument goes, in order to allow the now higher-priced domestic producers enough time to learn the business and to achieve the economies of scale in production and the external economies of learning by doing that are necessary to lower unit costs and prices. With enough time and sufficient protection, the infant will eventually grow up, be directly competitive with developed-country producers, and no longer need this protection. Ultimately, as actually seen in the case of many formerly protected IS industries in South Korea and Taiwan, domestic producers hope to be able not only to produce for the domestic market without a tariff wall or government subsidies but also to export their now lower-cost manufactured goods to the rest of the world. Thus, for many developing-country industries, in theory, an IS strategy becomes the prerequisite for an EP strategy. It is for this reason, among others (including the desire to reduce dependence and attain greater self-reliance, the need to build a domestic industrial base, and the ease of raising substantial tax revenue from tariff collections),⁴¹ that import substitution has been appealing to so many governments.

The basic theory of protection is an old and controversial issue in the field of international trade. It is relatively simple to demonstrate. Consider Figure 12.3. The top portion of the figure shows standard domestic supply and demand curves for the industry in question (say, shoes) if there were no international trade—that is, in a closed economy. The equilibrium home price and quantity would be P_1 and Q_1 . If this country were then to open its economy to world trade, its small size in relation to the world market would mean that it would face a horizontal, perfectly elastic demand curve. In other words, it could sell (or buy) all it wanted at a lower world price, P_2 . Domestic consumers would benefit from the lower price of imports and the resultant greater quantity purchased, while domestic producers and their employees would clearly suffer as they lost business to lower-cost foreign suppliers. Thus, at the lower world price, P_2 , the quantity demanded would rise from Q_1 to Q_3 , whereas the

FIGURE 12.3 Import Substitution and the Theory of Protection



quantity supplied by domestic producers would fall from Q_1 to Q_2 . The difference between what domestic producers would be willing to supply at the lower P_2 world price (Q_2) and what consumers would want to buy (Q_3) would be the amount that would be imported—shown as line ab in Figure 12.3.

Facing the potential loss of domestic production and jobs as a result of free trade and desiring to obtain infant-industry protection, local producers will seek tariff relief from the government. The effects of a tariff (equal to t_0) are shown in the lower half of Figure 12.3. The tariff causes the domestic price of shoes to rise from P_2 to P_t —that is, $P_t = P_2 (1 + t_0)$. Local consumers now have to pay the higher price and will reduce their quantity demanded from Q_3 to Q_5 . Domestic producers can now expand production (and employment) up to quantity Q_4 from Q_2 . The rectangular area $cdfe$ measures the amount of the tariff revenue collected by the government on imported shoes.

Clearly, the higher the tariff, the closer to the domestic price the sum of the world price plus the import tax will be. In the classic infant-industry IS scenario, the tariff may be so high that it raises the price of the imported product above P_1 to, say, P_3 in the upper diagram of Figure 12.3 so that imports are effectively prohibited and the local industry is allowed to operate behind a fully protective tariff wall, once again selling Q_1 output at P_1 price. In the short run, it is clear that the impact of such a prohibitive tariff is to penalize consumers, who are in effect subsidizing domestic producers and their employees through higher prices and lower consumption. Alternatively, we can say that a tariff redistributes income from consumers to producers. However, in the longer run, advocates of IS protection for infant industries argue that everyone will benefit as domestic and other shoe manufacturers reap the benefits of economies of scale and learning by doing so that ultimately the domestic price falls below P_2 (the world price). Production will then occur for *both* the domestic and world markets, domestic consumers as well as domestic producers and their employees will benefit, protective tariffs can be removed, and the government will be able to replace any lost tariff revenue with taxes on the now very much higher incomes of domestic manufactures. It all sounds logical and persuasive in theory. But how has it performed in practice?

The IS Industrialization Strategy and Results

Most observers agree that the import-substituting strategy of industrialization has been largely unsuccessful.⁴² Specifically, there have been five undesirable outcomes. First, secure behind protective tariff walls and immune from competitive pressures, many IS industries (both publicly and privately owned) remain inefficient and costly to operate. Second, the main beneficiaries of the import substitution process have been the foreign firms that were able to locate behind tariff walls and take advantage of liberal tax and investment incentives. After deducting interest, profits, and royalty and management fees, much of which are remitted abroad, the little that may be left over usually accrues to the wealthy local industrialists with whom foreign manufacturers cooperate and who provide their political and economic cover.

Third, most import substitution has been made possible by the heavy and often government-subsidized importation of capital goods and intermediate products by foreign and domestic companies. In the case of foreign companies,

much of this is purchased from parent and sister companies abroad. There are two immediate results. On the one hand, capital-intensive industries are set up, usually catering to the consumption habits of the rich while having a minimal employment effect. On the other hand, far from improving the developing nation's balance of payments situation and alleviating the debt problem, indiscriminate import substitution often worsens the situation by increasing a need for imported capital-good inputs and intermediate products while, as just noted, a good part of the profits is remitted abroad in the form of private transfer payments.

A fourth detrimental effect of many import substitution strategies has been their impact on traditional primary-product exports. To encourage local manufacturing through the importation of cheap capital and intermediate goods, **official exchange rates** (the rates at which the central bank of a nation is prepared to purchase specific foreign currencies) have often been artificially overvalued. This has had the effect of raising the price of exports and lowering the price of imports in terms of the local currency. For example, if the free-market exchange rate between Pakistani rupees and U.S. dollars was 20 to 1 but the official exchange rate was 10 to 1, an item that cost \$10 in the United States could be imported into Pakistan for 100 rupees (excluding transport costs and other service charges). If the **free-market exchange rate** (the exchange rate determined by the supply and demand for Pakistani rupees in terms of dollars) prevailed, that item would cost 200 rupees. Thus, by means of an **overvalued exchange rate**, developing-country governments have effectively lowered the domestic currency price of their imports. At the same time, their export prices have increased—for example, at an exchange rate of 10 to 1, U.S. importers would have to pay 10 cents for every 1-rupee item rather than the 5 cents they would pay if the hypothetical free-market ratio of 20 to 1 were in effect.

The net effect of overvaluing exchange rates in the context of import substitution policies is to encourage capital-intensive production methods still further (because the price of imported capital goods is artificially lowered) and to penalize the traditional primary-product export sector by artificially raising the price of exports in terms of foreign currencies. This overvaluation, then, causes local farmers to be less competitive in world markets. In terms of its income distribution effects, the outcome of such government policies may be to penalize the small farmer and the self-employed while improving the profits of the owners of capital, both foreign and domestic. Industrial protection thus has the effect of taxing agricultural goods in the home market as well as discouraging agricultural exports. Import substitution policies have in practice often worsened the local distribution of income by favoring the urban sector and higher-income groups while discriminating against the rural sector and lower-income groups.

Fifth and finally, import substitution, which may have been conceived with the idea of stimulating infant-industry growth and self-sustained industrialization by creating “forward” and “backward” linkages with the rest of the economy, has often inhibited that industrialization. Many infant industries never grow up, content to hide behind protective tariffs and governments loath to force them to be more competitive by lowering tariffs. In fact, governments themselves often operate protected industries as state-owned enterprises.

Official exchange rate Rate at which the central bank will buy and sell the domestic currency in terms of a foreign currency such as the U.S. dollar.

Free-market exchange rate Rate determined solely by international supply and demand for domestic currency expressed in terms of, say, U.S. dollars.

Overvalued exchange rate An official exchange rate set at a level higher than its real or shadow value.

Moreover, by increasing the costs of inputs to potentially forward-linked industries (those that purchase the output of the protected firm as inputs or intermediate products in their own productive process, such as a printer's purchase of paper from a locally protected paper mill) and by purchasing their own inputs from overseas sources of supply rather than through backward linkages to domestic suppliers, inefficient import-substituting firms may in fact block the hoped-for process of self-reliant integrated industrialization.⁴³

Tariff Structures and Effective Protection Because import substitution programs are based on the protection of local industries against competing imports primarily through the use of tariffs and physical quotas, we need to analyze the role and limitations of these commercial policy instruments in developing nations. As we have already discussed, governments impose tariffs and physical quotas on imports for a variety of reasons. For example, tariff barriers may be erected to raise public revenue. In fact, given the administrative and political difficulties of collecting local income taxes, fixed-percentage taxes on imports collected at a relatively few ports or border posts often constitute one of the cheapest and most efficient ways to raise government revenue. In many developing countries, these foreign-trade taxes are thus a central feature of the overall fiscal system. **Nontariff trade barriers**, such as physical quotas on imports like automobiles and other luxury consumer goods, though more difficult to administer and more subject to delay, inefficiency, and rent-seeking corruption (e.g., with regard to the granting of import licenses), provide an effective means of restricting the entry of particularly troublesome commodities. Tariffs, too, may serve to restrict the importation of non-necessity products (usually expensive consumer goods). By restricting imports, both quotas and tariffs can improve the balance of payments. And like overvaluing the official rate of foreign exchange, tariffs may be used to improve a nation's terms of trade. However, in a small developing country that is unable to influence world prices of its exports or imports, this argument for tariffs (or devaluation) has little validity. Finally, as noted, tariffs may form an integral component of an import substitution policy of industrialization.

Whatever the means used to restrict imports, such restriction always protects domestic firms from competition with producers from other countries. To measure the degree of protection, we need to ask by how much these restrictions cause the domestic prices of imports to exceed what their prices would be if there were no protection. There are two basic measures of protection: the nominal rate and the effective rate.

The **nominal rate of protection** shows the extent, in percentages, to which the domestic price of imported goods exceeds what their price would be in the absence of protection. Thus, the nominal (ad valorem) tariff rate, t , refers to the final prices of commodities and can be defined simply as

$$t = \frac{p' - p}{p} \quad (12.1)$$

where p' and p are the unit prices of industry's output with and without tariffs, respectively.

Nontariff trade barrier A barrier to free trade that takes a form other than a tariff, such as quotas or (possibly arbitrary) sanitary requirements.

Nominal rate of protection An ad valorem percentage tariff levied on imports.

Effective rate of protection

The degree of protection on value added as opposed to the final price of an imported product—usually higher than the nominal rate of protection.

Value added Amount of a product's final value that is added at each stage of production.

For example, if the domestic price, p' , of an imported automobile is \$5,000 whereas the CIF (cost plus insurance and freight) price, p , when the automobile arrives at the port of entry is \$4,000, the nominal rate of tariff protection, t , would be 25%. This is the kind of tariff depicted as t_0 in Figure 12.3.

By contrast, the **effective rate of protection** shows the percentage by which the **value added** at a particular stage of processing in a domestic industry can exceed what it would be without protection. In other words, it shows by what percentage the sum of wages, interest, profits, and depreciation allowances payable by local firms could, as a result of protection, exceed what this sum would be if these same firms had to face unrestricted competition (no tariff protection) from foreign producers.⁴⁴ The effective rate, ρ , can therefore be defined as the difference between value added (percent of output) in domestic prices and value added in world prices, expressed as a percentage of the latter, so that

$$\rho = \frac{v' - v}{v} \quad (12.2)$$

where v' and v are the value added per unit of output with and without protection, respectively. The result can be either positive or negative, depending on whether v' is greater or less than v . For most developing economies, it is highly positive.

The important difference between nominal and effective rates of protection can be illustrated by means of an example.⁴⁵ Consider a nation without tariffs in which automobiles are produced and sold at the international or world price of \$10,000. The value added by labor in the final assembly process is assumed to be \$2,000, and the total value of the remaining inputs is \$8,000. Assume for simplicity that the prices of these nonlabor inputs are equal to their world prices. Suppose that a nominal tariff of 10% is now imposed on imported automobiles, which raises the domestic price of cars to \$11,000 but leaves the prices of all the other importable intermediate units unchanged. The domestic process of automobile production can now spend \$3,000 per unit of output on labor inputs, as contrasted with \$2,000 per unit before the tariff. The theory of effective protection therefore implies that under these conditions, the nominal tariff of 10% on the final product (automobiles) has resulted in an effective rate of protection of 50% for the local assembly process in terms of its value added per unit of output. It follows that for any given nominal tariff rate, the effective rate is greater the smaller the value added of the process; that is, $\rho = t/(1-a)$, where t is the nominal rate on final product and a is the proportionate value of the importable inputs in a free market where these inputs are assumed to enter the country duty-free.

Most economists argue that the effective rate of protection is the more useful concept (even though the nominal or ad valorem rate is simpler to measure) for ascertaining the degree of protection and encouragement afforded to local manufacturers by a given country's tariff structure. This is because effective rates of protection show the net effect on a firm or industry of restrictions on the imports of both its outputs and its inputs. For most countries, developing and developed, the effective rate of protection normally exceeds the nominal rate of protection, sometimes by as much as 200%. For example, average levels of effective protection have exceeded 300% for Pakistan and Uruguay, 100% for Argentina and Brazil, 50% for the Philippines, and 25%

for Mexico.⁴⁶ However, effective rates of protection have fallen substantially since the mid-1980s.

Among the many implications of analyzing effective versus nominal tariff structures with regard to developing countries, two stand out as particularly noteworthy. First, it is clear that most developing countries have pursued import-substituting programs of industrialization with emphasis on the local production of final consumer goods for which a ready market was presumed to exist. Moreover, final goods production is generally less technically sophisticated than intermediate capital-goods production. The expectation was that in time, rising demand and economies of scale in finished-goods production would create strong backward linkages leading to the creation of domestic intermediate-goods industries. It is also clear that for most developing countries, the record of performance has been disappointing. Part of the reason for this lack of success has been that developing-country tariff structures have afforded exceedingly high rates of effective protection to final-goods industries while granting considerably less effective protection to intermediate and capital goods. The net result is an attraction of scarce resources away from intermediate-goods production and toward the often inefficient production of highly protected final consumer goods. Backward linkages do not develop, intermediate-good import costs rise, and the development of an indigenous capital-goods industry focusing on efficient, low-cost, labor-intensive techniques is severely impeded.

Second, even though nominal rates of protection in developed countries on imports from the developing countries may seem relatively low, effective protection rates can be quite substantial. As noted earlier in the cases of cacao and sugar, raw materials are usually imported duty-free, whereas processed products such as roasted and powdered coffee, coconut oil, and cocoa butter appear to have low nominal tariffs. The theory of effective protection suggests that in combination with zero tariffs on imported raw materials, low nominal tariffs on processed products can represent substantially higher effective rates of protection. For example, if a tariff of 10% is levied on processed coconut oil whereas copra (dried coconut) can be imported duty-free, and if the value added in making oil from copra is 5% of the total value of coconut oil, the *process* is actually being protected at 200%! This greatly inhibits the development of food and other raw-materials-processing industries in developing nations and ultimately cuts back on their potential earnings of foreign exchange.

Effective rates of protection are also considerably higher than of nominal rates protection in the developed countries, especially in goods where low-income countries can be most competitive. For example, until recently, the effective rate of protection on thread and yarn, textile fabrics, clothing, wood products, leather, and rubber goods has averaged more than twice the nominal rate of protection on these same items in the United States and the European Union. In the EU, effective rates of protection on coconut oil have been 10 times the nominal rate of protection (150% compared with 15%), and those on processed soybeans have been 16 times the nominal rate of protection (160% as opposed to 10%).

To sum up, the standard argument for tariff protection in developing countries has four major components:

1. Duties on trade are a major source of government revenue in a majority of developing countries because they are a relatively easy form of taxation to impose and even easier to collect.

2. Import restrictions represent an obvious response to chronic balance of payments and debt problems.
3. Protection against imports is said to be an appropriate means for fostering economies of scale, positive externalities, and industrial self-reliance as well as overcoming the pervasive state of economic dependence in which many or most developing countries understandably perceive themselves.
4. By pursuing policies of import restriction, developing countries can gain greater control over their economic destinies while encouraging foreign business interests to invest in local import-substituting industries, generating high profits and thus the potential for greater saving and future growth. They can also obtain imported equipment at relatively favorable prices and reserve an already established domestic market for local or locally controlled producers. Eventually, they may even become competitive enough to export to the world market.

Although these arguments can sound convincing and some protective policies have proved highly beneficial to the developing world, many have failed to bring about their desired results. Protection is a tool of economic policy that must be employed selectively and wisely, not as a panacea to be applied indiscriminately and without consideration of both short- and long-term ramifications.

Foreign-Exchange Rates, Exchange Controls, and the Devaluation Decision

We have already briefly discussed the question of foreign-exchange rates. Remember that a country's official exchange rate is the rate at which its central bank is prepared to transact exchanges of its local currency for other currencies in approved foreign-exchange markets. Official exchange rates are usually quoted in terms of U.S. dollars—so many pesos, reals, pounds, euros, rupees, bhat, or yen per dollar. For example, the official exchange rate of the South African rand for U.S. dollars in 1998 was approximately 5 rand per dollar, and the Indian rupee was officially valued at approximately 40 rupees per dollar. If a South African manufacturer wished to import fabrics from an Indian textile exporter at a cost of 40,000 rupees, he would need 5,000 rand to make the purchase. However, since most foreign-exchange transactions are conducted in U.S. dollars, the South African importer would need to purchase \$1,000 worth of foreign exchange from the central bank of South Africa for his 5,000 rand and then transmit these dollars through official channels to the Indian exporter. Currently, few major economies operate traditional fixed exchange rates except those pegged to the Euro; China moved from a fixed exchange rate to a managed float (giving more flexibility) in 2005. Note that many developing countries with managed floats still use intervention to maintain significant control over their exchange rates.

Official foreign-exchange rates are not necessarily set at or near the economic equilibrium price for foreign exchange—that is, the rate at which the domestic demand for a foreign currency such as dollars would just equal its supply in the absence of governmental regulation or intervention. In fact, as noted earlier, historically the currencies of most developing countries have

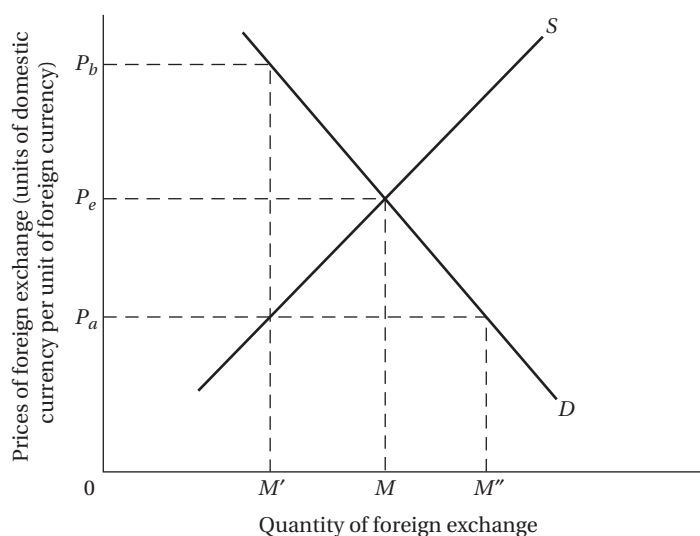
been overvalued by the exchange rate. Whenever the official price of foreign exchange is established at a level that in the absence of any governmental restrictions or controls would result in an excess of local demand over the available supply of foreign exchange, the domestic currency in question is said to be overvalued.

In situations of excess demand, developing-country central banks have three basic policy options to maintain the official rate of exchange. First, they can attempt to accommodate the excess demand by running down their reserves of foreign exchange (as Mexico did from 1991 to 1994 and Thailand, Malaysia, Indonesia, and the Philippines did from 1995 to 1997) or by borrowing additional foreign exchange abroad and thereby incurring further debts (as many African countries did in the 1980s and Indonesia and South Korea did in the 1990s). Second, they can attempt to curtail the excess demand for foreign exchange by pursuing commercial policies and tax measures that are designed to lessen the demand for imports (e.g., tariffs, physical quotas, licensing). Third, they can regulate and intervene in the foreign-exchange market by rationing the limited supply of available foreign exchange to “preferred” customers.⁴⁷ Such rationing is more commonly known as **exchange control**. The policy has been widely used throughout the developing world, although it is much less common than it once was.

The mechanism and operation of exchange control can be illustrated diagrammatically with the aid of Figure 12.4. Under free-market conditions, the equilibrium price of foreign exchange would be P_e , with a total of M units of foreign exchange demanded and supplied. If, however, the government maintains an artificially low price of foreign exchange (i.e., an overvaluation of its domestic currency) at P_a , the supply of foreign exchange will amount to only M' units because exports are overpriced. But at price P_a , the demand

Exchange control A governmental policy designed to restrict the outflow of domestic currency and prevent a worsened balance of payments position by controlling the amount of foreign exchange that can be obtained or held by domestic citizens.

FIGURE 12.4 Free-Market and Controlled Rates of Foreign Exchange



for foreign exchange will be M'' units, with the result that there is an “excess demand” equal to $M'' - M'$ units. Unless foreigners are willing to lend to or invest in the country to make up the difference, some mechanism will have to be devised to ration the available supply of M' . If the government were to auction this supply, importers would be willing to pay a price of P_b for the foreign exchange. In such a case, the government would make a profit of $P_b - P_a$ per unit. However, such open auctions are rarely carried out, and limited supplies of foreign exchange are allocated through some administrative quota or licensing device. Opportunities for corruption, evasion, and the emergence of black markets are thus made possible because importers are willing to pay as much as P_b per unit of foreign exchange.

Why have a majority of developing-country governments at one time or another opted for an overvalued official exchange rate? Many have done so as part of widespread programs of rapid industrialization and import substitution. As mentioned earlier, overvalued exchange rates reduce the domestic currency price of imports below the level that would exist in a free market for foreign exchange (i.e., by the forces of supply and demand). Cheaper imports, especially capital and intermediate producer goods, are needed to fuel the industrialization process. But overvalued exchange rates also lower the domestic currency price of imported consumer goods, especially expensive luxury products. Developing countries wishing to limit such unnecessary and costly imports often need to establish import controls (mostly physical quotas) or to set up a system of **dual** or **parallel exchange rates**, with one rate, usually highly overvalued and legally fixed, applied to capital and intermediate-good imports and the other, much lower and illegal (or freely floating), for luxury consumption good imports. Such dual exchange-rate systems make the domestic price of imported luxury goods very high while maintaining the artificially low and thus subsidized price of producer good imports. Needless to say, dual exchange-rate systems, like exchange controls and import licenses, present serious problems of administration and can promote black markets, corruption, evasion, and rent seeking (see Chapter 11).⁴⁸

However, overvalued currencies reduce the return to local exporters and to import-competing industries that are not protected by heavy tariffs or physical quotas. Exporters receive less domestic currency for their products than would be forthcoming if the free-market exchange rate prevailed. Moreover, in the absence of export subsidies to reduce the foreign-currency price of exports, exporters, mostly farmers, become less competitive in world markets because the price of their produce has been artificially elevated by the overvalued exchange rate. In the case of import-competing but unprotected local industries, the overvalued rate artificially lowers the domestic currency price of foreign imports of the same product (e.g., radios, tires, bicycles, or household utensils).

Hence, in the absence of effective government intervention and regulation of the foreign-exchange dealings of its nationals, overvalued exchange rates have a tendency to exacerbate balance of payments and foreign-debt problems simply because they cheapen imports while making exports more costly. Chronic payments deficits resulting primarily from current account transactions (exports and imports) can possibly be ameliorated by a currency **devaluation**. Simply defined, a country's currency is devalued when the official rate at which its

Dual exchange rate (parallel exchange rate) Foreign-exchange-rate system with a highly overvalued and legally fixed rate applied to capital- and intermediate-goods imports and a second, illegal (or freely floating) rate for imported consumption goods.

Devaluation A lowering of the official exchange rate between one country's currency and all other currencies.

central bank is prepared to exchange the local currency for dollars is abruptly increased. A currency **depreciation**, by contrast, refers to a gradual decrease in the purchasing power of a domestic currency in foreign markets relative to domestic markets; *appreciation* refers to a gradual increase.⁴⁹ For example, when these currencies were pegged, a devaluation of the South African rand and the Indian rupee would occur if their official exchange rates of approximately 5 rand and 40 rupees to the dollar were changed to, say, 8 rand and 50 rupees per dollar. Following these devaluations, U.S. importers of South African and Indian goods would pay fewer dollars to obtain the same products. But U.S. exports to South Africa and India would become more expensive, requiring more rand or rupees to purchase than before. In short, by lowering the *foreign*-currency price of its exports (and thereby generating more foreign demand) while raising the *domestic*-currency price of its imports (and thereby lowering domestic demand), developing countries that devalue their currency hope to improve their trade balance vis-à-vis the rest of the world. This is a principal reason why devaluation is always a key component of IMF stabilization policies when currencies are “pegged.”

An alternative to a currency devaluation is to allow foreign-exchange rates to fluctuate freely in accordance with changing conditions of international demand and supply. Freely fluctuating or **flexible exchange rates** in the past were not thought to be desirable, especially in developing nations heavily dependent on exports and imports, because they are extremely unpredictable, subject to wide and uncontrollable fluctuations, and susceptible to foreign and domestic currency speculation. Such unpredictable fluctuations can wreak havoc with both short- and long-range development plans. Nevertheless, during the global balance of payments and debt crises of the 1980s, many developing countries, including Mexico, Argentina, Chile, and the Philippines, were heavily influenced by the IMF to let their exchange rates float freely in order to correct sizable payments imbalances and to prevent continued capital flight. The same phenomenon occurred again for Mexico in 1994 and for Thailand, the Philippines, South Korea, Malaysia, and Indonesia in 1997 and 1998 during the Asian currency crisis. In a matter of several months during 1997, the Thai baht lost one-third of its value against the dollar, and the Philippine peso, South Korean won, Malaysian ringgit, and Indonesian rupiah fell by almost 30%. In a recent if less consequential example, the Indian rupee suddenly fell beginning in May 2013, losing as much as 20% of its value against the U.S. dollar (9% in August 2013 alone); the central bank responded by raising interest rates, which temporarily reversed about half of the 2013 decline but at an apparent cost of economic growth, which was already slowing. Some analysts viewed this as a potential harbinger of a new set of crises involving more countries such as Brazil, as the “ultra-loose” U.S. monetary policy tightens; we return to related topics in Chapters 13 and 15.

The present international system of floating exchange rates, formally legalized at an IMF meeting in 1976, represents a compromise between a fixed (artificially pegged) and a fully flexible exchange-rate system. Under this “managed” floating system, major international currencies are permitted to fluctuate freely, but erratic swings are limited through central bank intervention. The trend for most developing countries is toward a **managed float** of their currencies.

One final point that should be made about currency devaluations concerns their probable effect on domestic prices. Devaluation has the immediate effect

Depreciation (of currency)

The decline over time in the value or price of one currency in terms of another as a result of market forces of supply and demand.

Flexible exchange rate

The exchange value of a national currency that is free to move up and down in response to shifts in demand and supply arising from international trade and finance.

Managed float

A fluctuating exchange rate that allows central bank intervention to reduce erratic currency fluctuations.

Wage-price spiral A vicious cycle in which higher consumer prices (e.g., as a result of devaluation) cause workers to demand higher wages, which in turn cause producers to raise prices and worsen inflationary forces.

of raising prices of imported goods in terms of the local currency. Imported shirts, shoes, radios, records, foodstuffs, and bicycles that formerly cost x rupees now cost $(1 + d)x$ rupees, depending on the percentage magnitude of the devaluation, d . If, as a result of these higher prices, domestic workers seek to preserve the real value of their purchasing power, they are likely to initiate increased wage and salary demands. Such increases, if granted, will raise production costs and tend to push local prices up even higher. A **wage-price spiral** of domestic inflation can be thereby set in motion. For example, following the widespread IMF-induced currency devaluations during the 1997 Asian crisis, rates of inflation shot up in 1998 from 11% to 35% in Indonesia, from 6% to 12% in Thailand, and from 5% to 10% in the Philippines. Unemployment rates doubled, and workers took to the streets, demanding an end to the layoffs and a rise in wages to offset their lost purchasing power.

As for the distributional effects of a devaluation, it is clear that by altering the domestic price and returns of “tradable” goods (exports and imports) and creating incentives for the production of exports as opposed to domestic goods, devaluation will benefit certain groups at the expense of others. In general, urban wage earners, people with fixed incomes, the unemployed, and the small farmers and rural and urban small-scale producers and suppliers of services who do not participate in the export sector stand to be financially hurt by the domestic inflation that typically follows a devaluation. Conversely, large exporters (often large landowners and foreign-owned corporations) and medium- to large-size local businesses engaged in foreign trade stand to benefit the most.⁵⁰ For this reason and others, international commercial and financial problems (e.g., chronic balance of payments deficits) cannot be divorced from developing countries’ domestic problems (e.g., poverty and inequality). Policy responses to alleviate one problem can either improve or worsen others.

Undervalued exchange rate An official exchange rate set at a level lower than its real or shadow value.

Finally, note that while a neutral exchange rate favors producing for neither the export market nor the domestic market, and free-market economists tend to favor it because of its “level playing field” in that respect, in contrast, an **undervalued exchange rate** is strongly export promoting. This is because it raises the local prices that firms receive for goods that can be exported *relative to* prices of nontradable goods that are sold only to domestic buyers, thus motivating a reorientation of firms toward the export market. If exports stimulate growth and if that growth is widely shared, many development economists expect that in the longer term, devaluation—and perhaps even undervaluation of exchange rates—can provide important development advantages. Proponents of industrial policy (and critics who consider it unfair currency manipulation) point to the long-term undervaluation of the Chinese renminbi and the earlier undervaluation of other East Asian currencies, particularly those of South Korea and Taiwan during their rapid catch-up phase; we return to this topic in the end-of-chapter case studies on Taiwan and South Korea in Chapters 12 and 13, respectively.

Trade Optimists and Trade Pessimists: Summarizing the Traditional Debate

We are now in a position to summarize the major issues and arguments in the great debate between advocates of free-trade, outward-looking development

and export promotion policies—the **trade optimists**—and advocates of greater protection, more inward-looking strategies, and greater import substitution—the **trade pessimists**.⁵¹ Let us begin with the latter school of thought.

Trade Pessimist Arguments Trade pessimists tend to focus on four basic themes: (1) the limited growth of world demand for primary exports, (2) the secular deterioration in the terms of trade for primary producing nations, (3) the rise of “new protectionism” against manufactured and processed agricultural goods from developing countries, and (4) the presence of market failures that reduce the ability of developing countries to move up to export higher-value products.

The value of traditional developing-country exports to developed countries grow slowly because of (1) a shift in developed countries from low-technology, material-intensive goods to high-technology, skill-intensive products, which decreases the demand for raw materials; (2) increased efficiency in industrial uses of raw materials; (3) the substitution of synthetics for natural raw materials like rubber, copper, and cotton; (4) the low income elasticity of demand for primary products and light manufactured goods; (5) the rising productivity of agriculture in developed countries; and (6) relatively higher levels of protectionism for both agriculture and labor-intensive developed-country industries.

The terms of trade remain unfavorable or continue to deteriorate because of (1) oligopolistic control of factor and commodity markets in developed countries, combined with increasing competitive sources of supply of a developing country’s exportables, and (2) a generally lower level of the income elasticity of demand for its exports.

The rise of **new protectionism** in the developed world results from the success of a growing number of developing countries in producing a wide range of both primary and secondary products at competitive world market prices, combined with the quite natural fears of workers in higher-cost developed-country industries that their jobs will be lost. They pressure their governments in North America, Europe, and Japan to curtail or prohibit competitive imports from the developing world. The form this takes changes over time; the 2010 proposals by the leaders of France and Italy for “carbon tariffs” to be levied on exports of developing countries that do not restrict greenhouse gases are a recent example: Surely, protectionism against developing countries is not the only way to help them to decrease greenhouse gas emissions.

Trade pessimists therefore conclude that trade opportunities are limited and even hurt developing countries for four reasons:

1. The slow growth in demand for their traditional exports means that export expansion results in lower export prices and a transfer of income from poor to rich nations.
2. Without import restrictions, the high elasticity of developing countries’ demand for imports, combined with the low elasticity for their exports, means that developing countries must grow slowly to avoid chronic balance of payments and foreign-exchange crises.

Trade optimists Theorists who believe in the benefits of free trade, open economies, and outward-looking development policies.

Trade pessimists Theorists who argue that without tariff protection or quantitative restrictions on trade, developing countries gain little or nothing from an export-oriented, open-economy posture.

New protectionism The erection of various nontariff trade barriers by developed countries against the manufactured exports of developing nations.

3. Developing nations have their “static” comparative advantage in primary products, which means that export-promoting free-trade policies tend to inhibit industrialization, which is in turn the major vehicle for the accumulation of technical skills and entrepreneurial talents.
4. Trade pessimists view trade liberalization under the WTO as limited in practice, with developing economies—particularly the least developed countries—lacking the high-powered lawyers and other resources needed to pry developed markets open.

Trade Optimist Arguments Trade optimists tend to underplay the role of international demand in determining the gains from trade. Instead, they focus on the relationship between trade policy, export performance, and economic growth.⁵² They argue that **trade liberalization** (including export promotion, currency devaluation, removal of trade restrictions, and generally “getting prices right”) generates rapid export and economic growth because free trade provides a number of benefits:

1. It promotes competition, improved resource allocation, and economies of scale in areas where developing countries have a comparative advantage. Costs of production are consequently lowered.
2. It generates pressures for increased efficiencies, product improvement, and technical change, thus raising factor productivity and further lowering costs of production.
3. It accelerates overall economic growth, which raises profits and promotes greater saving and investment and thus furthers growth.
4. It attracts foreign capital and expertise, which are in scarce supply in most developing countries.
5. It generates needed foreign exchange that can be used to import food if the agricultural sector lags behind or suffers droughts or other natural catastrophes.
6. It eliminates costly economic distortions caused by government interventions in both the export and foreign-exchange markets, and substitutes market allocation for the corruption and rent-seeking activities that typically result from an overactive government sector.
7. It promotes more equal access to scarce resources, which improves overall resource allocation.
8. It enables developing countries to take full advantage of reforms under the WTO.

Trade optimists argue, finally, that even though export promotion may at first be difficult with limited gains—especially in comparison with the easy gains of first-stage import substitution—over the longer run, the economic benefits tend to gain momentum, whereas import substitution faces rapidly diminishing returns.

Trade liberalization

Removal of obstacles to free trade, such as quotas, nominal and effective rates of protection, and exchange controls.

12.6 The Industrialization Strategy Approach to Export Policy

Export-Oriented Industrialization Strategy

Since the mid-1980s, another important strand of thought has emerged concerning the relationship between trade and development. The **industrialization strategy approach** is outward-oriented and optimistic about export-led development but still envisions an active role for government in influencing the type and sequencing of exports as a country strives to produce more advanced products, adding higher value.

The industrialization strategy approach began primarily as an empirical literature but has developed a theory to help explain why an interventionist strategy toward exports can accelerate growth and improve development outcomes more than a strict free-trade approach. The theories developed in this approach are focused on identifying and redressing market failures encountered in the process of industrialization.

This strain of research has revealed that rather than operating on a free-market basis, leading export-oriented East Asian economies that are now high-income, in fact, had very active government interventions to encourage industrial exports and to attempt to move up the ladder of comparative advantage toward more advanced products, generating higher value added by employing higher skills and higher technology. Such programs are termed *industrialization strategies* or, more narrowly, *industrial policies*.⁵³

Why might an economy be better off using such policies, and why might these policies be better than available alternatives for achieving development goals? It has long been recognized that there are market failures in original research and development; some of the benefits of these expenditures are captured by other firms. This is the rationale for government research programs in the developed countries (such as the National Institutes of Health in the United States). But analogous market failures apply to the transfer of technology from developed to developing countries. In particular, if one firm absorbs technology from outside the region but then other firms benefit from learning by watching and similar spillover effects, then without outside support, we can expect too little technology transfer and other firm upgrading from the social viewpoint. This market failure forms part of the explanation for why a government industrialization strategy centered on absorbing technology from abroad may improve efficiency. In part, government can help solve a coordination problem. More broadly, it has been argued that policy can improve on markets when they are incomplete; that is, market prices of local costs, as well as sales opportunity, provide signals to entrepreneurs only on existing products, not new ones. Unlike conventional regulation, industrial policies can be designed to attempt to complement market forces, providing incentives to sustainably undertake activities on a for-profit basis that are socially efficient but need some complementary inputs and initial conditions to get under way.

The question, then, is why an *export-oriented* industrialization strategy might be important. Of course, for small countries, one reason is to ensure a market of adequate size. But proponents argue that the full explanation goes

Industrialization strategy approach A school of thought in trade and development that emphasizes the importance of overcoming market failures through government policy to encourage technology transfer and exports of progressively more advanced products.

well beyond this. The use of manufacturing exports of growing technological content as a yardstick of performance automatically emphasizes targets with very strong development benefits. In addition, the world export market is an arena in which performance is clearly, quickly, and rigorously tested while keeping government, whose resources and information capacities are inherently limited, tightly focused on relevant and manageable problems.

In this regard, export targets as a development policy mechanism hold the advantage of being easily observable. This fact has long been understood by developing-country fiscal authorities, who have taxed exports precisely because they are observable and therefore not subject to the tax evasion that is so rampant in the developing world. This distortion has a well-publicized (if not self-evident) antiexport bias effect. But proponents point out that East Asian countries put this “fiscal observability” to use as the centerpiece of their industrial policy system in a way that reversed the negative incentive effects of export taxes.

However, the literature has also stressed the continued importance of infant-industry support. Why might this sometimes be effective? First, empirically, import substitution often precedes export promotion. One influential study concluded that “periods of significant export expansion are almost always preceded by periods of strong import substitution.”⁵⁴ This does not mean that across-the-board protection is viable today, even for large countries, but countries known primarily for their export prowess, such as South Korea, have often protected—for a limited time—the very industries in which they later became successful exporters.

In 2007 research, Ricardo Hausmann, Jason Hwang, and Dani Rodrik found that exporting a mix of goods that are more typical for a country with higher per capita income predicts higher subsequent growth. As they concluded, “Not all goods are alike in terms of their consequences for economic performance. Specializing in some products will bring higher growth than specializing in others.” Or, as Hausmann and Rodrik put it, “You become what you export.”⁵⁵

Note that without proper attention to incentives (for both market and rent-seeking activities), these same industrial policies can prove counterproductive. Countries that cannot find the political will to use protection as a highly selective and strictly temporary instrument of industrial policy may be better off abandoning this instrument altogether.

Evidence shows that Singapore, Taiwan, and South Korea have had especially active government industrialization strategies and specific industrial policies over a period of several decades. The experience in South Korea is examined in the case study at the end of the next chapter. The specific policies differ across countries but have common features in encouraging indigenous skills, technologies, and firms and not just promoting labor-intensive manufactures but actively and systematically seeking to upgrade over time. Another feature is collaboration between the public and private sectors, with government playing a coordinating role but with ongoing effective communication and an attempt to understand the constraints faced by the private sector and how to relax them, and not trying to manage industry.

The East Asian success stories are interestingly characterized by Colin Bradford:

What seems to distinguish the East Asian development experiences is not the dominance of market forces, free enterprise, and internal liberalization, but effective,

highly interactive relationships between the public and private sectors characterized by shared goals and commitments embodied in the development strategy and economic policy of the government. The dichotomy between market forces and government intervention is not only overdrawn: it misconceives the fundamental dynamic at work. It is the *degree of consistency* between the two sectors—rather than the extent of implicit or explicit conflict—that has been important in the successful development cases. A coherent development strategy was not only formulated but followed by both the government and the private sector in providing an unusual degree of common direction to national energies in these cases.⁵⁶

In a globalizing economy, opportunities to grow through exporting by relying on free-market incentives are in some ways greater but in other ways less strong than before. For example, the end of the Multifiber Arrangement made it more likely that low-income countries will find it difficult to launch a manufactured-exports program via the traditional means of starting with textile exports. The growth of China as the “workshop of the world” suggests that it may become more difficult to break into exporting in other sectors as well. On the other hand, with wages beginning to increase in China, new opportunities may emerge for other regions.

Conditions for industrialization strategy also differ today from those that prevailed decades ago in that foreign investors are far more mobile and can quickly go wherever wages or other production costs are lowest. But as the late Sanjaya Lall argued, “Increasing mobility does not mean factors spread themselves evenly over poor countries. Efficient production requires local capabilities to complement the mobile factors. Thus globalization needs efficient ‘localization’: Countries must provide the technical, skill, quality, and reliability needs of competitive production.” Lall further argued that:

technologies cannot be effectively used by developing economies just by opening up to global trade, technology, or capital flows. Technology cannot be fully embodied in machines, licences, or people: It has strong tacit elements. These tacit elements need time, investment and effort: to understand, adapt, use and improve technologies—to build new capabilities. Such effort generally faces pervasive market and institutional failures: within the firm, between firms, and between enterprises and factor markets and institutions. Proactive strategies, often selective in nature, are essential for industrial success.⁵⁷

As evidence has accumulated, the debate has shifted. Instead of opposing all government industrialization strategy, it has become a mainstream view to acknowledge the value of policies that effectively improve the position of all industrial exporters but to avoid what is termed “picking winners.” In practice, Lall argued, this distinction is difficult to make because often the needed new organizations, skills, and infrastructure are specific to a given sector. But as a general starting point, reasonably nonpreferential but active government support for manufactures exporting as a development policy has gained wide acceptance.

Another issue is whether and to what degree WTO rules permit such government actions. Although general support for all industries that does not discriminate is permitted, and such support continues to be practiced by economies sufficiently advanced and governments sufficiently skilled to do so, such as Taiwan and South Korea, some developing countries that might benefit from

exporting strategically are not permitted to do so. There are, however, some important exceptions to these rules, notably for the least developed countries. There are also some gray areas. Governments may build infrastructure, and to a degree, this can be industry-specific. Governments can assist an emerging industry as long as it does not give domestic firms a significant advantage over foreign firms. Government can also promote some categories of foreign investment in selected sectors, specialized human capital formation, innovation priorities, and joint-venture agreements.

A third issue is whether other governments have the competence and political authority that South Korea did during its period of active industrial policy management. Where competence is lacking, advocates have argued that the World Bank and other agencies should help governments build this competence. But some observers argue that if governments lack the needed skills (and are unable to get international assistance to develop the needed capabilities), they may ultimately be better off using less interventionist strategies.

Moreover, as Dani Rodrik and others have pointed out, a government does not have to pick all industries correctly, only a sufficient number for the benefits of those successes to outweigh the costs of failure. As Rodrik puts it, “conducting policy in a manner that would ensure zero failure would make as much sense as a pharmaceutical company investing only in drugs that are guaranteed to be profitable from the outset.”⁵⁸ Rodrik reviews examples cited in the literature of major industrial policy successes, for example, in Chile and Uruguay. He proposes that incentives for government agencies can be established, involving benchmarking and transparency, to help ensure that support for industrial sectors is limited and temporary. Rodrik suggests that the problems of carrying out industrial policy—such as imperfect government knowledge, avoiding rent seeking, and ceasing support of failed initiatives—are not fundamentally different from those faced by government activity in other sectors such as education, health, social insurance, and macroeconomic stabilization. Market failures in these sectors are hard to observe and prone to rent seeking, yet government’s role is understood to be vital.

From Rodrik’s research, other general principles are to target new activities, not existing ones; to use clear benchmarking to determine eligibility for continued support; to build in sunset clauses (or time limits for support); to give industrial policy authority to agencies with previously demonstrated competence that are, in turn, to be overseen by top political figures—essentially making their careers dependent on industrial policy success; and to employ active and transparent channels of communication with broad representatives of the private sector. In a challenge to some proponents of this school, Rodrik proposes to target broader activities and not narrow sectors (for example, English language training, not call centers or tourism as such).

It is also important to stress that these approaches are more likely to be effective if the public and private sectors are able work together cooperatively in ways consistent both with broad development objectives and with profitability for investors. Although the context of this debate has changed, with the far more competitive world environment and changes in trade rules, industrial policy considerations will continue to be important in the design of developing countries’ export strategies.

The New Firm-level International Trade Research and the Developing Countries

In recent years, a new strand of literature in international trade theory has emerged that emphasizes the importance of differences (heterogeneity) among firms in understanding international trade patterns. An important topic is the impact of international trade on individual firms and the extent and nature of competition within domestic industries. The new research examines ways that firms respond to more open economies and the globalization process, and the implications of these responses for patterns of investment—and potentially for structural transformation. Relevant research topics have included “the higher productivity of exporters relative to nonexporters, within-industry reallocations of resources following trade liberalization, and patterns of trade participation across firms and destination markets.”⁵⁹

To the extent that the new analysis is based on the behavior of firms, the results of further research with these models may ultimately offer a more realistic framework for evaluating trade policies for developing countries. It is too early to judge the extent of the flexibility of these models to represent special developing-country circumstances, but the new approach holds the potential of important improvements over more aggregated models, reviewed earlier in the chapter. But a systematic empirical as well as theoretical application to special problems of economic development and particular developing countries is needed.

One useful starting point may be another recent strand of development literature focusing on analysis of the firm- and plant-level data from developing countries and regions. The new availability of firm- and plant-level data has provided a spur to new research. A good example is the Enterprise Surveys, including several on the African manufacturing sector carried out under the Regional Program on Enterprise Development (RPED).⁶⁰

An important strand of this empirical research has focused on using firm-level data to identify what factors cause firms in developing countries to export—or at least to find the factors associated with export activity by particular companies. Another related empirical research strand seeks to better understand what problems firms face at the microeconomic level in developing countries, including the degree of corruption, badly designed regulations, lack of key infrastructure, poor access to technical knowledge, or skill shortages, all of which may affect capacity to export. These emerging areas of research will be watched closely in the coming years for its lessons for development policy.⁶¹

12.7 South-South Trade and Economic Integration

Economic Integration: Theory and Practice

The United Nations Development Programme (UNDP) reported in its 2013 *Human Development Report* that from 1981 to 2011, South-South trade increased from less than 8% to more than 26% of world merchandise trade.

South-South trade represents over one-third of all developing-world exports.⁶² Exports to China have provided an important opportunity in recent years for some developing countries. Many pioneering development economists,

such as Nobel laureate Sir Arthur Lewis, have argued that developing countries should orient more of their trade toward one another.⁶³ Variants of this theme have been taken up by many contemporary development economists. One argument, advanced in 2006 by Abhijit Banerjee, is that it is difficult for exporters from most low-income countries to break into developed markets because of the effects on their reputation. It is very costly to create and maintain a reputation as a country that exports high-quality products. Thus, it may be better to trade with other developing economies because reputation effects are not as important for exporting to these markets. They can also work together to establish quality standards and certify their achievement, as Pranab Bardhan has proposed.⁶⁴

One strong variant of the South-South trade hypothesis is that developing countries should go beyond greater trade with one another and move in the direction of **economic integration**. Economic integration occurs whenever a group of nations in the same region join together to form an **economic union** or **regional trading bloc** by raising a common tariff wall against the products of nonmember countries while freeing internal trade among members. In the terminology of integration literature, nations that levy common external tariffs while freeing internal trade are said to have formed a **customs union**. If external tariffs against outside countries differ among member nations while internal trade is free, the nations are said to have formed a **free-trade area**. Finally, a **common market** possesses all the attributes of a customs union (common external tariffs and free internal trade) plus the free movement of labor and capital among the partner states.

The traditional theory of customs unions and economic integration focuses on the static resource and production reallocation effects. But the deeper economic rationale for the gradual integration of less developed economies is a long-term dynamic one: Integration provides the opportunity for industries that have not yet been established as well as for those that have to take advantage of economies of large-scale production made possible by expanded markets. In some cases, this is perceived as a defensive response to decreased access to export to other markets due to protectionism or the formation of other trading blocs, such as the European Union, that divert trade to their own group. Integration can be viewed as a mechanism to encourage a rational division of labor among a group of countries, each of which is too small to benefit from such a division by itself. In the absence of integration, each separate country may not provide a sufficiently large domestic market to enable local industries to lower their production costs through economies of scale. In such cases, import-substituting industrialization will typically result, as noted earlier, in the establishment of high-cost, inefficient local industries. Moreover, in the absence of integration, the same industry (e.g., textiles or shoes) may be set up in two or more adjoining small nations. Each will be operating at less than optimal capacity but will be protected against the imports of the other by high tariff or quota barriers. Not only does such duplication result in wasted scarce resources, but it also means that consumers are forced to pay a higher price for the product than if the market were large enough for high-volume, low-cost production to take place at a single location.

This leads to a second dynamic rationale for economic integration. By removing barriers to trade among member states, the possibility of coordinated industrial strategy is created, especially in industries where economies of scale

Economic integration The merging to various degrees of the economies and economic policies of two or more countries in a region.

Economic union The full integration of two or more economies into a single economic entity.

Regional trading bloc An economic coalition among countries within a geographic region, usually characterized by liberalized internal trade and uniform restrictions on external trade, designed to promote regional economic integration and growth.

Customs union A form of economic integration in which two or more nations agree to free all internal trade while levying a common external tariff on all nonmember countries.

Free-trade area A form of economic integration in which free trade exists among member countries, but members are free to levy tariffs on nonmember countries.

Common market A form of economic integration in which there is free internal trade, a common tariff, and the free movement of labor and capital among partner states.

are likely to exist. Examples include fertilizer and petrochemical plants, heavy industry like iron and steel, capital goods and machine tool industries, and small-farm mechanical equipment. But the coordination of industrial expansion that enables all member states to accelerate their rates of industrial growth by assigning given industries to different members takes the partners that much closer to full economic and eventual political union. Problems of sovereignty and national self-interest impinge at this stage. To date, they have overwhelmed the economic logic of a close and coordinated union. However, as developing countries, especially small ones, continue to experience the limitations of either development in isolation (**autarky**) or full participation in the highly unequal world economy, it is likely that interest will increase in the coming decades in the long-run benefits of some form of economic (and perhaps political) cooperation. The recent expansion and deepening of cooperation in the Association of Southeast Asian Nations (ASEAN) is a case in point.

In addition to these two long-term dynamic arguments for integration, there are also the standard static evaluative criteria known as **trade creation** and **trade diversion**. Trade creation is said to occur when common external barriers and internal free trade lead to a shift in production from high- to low-cost member states. For example, before integration, both country A and country B may produce textiles for their respective local markets. Country A may be a lower-cost producer, but its exports to country B are blocked by the latter's high tariffs. If A and B form a customs union by eliminating all barriers to internal trade, country A's more efficient low-cost textile industry will service both markets. Trade will have been created in the sense that the removal of barriers has led to a shift in country B's consumption from its own relatively high-cost textiles to the lower-cost textiles of country A.

In contrast, trade diversion is said to occur when the erection of external tariff barriers causes production and consumption of one or more member states to shift from lower-cost nonmember sources of supply (e.g., a developed country) to higher-cost member producers. Trade diversion is normally considered undesirable because both the world and member states are perceived to be worse off as a result of diversion of production from more efficient foreign suppliers to the less efficient domestic industries of member states. However, some advocates anticipate dynamic benefits analogous to some of the industrialization strategy arguments just discussed.

Some other special advantages depend on local conditions. Landlocked developing countries may be viewed as safer locations for investment (in infrastructure as well as export industries) when they join a trading agreement with a group in which at least one country has access to the sea. For small-island developing countries, such groupings can offer a lifeline to greater capabilities. Some observers believe that regional economic integration reduces the chances of war or other strife (this belief was part of the original rationale for the creation of the European Union and, to some extent, its later expansion to the east).

Regional Trading Blocs, the Globalization of Trade, and Prospects for South-South Cooperation

Many European Union members use a single currency, the euro, requiring close monetary coordination and in effect creating the largest economic entity

Autarky A closed economy that attempts to be completely self-reliant.

Trade creation Shift, upon formation of a customs union, in the location of production from higher-cost to lower-cost member states.

Trade diversion Shift, upon formation of a customs union, of the location of production of formerly imported goods from a lower-cost nonmember state to a higher-cost member nation.

in the world. The North American Free Trade Agreement (NAFTA) represents a unique arrangement in that a large developing country, Mexico, has joined a developed-country trading bloc, Canada and the United States. (Chile, an NIC, is also seeking membership.)

A number of trading blocs have emerged in Latin America. Argentina, Brazil, Paraguay, Uruguay, and, following its accession in 2012, Venezuela, have formed a common market-style agreement called the Common Market of the South, also known as Mercosur. Having a “political” purpose as well as an economic purpose, Mercosur is frequently described as a divided or “fractious” bloc; Mercosur suspended Paraguay in 2012, and the addition of Venezuela was controversial. The other South American bloc, the Andean Group (consisting of Bolivia, Colombia, Ecuador, Peru, and Venezuela), established a full-fledged common market in 1995. The 2008 launch of a regional customs union, known as the Union of South American Nations (UNASUR), signaled a new impetus for this trend; UNASUR has an aspirational objective of integration on the scale of the European Union. The Caribbean and Central American states also have an agreement in place.

In Africa, moves are under way to promote regional economic integration, including the South African Development Community (SADC). Thanks to well-developed railroad and air links, the 10 members of SADC—Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe—anticipate new and much greater trading opportunities. East African countries are revitalizing the East African Community (EAC), originally established in the late 1960s but which fell victim to differing national policies and broke down just a decade after its founding. But it was revived in 2000 with a new trade agreement—now common market—among Burundi, Kenya, Rwanda, Tanzania, and Uganda. The EAC has aspirations of full political as well as economic union, but its 2012 target of a common currency was not achieved. More broadly, a Common Market for Eastern and Southern Africa (COMESA) provides an evolving umbrella for the process; by 2013, it was a free-trade area with 19 member nations. There is also a 15-member Economic Community of West African States (also known as CEDEAO, its French acronym); its focus is primarily on monetary union.

One unresolved question about these regional trading blocs, aspirational full-fledged common markets, and political unions is whether they will fragment the world economy and run counter to the globalization of trade. Another consideration concerns integration behind tariff barriers among developing countries at different stages of development. Anthony Venables argues through extensions of traditional trade theory that within customs unions, “countries with a comparative advantage between that of their partners and the rest of the world do better than countries with an ‘extreme’ comparative advantage. Consequently, integration between low income countries tends to lead to divergence of member country incomes, while agreements between high income countries cause convergence.”⁶⁵ Thus, a customs union among developing countries could provide its biggest benefits to the highest-income nations within the group as they attract the manufacturing sector. Venables argues that developing countries are likely better off by entering into North-South than South-South agreements. The availability of North-South agreements is at best unclear for many low-income countries. More generally,

the relevance of this theory depends on local conditions, such as opportunities for dynamic gains and the specifics of South-South agreements, which at their best are about more than merely setting common tariffs. Paul Collier offers a balanced starting point when he argues that “regional integration is a good idea, but not behind high external barriers.”⁶⁶

International trade patterns are evolving, if unevenly. The World Development Indicators show that from 2000 to 2010, developing-country merchandise exports to high-income countries approximately tripled, but at the same time, merchandise exports between developing countries expanded by more than six times. As a result, as noted at the outset, about one-third of the value of developing-country exports now goes to other developing countries. This trend is less pronounced among the low-income countries but is prevalent among upper-middle-income countries such as Brazil, which has greatly expanded its agricultural and resource exports to China, as well as expanded trade with its partners in the Common Market of the South. The special role of China as a resource importer and manufactures exporter stands out in South-South trade patterns. And as noted by UNIDO, “East Asia and the Pacific accounted for almost 70 percent of manufactured exports between developing countries over 2000-2009.”⁶⁷

Beyond this, although opportunities to benefit from solidarity across developing countries have improved in some ways, prospects remain uncertain. On one hand, leading developing countries have never had so much power in the councils of global economic policymaking, including the increasingly important G20, a willingness to exercise veto power in the WTO, beginnings of a power shift in the World Bank and IMF, and perhaps, most importantly, having more to offer one another—from better technology to transfer, to means to pay higher prices for primary products. The once-sharp ideological differences among many of them have narrowed—though these seem to have been replaced in some cases with religious differences. On the other hand, over the past two decades there has been steadily increasing inequalities *among* developing countries in rates of growth and of incomes per capita; this also tends to widen disparities in their priorities and interests.

12.8 Trade Policies of Developed Countries: The Need for Reform and Resistance to New Protectionist Pressures

It is clear that a major obstacle to export expansion, whether in primary products or manufactures, has been the various trade barriers erected by developed nations against the principal commodity exports of developing countries. In the absence of economic integration or even in support of that effort, the prospects for future trade and foreign-exchange expansion depend largely on the domestic and international economic policies of developed nations. Unfortunately, the integration among NAFTA and EU members may itself pose one of the biggest impediments to developing-world exports to North America and Europe. Although internal structural and economic reform may be essential to economic and social progress, an improvement in the competitive position

of industries in which developing economies do have a dynamic comparative advantage will be of little benefit to them or the world as a whole so long as their access to major world markets is restricted by rich-country commercial policies.

Developed countries' economic and commercial policies are most important from the perspective of future developing-country foreign-exchange earnings in three major areas: tariff and nontariff barriers to their exports; adjustment assistance for displaced workers in developed-country industries hurt by freer access of labor-intensive, low-cost developing-country exports; and the general impact of rich-country domestic economic policies on developing economies.

The new protectionist tariff and nontariff trade barriers (e.g., excise taxes, quotas, "voluntary" export restraints, disingenuous sanitary regulations) imposed by rich nations on the commodity exports of poor ones have been major obstacles to the expansion of the latter's export-earning capacities, and the advent of the WTO has only partially eliminated these problems. As we have noted, many tariffs for both agricultural and nonagricultural goods increase with the degree of product processing; that is, they are higher for processed foodstuffs than for basic foodstuffs (e.g., peanut oil compared with peanuts)—higher for, say, shirts than for raw cotton. These high effective tariffs have inhibited many low-income nations from developing and diversifying their own secondary-export industries and thus have acted to restrain their industrial expansion. The overall effect of developed-country tariffs, quotas, and nontariff barriers has been to lower the effective price received by developing countries for their exports, reduce the quantity exported, and diminish foreign-exchange earnings.⁶⁸

Uruguay Round A round of the General Agreement on Tariffs and Trade negotiations, started in Uruguay in 1986 and signed in 1994, designed to promote international free trade.

The **Uruguay Round** agreement of 1995 substantially reduced tariff and nontariff trade barriers in many sectors. It also established the Geneva-based World Trade Organization to replace the 47-year-old General Agreement on Tariffs and Trade. The three major provisions from the perspective of developing nations are the following.⁶⁹

1. Developed countries cut tariffs on manufactures by an average of 40% in five equal annual reductions. Developing countries in turn agreed to not raise tariffs by "binding" in recent trade reforms. Despite these reductions, developing countries still face tariffs that are 10% higher than the global average, while the least developed countries face tariffs that are 30% higher.⁷⁰
2. Trade in agricultural products came under the authority of the WTO and were to be progressively liberalized. Although progress was made at first, agricultural subsidies subsequently returned to record highs.
3. For textiles and apparel, the Multifiber Arrangement quotas, which long penalized exports of developing countries, were phased out in 2005, with most of the progressive reductions taking effect toward the end of the period. But tariffs on textile imports were reduced only to an average of 12%—three times the average level of tariffs on other imports.

The reforms had other important limitations. Although average tariffs are generally quite low by historical standards, tariffs that "escalate" (increase the

more processed the product becomes before it is exported) remain in place in many cases; low-income countries still face peak tariffs in some key products in agriculture, textiles, and clothing; and enormously distorting agricultural subsidies still cause great harm to many developing countries. As the United Nations Development Programme concluded:

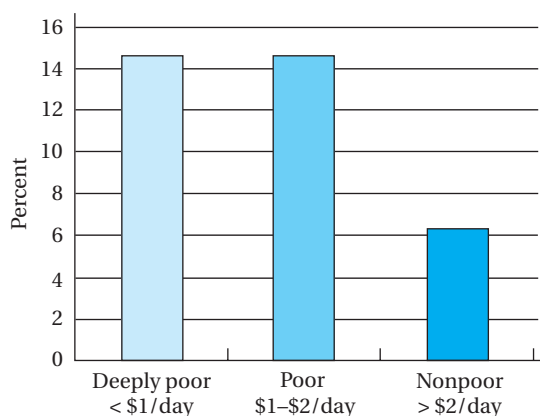
Developing countries, with three-quarters of the world's people, will get only a quarter to a third of the income gains generated—and most of that will go to a few powerful exporters in Asia and Latin America.⁷¹

Indeed, at the household level, the World Bank reported that the effective, trade-weighted tariffs faced by the poor are much higher than those faced by the nonpoor. Both those living on less than \$1 a day and those living on between \$1 and \$2 a day faced effective tariffs of well over 14%, while those with higher incomes of over \$2 a day faced trade-weighted tariffs of only just over 6% on average, as shown in Figure 12.5.

Partly as a result, many governments of developing countries, as well as companies and citizens, believe that they got a bad deal in the Uruguay Round negotiations that culminated in the establishment of the WTO. There is the widespread conviction in the developing world that the rich countries did not live up to their part of the bargain, failing to open their markets fairly. Developing nations complain that governments and corporations of the developed world have the most effective (and expensive) lawyers and other leverage to force developing countries to follow WTO requirements, while developing nations lack the resources to force the rich nations to do the same.

However, developing countries now represent about three-quarters of the 159-member WTO (as of 2013). And whereas India and Brazil played high-profile, vocal roles in trade negotiations under the GATT, with perhaps three dozen other developing countries taking active, if relatively quiet, roles in the new century, the situation has changed palpably. The WTO director's own

FIGURE 12.5 Effective Tariff Faced by Income Groups, 1997–1998



Source: International Bank for Reconstruction and Development/The World Bank, *Global Economic Prospects and the Developing Countries*, 2002. Reprinted with permission.

2001 report noted that after eight trade liberalization rounds over the past half century, trade barriers remain in place in textiles and agriculture, the goods most affecting the developing world. As the world's trading nations began consideration of a new round of negotiations on reducing trade barriers, the developing world was insisting on a larger say. Unlike the IMF and World Bank, the WTO operates on consensus, in effect giving even small, low-income nations an equal vote—and an effective veto. Developing-country governments say they are reluctant to extend negotiations to what they term the “nontrade” issues of investment, competition, environment, and labor standards. Thus, the developing countries do not appear to be without bargaining power if they can learn to use it effectively.

The most recent round of negotiations were dubbed the “Doha Development Round”: *Doha* for the city in Qatar in which agreement on the agenda was reached in November 2001 and *Development* for the commitment to focus much more on the needs and aspirations of the developing world in this round of trade agreements. Whether this goal ultimately will be achieved remains to be seen. But these talks have been at a protracted impasse. For example, the 2006 talks ended in discord about reducing developed-country farm subsidies, and the 2008 talks collapsed over this and other issues of market access, and acrimony over the extent of permissible use of developing-countries’ “special safeguard mechanisms” to protect poor farmers in countries such as India in the event of import surges. The outlook was cloudy after failure to conclude the round on the agreed timetable. Since the 2008 economic crisis, politicians in many countries have considered it inexpedient to be viewed as extending “concessions” on trade.

In what was widely viewed as new evidence of the increasing role and power of developing countries in international economic affairs, in May 2013, Brazilian diplomat Roberto Azevêdo was elected as the new WTO director-general—despite the fact that he was not the preferred candidate of the United States or the EU—after an unusually lengthy leadership contest. Subsequently, the WTO engaged in discussions for a “Doha lite” agreement, which would give a sense of progress on trade talks while avoiding more sensitive—albeit more substantive—areas of disagreement.⁷²

However, on parallel tracks, regional and bilateral trade arrangements continue to take shape. The largest prospective example is for a “Trans-Pacific Partnership” (TPP), now in active discussion, which would include about a dozen mostly high-income countries but also some developing nations, including Mexico, Peru, and Vietnam. Some observers have concluded that rather than strictly a trade agreement, the TPP gets part of its impetus from the fear of China’s growing influence in the Pacific Basin area. Other observers have viewed the TPP process as emblematic of a trend toward sidelining the WTO—the opposite of what many countries had originally envisaged.⁷³ But debates over proposals to reform the WTO to make it more relevant and responsive to needs of developing countries continue.⁷⁴

However institutional arrangements evolve in coming years, developing countries seem certain to continue to play an ever more active role in setting the agenda for trade talks.

Case Study 12

A Pioneer in Development Success through Trade: Taiwan

Taiwan is one of the original four “East Asian Tiger” economies whose dramatic economic successes of recent decades influenced the way economists think about development. The experience of Taiwan was a major impetus behind the changes in economic policy instituted in the People’s Republic of China (PRC) beginning in 1978. With a population of about 23 million, Taiwan, which calls itself the Republic of China (ROC), is a mountainous, 36,000-square-kilometer (14,000-square-mile) island off the coast of the Chinese mainland, about the combined size of Maryland and Delaware, or a little less than that of the Netherlands.


Taiwan’s claim to its status as a “development miracle” is strong. The island racked up a measured annual economic growth rate averaging about 7% over the four decades from 1960 to 2000. Taiwan’s economy grew nearly 10% annually in the 1965–1980 period, faster than any other nation’s. Despite its now high-income status, with a per capita income of \$13,925 in 2000 at market exchange rates (\$22,646 in 2000 at PPP), Taiwan continued to grow, at a rapid rate of 5.7% on average over the 1996–2000 period. Sustaining such high rates over such a long stretch of time was unprecedented until the subsequent growth of China itself (see the case study in Chapter 4). At least as important, Taiwan has achieved universal elementary and middle school education (nine years are mandatory), a healthy population with a life expectancy of 75 years, and an infant mortality rate of only 5 per 1,000 live births. Absolute poverty has essentially been eliminated, unemployment is extremely low, and relative inequality is modest even by developed-country standards.

Taiwan has had to adjust to some of the changes that economies that reach the threshold of high-income status must confront. The GDP growth rate fell to just 2% in the 2000–2010 decade. Like Japan, Taiwan has a below-replacement fertility rate, and its population growth rate has now dropped to less than a quarter of a percent per year. There has been a “hollowing out” of basic manufacturing as plants have moved to (mainland) China in search of lower-wage labor. Production that has remained has been forced to shift rapidly to high-tech products and processes in the face of rising competition in basic industries from other developing countries. Continued uncertainty clouds the island’s political future, given the forceful response from China in response to any hint of Taiwan independence, as China regards Taiwan as a renegade province. The resulting business uncertainty has had at least some dampening effect on investment. But Taiwan has also transformed itself into a credibly and competitively democratic polity with a vigorously free press and far less corruption and greater government transparency than its neighbors.

Taiwan’s achievement stands in contrast to many other economies that started in similar—or even better—circumstances in the postwar world.

Competing Explanations for Success

Taiwan’s success has been ascribed to many factors, including an emphasis on education, extensive infrastructure development, early and thorough land reform, very high rates of saving and investment, a mixture of constructive foreign influences and diffusion of commercial ideas from Japan and the United States, an effective government industrialization strategy, the free market’s release of



human energies and creativity, a 1960s boom resulting from the Vietnam War, the initiation of an export-led growth strategy in the midst of the rapidly expanding world economy of the early 1960s, direct American aid—and Taiwan's use of that aid for investment rather than consumption, the work ethic and productive attitudes of the Taiwanese labor force, a long history as an entrepreneurial culture, the movement into entrepreneurship of capable local islanders who sought opportunities for advancement but were blocked from the political arena, and the survival instinct—the necessity of economic development as a defense against attack from the PRC.

Instead of having to choose from just one or two of these factors, an alternative interpretation is that development success requires many things to work well together, and hence there may not be so many explanations after all. Many of the cited factors may reflect necessary but not sufficient conditions. In this view, the key is to understand the magnified impact of having many development factors operating successfully at the same time (see Chapter 4).

Let's examine the factors cited more closely.

Emphasis on Education

Consistent with the historical Chinese cultural veneration for education, six years of education became compulsory in Taiwan in 1950. Especially impressive were enrollment rates for girls, which surpassed 90% for those aged 6 to 11 by 1956. (The comparable figure for boys in that year was over 96%.) Emphasis on girls' education is widely viewed as one of the most important factors in successful development.

When compulsory education was expanded to nine years in 1968, there were doubts that the economy could afford it. Today, while 9 years remains a remarkable minimum educational standard for any developing economy, plans are being considered to expand compulsory schooling to 12 years.

Other features have also been in play. Students go to school seven hours a day, five and one-half days a week. In 2002, the overall student-teacher ratio was less than 20. Teacher salaries are relatively high, comparable to lower-middle management in Taiwan. Taiwan's models were the United States for general education and Japan for vocational education.


Greater emphasis is placed on general than on job-specific skills. But incentives for close relationships between education and business are also stressed. Tax breaks are given for company donations of personnel and equipment to schools.

Assuming that the world development community is serious in its Millennium Development Goal of enrolling all children in six years of elementary school by 2015, the early experience of Taiwan is instructive. Enrollment was real and not just on paper, students generally remained in school after they enrolled, teachers taught seriously, and corruption was kept to a minimum. The contrast in most of these respects to today's low-income countries is striking.

Extensive Infrastructure Development

Development of infrastructure has been widely cited as a crucial factor in successful development. A major highway, for example, is argued to represent a "growth pole" around which industrial and commercial development can consolidate and grow. From the period of Japanese colonial rule (1905–1945), Taiwan inherited an infrastructure system that was far superior to that of most poor countries. The Japanese built roads, ports, and railroads to facilitate their own acquisition of rice and other farm products from the island. But this same infrastructure became a vehicle for national industrial growth from the 1950s. This endowment was supplemented by the government's own extensive program in the 1950s and 1960s. Taiwan's army was too large for the island, a legacy of the pre-1949 control of the mainland by the governing Kuomintang, or Chinese Nationalists. Thousands of soldiers participated in a voluntary program to retire from active military service to build infrastructure, including the technically challenging east-west highway projects, a program reckoned in Taiwan to be a major factor in its subsequent success. In more recent years, the emphasis has moved to telecoms and other high-tech infrastructure.

There was some waste, fraud, and abuse in infrastructure spending, though apparently less than average. When the press was freed, a number of infrastructure scandals were uncovered, many affecting Taiwan's capital, Taipei. The political openings



have played a role in keeping infrastructure development and other development necessities on track, another reflection of the interactive roles played by several contributory factors in economic growth.

Early and Thorough Land Reform Not burdened by close political ties to landlords, the Taiwanese government implemented a thoroughgoing land-to-the-tiller reform program in the 1950s. Landowners received stock in state-owned enterprises in return for transferring land to peasants. This was a major factor in the extremely rapid growth of agricultural productivity in this period—a crucial foundation for later industrialization. Other countries with similar land reform efforts, such as South Korea and Japan, have seen impressive results. The United States had similarly benefited from nineteenth-century programs such as the Homestead Act. In contrast, development in Latin America, as well as in some Asian countries such as the Philippines, has been severely hampered by the lack of land reform.

Very High Rates of Saving and Investment Most analysts agree that capital formation is crucial to successful development. Developed countries have much higher levels of capital per head than less developed countries, one of the factors enabling developed countries to enjoy higher productivity and incomes. Taiwan's saving rates were among the highest ever recorded, reaching 30 to 40% in the 1950s and 1960s.

The saving ethic is deeply rooted in Taiwanese culture. Parents teach children the overriding need to save for a rainy day. Public policies keep real interest rates for savers relatively high and tax-free. Interestingly, like fellow Tiger South Korea, Taiwan has a relatively low foreign-capital share in total investment, about 10%. High rates of saving and investment are important factors in development but not sufficient ones. India has substantially increased its rate of investment since independence in 1947 but not until recently its growth rate, partly because capital equipment has been expensive there and partly because investments have not been made in the most productive sectors at any point in time.

Diffusion of Commercial Ideas High saving alone will not create a development miracle without productive ideas among entrepreneurs about what use to make of it. Taiwan has had considerable

success in absorbing commercial ideas from Japan and the United States, largely due to the diligence of thousands of individual small companies. But government has also played a role, through agencies like the China External Trade Development Council (CETDC) that combed the world, especially the United States, for ideas on how Taiwanese firms could upgrade their technology and adapt to enter industrial markets. The World Bank's Donald Keesing has offered some fascinating insights into the CETDC's operation:

Market research in CETDC's New York office as of 1980 was based on an active search for items that could be sold in the United States. The search began with an analysis of the size and origin of U.S. imports, followed by a preliminary study of the price and quality of the more competitive imported and U.S. products. From this the officers in New York reached an estimate of the likelihood of Taiwan, China, firms competing successfully against offerings already on the market. (They claimed to understand the manufacturing capabilities of Taiwan, China, firms well enough to do this.) Once a likely product was identified, the office asked firms in Taiwan, China, to send it samples of the product and price lists. Representatives of the office would then visit importers, wholesalers, and other traders with samples and price lists, prospecting for sales. They would try to get reactions to the product. If the buyers were interested, they would telex the manufacturers. If not, they would find out why and then suggest appropriate steps to the manufacturer.

These observations lead us to perhaps the most complex set of development issues, the roles of state and market in successful development.

Effective Government Industrial Policies A traditional explanation for Taiwan's success is the operation of the free market. In contrast, Robert Wade and others have shown that Taiwan employed extensive government industrial policies and have presented somewhat controversial evidence that Taiwan's success is due in large measure to the effectiveness of its industrial policy.

Taiwan has had active industrial policy systems in place to license exports, control direct foreign investment both in and from Taiwan, establish



export cartels, and provide fiscal incentives for investment in priority sectors and concessional credit for favored industries. The government plays a much less active role today, now that developed-country status has been nearly attained, but it is interesting to view the roles played in Taiwan's more formative development stages.

Taiwan's economic history began with a very highly dirigiste, or state-directed, import substitution-oriented industrialization in the 1949–1958 period. Reforms in 1958 switched intervention to export promotion and introduced market forces. But what emerged was not a free market but merely a less thoroughly planned economy. Into the 1980s, all imports and exports in Taiwan had to be covered by a license. Imports were categorized as “prohibited,” “controlled,” and “permissible.” Controlled goods included luxuries and some goods produced locally with reasonable quality, in sufficient quantities, and whose prices were not more than a narrow margin (about 5%) above comparable import prices. Because the controlled list was larger than the published one, not all “permissibles” were automatically approved. As Wade shows, a potential importer of an item on the hidden list had to provide evidence that domestic suppliers could not meet foreign price, quality, and timing-of-delivery terms. Wade presents evidence that their function was to jump-start growth industries by providing domestic demand for products targeted by the government. Then aggressive incentives were provided to induce companies to begin to export these products.

Wade's interpretation of the relative success of this import substitution program is consistent with an emphasis on market incentives. He argues that because it controls quantities of foreign goods entering the local economy, the government can use international prices to discipline the price-setting behavior of protected domestic producers. The government demanded to know good reasons why domestic prices of protected items were significantly higher than international prices, especially in the case of inputs to be used for export production. In this way, domestic prices for controlled goods could be kept near world price levels through the threat of permitting imports, even without free trade of goods across national borders. Wade concluded that an effective government threat of allowing more goods in can itself be sufficient to


hold prices down, despite trade protection. Thus, the argument is that government is able to play an active role in industrial policy without compromising the vitality of market incentives.

Clearly, Taiwan's economy has been far from a free market, but explanations for Taiwan's success other than its actively interventionist policies can be given. In particular, general policies such as support of basic education and encouragement of high rates of saving cannot be ruled out as more important factors in Taiwan's success. Many entrepreneurs of small businesses in Taiwan seemed to feel that government has done more to harass them than to help them. And the stable, consistent macroeconomic policies in Taiwan and elsewhere in East Asia also stand in dramatic contrast to much of the rest of the developing world, especially the poorest-performing regions.

Market Incentives Even if entrepreneurial dynamism is hard to measure precisely, it is in evidence throughout the island. Incentives to produce wealth rather than merely to seek a share of existing wealth (rent-seeking behavior) are established with solid property rights and not significantly undermined by other policies.

Taiwan's government has not always been a highly efficient engine of progress. The mere fact that the ROC administers both a central and a provincial government covering exactly the same territory presented many opportunities for inefficiency. This is a legacy of the Chinese civil war, which the ROC lost. Moreover, until 1991, the government ruled Taiwan under martial law, creating opportunities for corruption. Indeed, in the 1990s, new corruption scandals were reported almost daily in Taiwan's many independent newspapers. The free election of Lee Teng-hui as president in 1996 was the culmination of a smooth five-year transition to democratic governance. Elections have been highly competitive since then and are generally viewed as free and fair; power has changed hands peacefully.

Other Factors The other explanations listed earlier were also somewhat important but unlikely to have been critical, given the decisive role of the seven factors just discussed. They are also special features that other economies cannot easily encourage through policy measures. The 1960s Vietnam War boom affected countries such as the Philippines as much as, if not more than, Taiwan, without lasting



effect. American aid to Egypt has been far larger and substantially used for investment purposes but with less impressive results. Undoubtedly, the work ethic and attitudes of the labor force were important. At the same time, they could not be called into play without the right incentives in place and without the availability of economically productive ideas. And a work ethic can be stimulated by the right incentives. A long history as an entrepreneurial culture may also be important, but in the long run, these will similarly be influenced by incentives for entrepreneurship.

The fact that Taiwan benefited from beginning export-led growth in the early 1960s, a time of unequalled world growth and a wide-open American market, was an undoubted advantage. On the other hand, other countries such as Thailand successfully grew through manufactures exports in the 1980s, despite far slower U.S. and world income and trade growth rates. The PRC has grown faster over the past quarter century than Taiwan ever did, despite sometimes sluggish world trade growth. Many of the PRC's reform policies since 1978 have been copied from the experience of Taiwan.

The idea that local islanders had few opportunities outside of entrepreneurship has not been proved; in any case, Taiwan seems hardly to differ in this regard from the situation under many other authoritarian regimes around the developing world that have suffered negative per capita income growth.

As to the necessity of economic development as a defense strategy, one cannot single out Taiwan. The United States guaranteed Taiwan's defense after President Truman sealed off the island in 1950 in response to the Korean crisis. Other developing countries lacking the natural defenses of an island and as gravely threatened by hostile neighbors have made little development progress in the same period. Military necessity more often represents a diversion of resources needed for development than a productive stimulus.

Conclusion

A combination of factors underlies Taiwan's success. Among them are an emphasis on education, absorption of productive ideas from abroad, extensive infrastructure development, thoroughgoing land reform, very high rates of saving and

investment, an effective industrial policy, and ensuring that marketplace incentives to produce wealth rather than to seek a share of existing wealth are established with solid property rights and not undermined by other policies.

Recently, the government of Taiwan has focused on collaborating with the private sector on more advanced research and development as Taiwan moves into high-technology fields. Taiwan's dynamic firms have invested vast sums in the PRC. Taiwan has been striving to adapt to a future in which relatively unskilled industrial jobs will no longer be available. The focus has been on education; high-technology production in several sectors, including computers, software, and biotechnology; and financial development. The focus continues to be on development through increasingly sophisticated exports. As Erik Thorbecke and Henry Wan point out, Taiwan launched its competitive semiconductor industry by using government laboratories to develop basic know-how and then formed private spin-off companies from these laboratories. And as noted by Thorbecke, Tung, and Wan, the government has also provided indirect but effective incentives to local firms that are providing key inputs to high-tech exporters and achieved success notably in the synthetic fiber and semiconductor industries. Thus, continued development of government competence and effectiveness in industrialization strategy may be critical as a developing economy approaches developed-country status. The economy may still face multiple equilibria (see Chapter 4) regarding its possible location on or below the world technology frontier. Haider Ali Khan provides an interesting analysis of Taiwan's efforts to transform its economy into a center of original research and development via a "positive feedback loop innovation system."

The fact that Taiwan weathered the enormous storms of the East Asian financial crisis in 1997–1998 strongly signaled the economy's development and resilience. The biggest problems looming for Taiwan are the resolution of the conflict with the PRC and the wholesale moves of Taiwan's industrial base to that country. The two issues are interrelated, most notably because greater interdependence between these economies is likely to raise the costs of war and lead to a peaceful resolution of the island's status. The resumption in 2008 of direct

mail and flights between Taiwan and mainland China, after 59 years, was a hopeful sign that violence can be avoided.

Are there any drawbacks to Taiwan's growth? Certainly environmental considerations have taken a backseat to economic growth until very recently. Taipei suffers from exceedingly noxious air pollution, for example. Despite a nominal beginning at land use planning, a drive down the island's west coast reveals a dizzying jumble of agricultural, industrial, commercial, and residential uses, defying any economic rationale, let alone aesthetics. Industrial sites sit perched on landfill over rice paddies and prawn pools, into which some waste products inevitably seep. Only after much Western pressure was attention given to endangered species. Even with increased government attention, as one Taiwanese official frankly put it, "the private sector is flexible and vibrant in Taiwan—where there is profit, there is activity."

For the most part, housing remains relatively small and basic in Taiwan. Again, with the opening of the PRC, many Taiwanese companies are moving lock, stock, and barrel to the mainland; some hollowing out of the economy, as has been seen in the United States and the United Kingdom, has occurred, but investment in the PRC by Taiwanese firms has arguably brought at least as much opportunity as problems. Taiwan was hit significantly by the global recession in 2008 and 2009, before rebounding. Although the caveats qualify Taiwan's success and point to some necessary future directions, they do not negate its impressive accomplishments.

In sum, Taiwan illustrates well the complex mix of factors behind the kind of rapid economic and social progress often termed a *development miracle*. The factors that stood out were education, infrastructure, land reform, high rates of saving and investment, absorption of commercial ideas, effective industrial policy in formative stages, market incentives, and policies and incentives for continued improvement and upgrading in skills, specialization in design skills, flexible production operations, productive knowledge, and efficiency. Thus, the transformation in Taiwan is not really a "mysterious" miracle; it can be understood as the result of policies consistent with the broader research on economic development. ■

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Concepts for Review

Absolute advantage	Free-trade area	Prebisch-Singer hypothesis
Autarky	Gains from trade	Price elasticity of demand
Balanced trade	General Agreement on Tariffs and Trade (GATT)	Primary products
Barter transactions	Globalization	Product cycle
Capital account	Growth poles	Product differentiation
Commodity terms of trade	Import substitution	Quota
Common market	Income elasticity of demand	Regional trading bloc
Comparative advantage	Increasing returns	Rent
Current account	Industrialization strategy approach	Returns to scale
Customs union	Industrial policy	Risk
Depreciation (of currency)	Infant industry	Specialization
Devaluation	International commodity agreement	Subsidy
Dual exchange rate (parallel exchange rate)	Inward-looking development policies	Synthetic substitutes
Economic integration	Managed float	Tariff
Economic union	Monopolistic market control	Trade creation
Effective rate of protection	Multifiber Arrangement (MFA)	Trade deficit
Enclave economies	New protectionism	Trade diversion
Exchange control	Nominal rate of protection	Trade liberalization
Export dependence	Nontariff trade barrier	Trade optimists
Export earnings instability	North-South trade models	Trade pessimists
Export promotion	Official exchange rate	Uncertainty
Factor promotion trade theory	Oligopolistic market control	Undervalued exchange rate
Factor price equalization	Outward-looking development policies	Uruguay Round
Foreign-exchange earnings	Overvalued exchange rate	Value added
Free-market exchange rate		Vent-for-surplus theory of international trade
Free trade		Wage-price spiral
		World Trade Organization (WTO)