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CHAPTER 1
Introduction

In the late 1990s, I met an anthropology student who had just returned from a year in Senegal. As soon as she learned that I was an international economist, she asked, "Can you tell me about the CFA franc devaluation? Why was it necessary? It has made life very difficult in Senegal." Some years later, I met a religion student who had just returned from a semester spent in Haiti working in a health clinic. As soon as he learned that I was an international economist, he asked, "Can you tell me about structural adjustment programs? I'm concerned about how they are being applied to Haiti." Subsequently, one of my children's school bus driver quizzed me about the Doha Round of multilateral trade negotiations, and a college professor wanted to know the exact distinction between trade and foreign direct investment.

These are not rare incidents. I have received such inquiries from all sorts of people. Increasingly, it seems, more and more of us need to know something about the world economy, religion students and bus drivers, as well as economics and business students. Why is this? Put simply, the world economy impacts us all in increasingly significant ways. It has become very difficult to take shelter in our respective majors and professions without being knowledgeable about the basics of international economics. Increasingly, trade flows, exchange rates, and multinational enterprises matter to us all, even if we would prefer that they did not. The 2008 global financial crisis made this apparent in the most dramatic way, as did the 2016 Brexit vote in favor of the United Kingdom leaving the European Union.

As a consequence of these changes, students and professionals, but also citizens more broadly, have significant concerns about "globalization." Shortly before the failed Seattle Ministerial Meeting of the World Trade Organization (WTO) in December 1999, for example, I received a phone call from a former student. She was about to travel to Seattle to join in the protests against the WTO, the "Battle of Seattle" as it was called. She knew that I had spent a brief amount of time at the WTO, and before she set off, she wanted to raise her concerns with me about globalization and the impact it was having on rural economies in the United States. The Seattle Ministerial was a failure, in part due to the efforts of my former student and her fellow protesters. The same was true of other subsequent WTO Ministerial Meetings.

Since that time, an anti-globalization movement has increased in strength.[1] It has drawn attention to the distributional impacts of increased global integration but has also at times questioned the entire integration of the world economy in broad-brush terms. Are the concerns of my former student and the anti-globalization movement well placed? Is globalization the evil that some contend it is? Or is it the unmitigated good that others contend it is? Most likely, the actualities of globalization are more nuanced than the good/evil dichotomy that is often invoked. For example, in an analysis of the effects of various globalization processes on the development processes, Goldin and Reinert (2012) stated that "The relationship between globalization and poverty is not well understood…. By examining both the processes through which globalization takes place and the effects that each of these processes has on global poverty alleviation, current discussions can be better informed" (p. 1).

Better informing students and professionals about globalization is an important component of this book, and exploring key aspects of globalization is one of the tasks we take up here. We will try to explore the world economy and globalization in as balanced a manner as possible. This will help us develop informed views and opinions, whatever they might be. Developing informed views and opinions, in turn, requires a serious study of international economics. This field of study is typically divided into two parts: international trade and international finance. Indeed, these two parts often constitute the only two courses in a standard "core-course" series. In this book, however, we are going to approach things slightly differently. Acknowledging some new perspectives on the world economy, we are going to explore three different aspects or realms of the modern world economy. These are: international trade, international production, and international finance. Let's briefly consider each of these in turn.

International Trade

Our first realm of the world economy is **international trade**.[2] International trade refers to the exchange of *both* goods *and* services among the countries of the world. We typically picture international trade as taking place only in *goods* such as steel, automobiles, wine, or bananas. However, this view is incomplete. It is important to acknowledge that a significant portion of world trade is composed of trade in *services*. For example, financial services, architectural services, and engineering services are all traded internationally. In fact, trade in services composes about one fifth of total world trade.[3] Indeed, trade in goods and trade in services can be *intertwined* as the process of trading in goods requires

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[1] See, for example, Ayres (2004), Dunkley (2016), and *The Economist* (2016a).

[2] Every time you encounter a term in **bold face** in this book, you can find its definition in the glossary.

[3] It is sometimes said that the word "goods" refers to things you can drop on your toe. Therefore, "services" refers to things you *cannot* drop on your toe! More formally, goods are tangible and storable, whereas services are intangible and non-storable. On trade in goods, see Reinert (2017b), and on trade in services, see Francois and Hoekman (2010) and Chanda (2017).

service inputs in the form of transportation, logistics, and customs clearance. Indeed, the process of manufacturing itself is becoming increasingly service intensive.[4]

International trade in goods and services is playing an increasing role in the world economy. Consider the data presented in Figure 1.1. This figure plots two series of data for the years 1970 to 2016. The first series, represented by a dashed line, is inflation-adjusted, world **gross domestic product** (GDP), a measure of world output. It has been normalized so that the value in 1980 is 100, and the values for each subsequent year are measured relative to 1980. The second series, represented by a solid line, is inflation-adjusted, world exports.[5] This series has been normalized in the same way as the GDP series. As you can see in Figure 1.1, over the decades considered, trade activity increased faster than production activity in the world economy. This is one of the main features of globalization, namely the expansion of exchange of goods and services among the countries of the world. You can also see that trade decreased more quickly in 2009 than did production in response to the 2008 financial crisis before recovering its previous trajectory. What Figure 1.1 encapsulates is a near-half-century of the increased trade intensification of the world economy.

There are many reasons for the expansion of world trade illustrated in Figure 1.1. One way of thinking about this is in terms of "three Ts," namely transportation, technology, and tariffs. The first "T" is transportation. During the 1970s, a revolution began in global goods shipping using containers, with ships built to carry thousands of increasingly-standardized containers and ports being redesigned to efficiently handle these ships and containers. Advances in container shipping continue to this day. The largest container ships now carry over 15,000 containers, and there are ongoing experiments in new materials (e.g., carbon-fiber composites), new security scanning technology, and new means of embedding container transport histories.[6] Recent statistical evidence suggests that container transport did indeed have a significant, positive impact on increased globalization via trade flows.[7]

The container shipping revolution was followed by significant changes in air freight that began in the mid-1980s. This mode of transportation is more expensive than container shipping. The reason air freight is important, however, is that it is so much faster. As noted by Baldwin (2016), "air cargo allow(s) manufacturers to know that intermediate goods could flow among distant factories almost as surely as they flow among factories within a nation" (p. 85). This new reality also helped to promote international trade flows.

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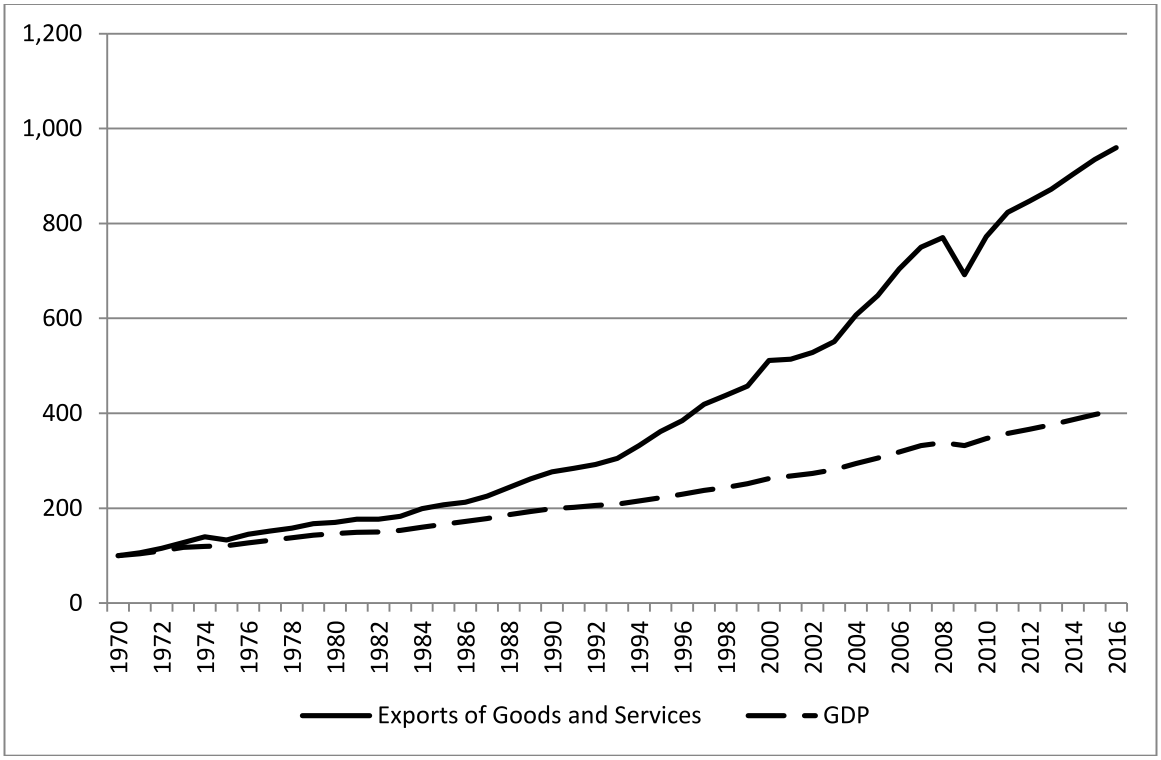
[4] See, for example, Lodefalk (2015). Chanda (2017) stated: "Manufacturing firms today are buying and producing more series than ever before. 'Servicification' of manufacturing refers to the fact that services are becoming important as both inputs and outputs for manufacturing" (p. 45).

[5] Note that world imports track world exports very closely, so we can use the level of exports as a proxy for the overall level of world trade.

[6] On some of these new container shipping technologies, see *The Economist* (2014).

[7] See *The Economist* (2013) and Bernhofen, El-Sahli and Kneller (2016).

Figure 1.1: Gross Domestic Product and Exports in the World Economy, 1970 to 2016 (1970=100)



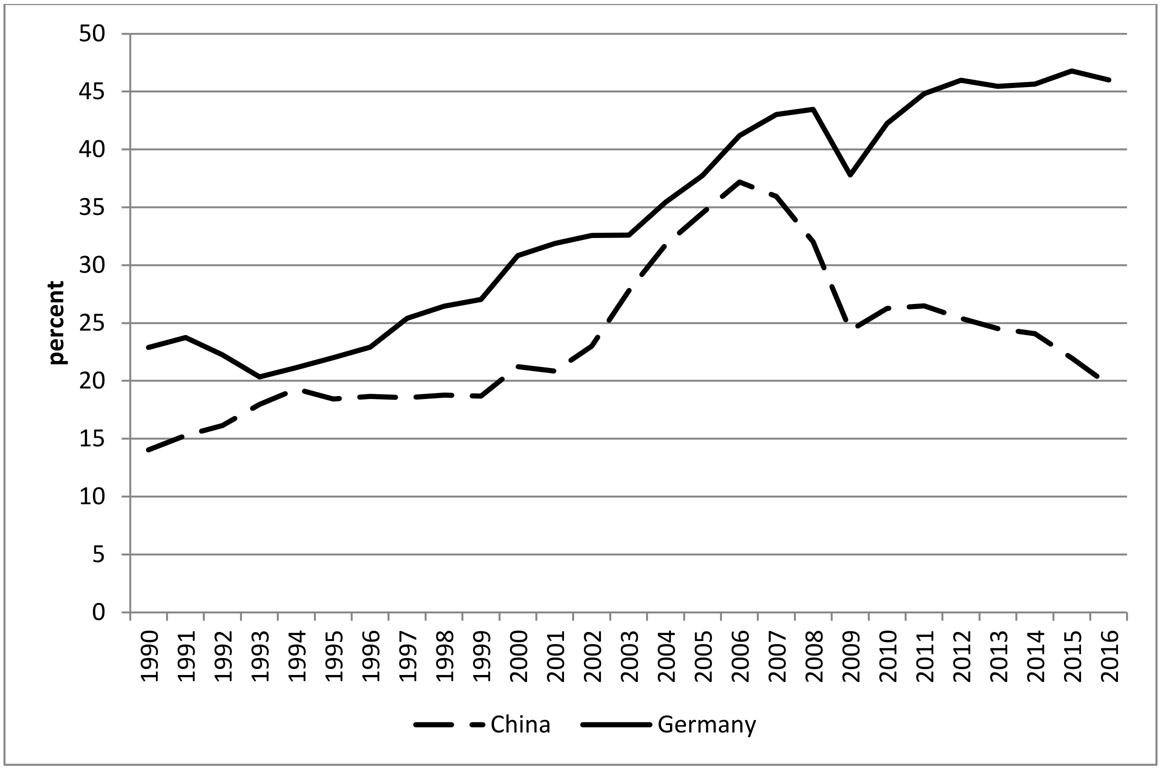
Source: World Bank, World Development Indicators and author calculations.

The second "T" is technology, specifically in the form of information and communication technology or ICT. A revolution in ICT has greatly enhanced the ability of firms to coordinate both international trade logistics and, more generally, international production systems. Advances in ICT also greatly facilitated some types of services trade via electronic commerce. ICT enhanced the development of container shipping to such an extent that we can say, to paraphrase Levinson (2006, p. 267), the container, combined with the computer, opened the way to modern globalization.

The third "T" is tariffs. The time period of Figure 1.1 coincided with an era of trade liberalization began with the lowering of tariff barriers both unilaterally and via regional and multilateral initiatives. For example, Hoekman and Kostecki (2009) reported that the result of multilateral trade liberalization, the weighted average tariff on manufactured products imposed by high-income countries fell from approximately twenty percent to five percent though the 1990s (p. 138). So tariffs or trade liberalization more broadly helped spur global trade integration.

In sum, the three Ts of transportation, technology, and tariffs all helped to contribute to a world economy in which international trade relations have grown increasingly important.[8] They also had impacts on patterns of international production to be discussed below.

Figure 1.2: Exports as a Percent of GDP, China and Germany, 1990 to 2016



Source: World Bank, World Development Indicators.

One recent and significant change in the global trading economy has been the entry of China as a result of its embrace of market reforms beginning in the late 1970s, as well as its joining the WTO in 2001. China's substantial increase in exports, particularly manufactured exports, was an unprecedented event that had significant implications for what we will call the *political economy of trade* throughout much of the world.[9] To gain some perspective, it is helpful to look at China's exports as a percent of GDP and compare this with another large exporter, Germany. We do this in Figure 1.2. You can see in this figure that China's exports as a percent of GDP are actually substantially *lower* than that of Germany and have been decreasing since 2006. Indeed, in 2016, China's

[8] Of these three factors (container shipping, ICT advances, and trade liberalization), Baldwin (2016) draws special attention to ICT, particularly in the decades since 1990. He sees container shipping and trade liberalization as reducing the costs of moving goods, but ICT as reducing the costs of moving ideas.

[9] See, for example, *The Economist* (2016a).

exports as a percent of GDP were below what they were in 2000, while Germany's increased steadily over the period of time considered in the figure. Indeed, as of 2016, Germany had the largest trade surplus in the world.[10]

You will begin to understand the major factors underlying international trade in Part I of this book. We will apply standard microeconomic thinking to analyzing both trade and trade policies. In doing this, you will become acquainted with the powerful concept of **comparative advantage**. You will also be introduced to a set of key policy issues surrounding the management of international trade, including issues pertaining to the World Trade Organization and to **preferential trade agreements** such as the North American Free Trade Area (NAFTA) and the Association of Southeast Asian Nations (ASEAN). A full understanding of the factors underlying international trade, however, will also require an understanding of international production taken up in Part II of this book.

International Production

A second important realm of the world economy is **international production**. Production patterns in the modern world economy can be relatively complex. For example, when my children were toddlers, one of their favorite books was *Bear's Busy Family*, published by the award-winning Barefoot Books. Featured in *Inc. Magazine* in 2006, Barefoot Books was founded in 1993 by Tessa Strickland and Nancy Traversy. It was initially run from their homes in the United Kingdom (where burgeoning inventory broke a table), but subsequently expanded with a flagship store in Cambridge, Massachusetts in the United States. In the case of *Bear's Busy Family*, the color separation was done in Italy, and the actual printing took place in Malaysia. So the book my children held with such interest in their hands was a result of a production process that took place in four countries. Production of products in multiple countries is what we mean by international production.

At the broadest level, international production can take place via two alternative modes. The first mode is non-equity contracting and includes foreign outsourcing, licensing, and franchising. Contracting is an arm's length relationship across national boundaries that can be described as a low-commitment-low-control option. The second mode is equity-based, **foreign direct investment** (FDI) undertaken by **multinational enterprises** (MNEs).[11] FDI involves firms based in one country *owning* at least 10 percent of a firm producing in another country and thereby exerting management

[10] See *The Economist* (2017a).

[11] A formal definition of an MNE by Dunning and Lundan (2008) is: "A multinational or transnational enterprise is an enterprise that engages in foreign direct investment and owns or, in some way, controls value-added activities in more than one country" (p. 3). For a review, see Anyanwu (2017).

influence, a high-commitment-high-control option.[12] Both of these options are important in the modern world economy.[13]

MNEs are a particularly important set of players in the world economy. To get a sense of this, consider the following facts:[14]

- MNEs account for approximately one fourth of world GDP.
- The sales of foreign affiliates of MNEs exceed the volume of world trade.
- MNEs are involved in approximately three fourths of all world trade.
- Approximately one third of world trade takes place *within* MNEs.
- MNEs account for approximately three fourths of worldwide civilian research and development.

A series of data on global FDI inflows from 1980 to 2016 is provided in Figure 1.3. The inflows are broken down among low-income (bottom), middle-income (middle) and high-income (top) countries that receive or host the FDI. As you can see, the 1990s were characterized by a large surge of FDI inflows, mostly into high-income countries and partly reflecting an upturn in mergers and acquisitions activity. What is also clear, however, is that the middle income countries of the world are hosting a growing amount of FDI. FDI inflows into low-income countries are very low and stagnant, hardly even visible at the bottom of the figure. Thus, low-income countries are largely excluded from this important part of economic globalization. As a result of the financial crisis and global recession, total FDI flows decreased substantially in 2008 and 2009. They subsequently recovered to approximately US$ 2 trillion, a value that had been reached in the mid-2000s in the previous FDI upturn.

What has accounted for the long-term increase in FDI activity in middle and high income countries? Two relevant factors are those mentioned above in our discussion of international trade, namely improvements in transportation and ICT. Add to this an expansion of global mergers and acquisition activity, particularly in the services sector (finance, transport, communications). Indeed, services began to account for approximately half of FDI flows in the 1990s. Further, many countries in the developing

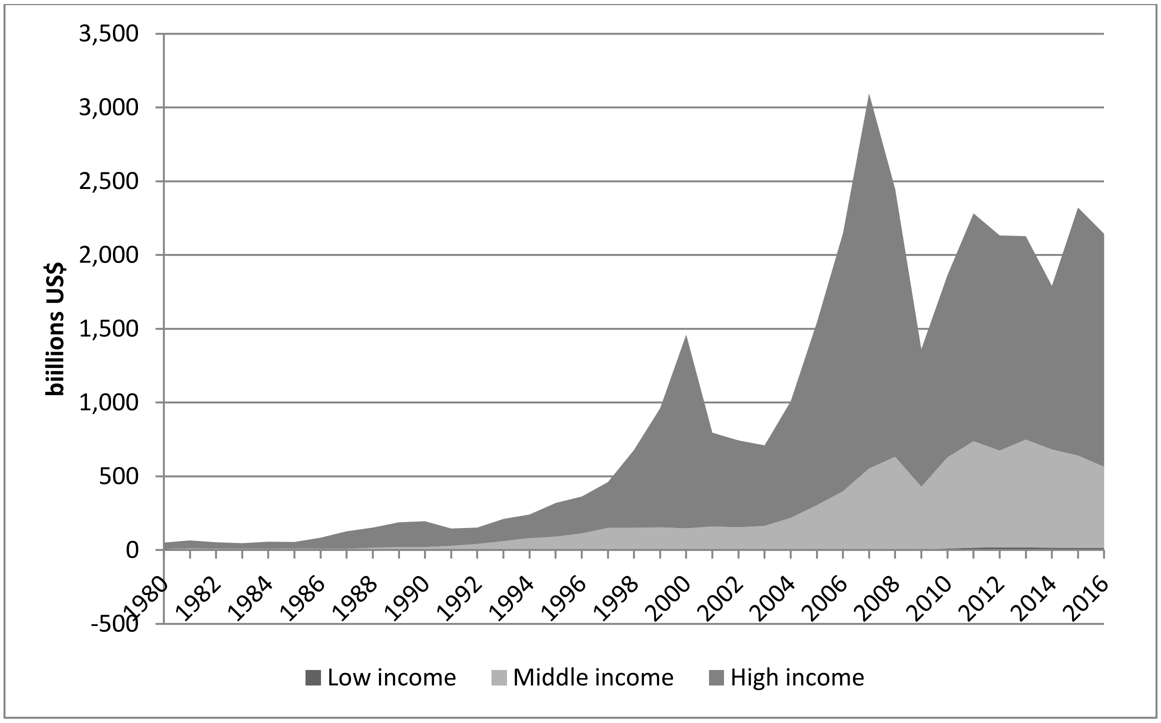
[12] The 10 percent ownership threshold for categorizing FDI is admittedly arbitrary, but it is a widely accepted standard in balance of payments accounting used by the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD).

[13] The popular term “offshoring” is used in different ways in the research and policy literature. In some cases (e.g., Chapter 2 of McIvor, 2005), it is used to mean essentially foreign outsourcing. In other cases (e.g., Feensta and Jensen, 2009), it is used to refer to FDI itself. In still other cases (e.g., Baldwin, 2016), it is used to refer to both. Given these multiple meanings, we will not use the term in this book.

[14] For further discussion of the role of MNEs, see chapter 2 of Dunning and Lundan (2008).

world began to shift from a policy posture of antipathy toward FDI inflows to one of relative friendliness.[15] This, for example, accompanied the well-known rise of FDI flows into China that helped spur its previously-discussed export expansion.

Figure 1.3: Nominal FDI Inflows to Low, Middle and High Income Countries, 1980 to 2016



Source: World Bank, World Development Indicators.

Both contracting relationships and FDI are configured among countries in what are known as **global production networks** (GPNs). GPNs are systems of value chains linked together in buyer-supplier or ownership relationships across countries.[16] GPNs are further held together by trade relationships in both intermediate and final products. GPNs have been enabled by the innovations in container shipping and ICT described above, and their configuration affects the way countries are included or excluded from evolving patterns of modern globalization. So the lack of FDI in low-income countries in part reflects their exclusion from GPNs.

[15] See Anyanwu (2017) who noted a shift to a view of "FDI as a prerequisite and catalyst for sustainable growth and development" (p. 134).
[16] See, for example, Gupta (2017).

ICT-enabled GPNs have received increasing attention among researchers. Indeed, Baldwin (2016) sees ICT-enabled GPNs as being the defining feature of modern globalization. Baldwin's observation is that ICT advances, along with advances in air cargo, made possible the coordination of production activities at a distance and, in a way, distributed factories across national boundaries. As he states, "The contours of industrial competitiveness are now increasingly defined by the outlines of international production networks rather than the boundaries of nations" (p. 6). He and others call this process "unbundling." By "unbundling," researchers mean that stages of production processes are moved outside of their original national location. This process is part of the modern evolution of GPNs.

Migration is also an important aspect of globalization.[17] This book considers migration to be a relevant part of international production in that most migrants leave one country and enter into another for work purposes. However, despite the fact that 3 to 4 percent of the world's population has migrated, there are significant impediments to this aspect of globalization. As barriers to the movements of goods, services, direct investment, and finance transactions have fallen over time, barriers to the movement of people have largely remained in place or even increased. This has caused some international economists (e.g., Pritchett, 2006) to refer to "everything but labor" globalization. Nonetheless, migration is still an element of the world economy worth studying, and we will consider its role in international production via both low- and high-skilled migration.

As the above facts and data indicate, FDI, MNEs, GPNs and migration are additional and important features of globalization. In Part II of the book, you will gain an understanding of these additional features of the modern world economy from both business and economic perspectives. This is a vast area of research, policy-making, and international business activity, but we will present the material in an organized and accessible manner to familiarize you with these new perspectives on the world economy.

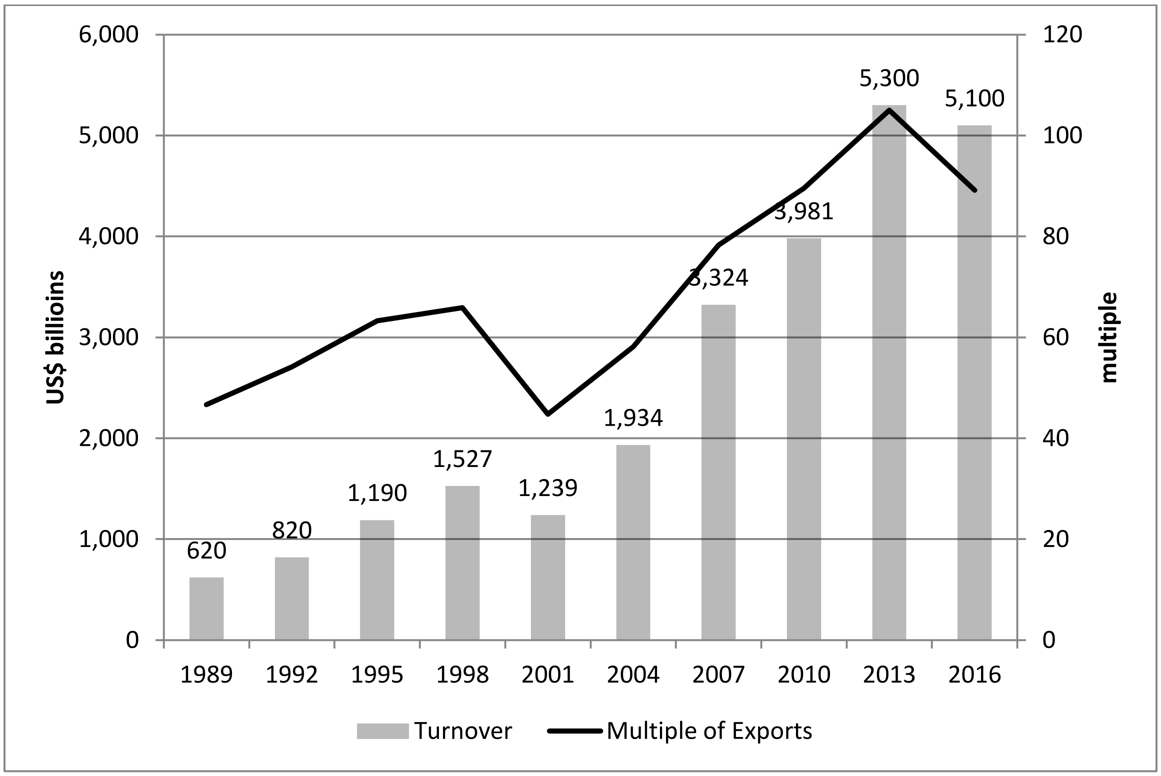
International Finance

A third important realm of the world economy is **international finance**. Whereas international trade refers to the exchange of goods and services among the countries of the world, international finance refers to the exchange of **assets** among these countries. Assets are financial objects characterized by a monetary value that can change over time. They make up the wealth portfolios of individuals, firms, and governments. For example, individuals and firms around the world conduct international transactions in currencies, equities, government bonds, corporate bonds (commercial paper), and even real estate as part of their management of portfolios. The way in which the prices of these assets change in response to these international transactions impacts individual countries in important ways. Additionally, as we will see, these transactions can provide a source of savings to countries over and above the domestic savings of their households and firms.

[17] See, for example, Chapter 6 of Goldin and Reinert (2012) and Omelaniuk (2017).

International finance plays an increasingly important role in the world economy. We can see this by considering foreign exchange transactions. As it turns out, foreign exchange transactions are *much larger* than trade transactions. For example, Figure 1.4 plots two variables for 3-year intervals between 1989 and 2016. The first variable, plotted as the vertical bars in reference to the left hand scale (lhs), is daily foreign exchange turnover as measured by the Bank for International Settlements (BIS) in its triennial April surveys. Despite downturns in 2001 and 2016, the total foreign exchange turnover has increased substantially over time. Observers were amazed when it broke US$ 1 trillion in 1995, but in 2013 it reached over US$ 5 trillion! In 2016, to some surprise, foreign exchange turnover declined a bit.

Figure 1.4: Daily Foreign Exchange Market Turnover and Annualized Multiple of Exports, 1989 to 2016 (billions of US dollars on lhs and multiple of exports on rhs).



Sources: Bank for International Settlements Triennial Central Bank Surveys and World Bank, World Development Indicators. Note: The multiple of exports assumes a constant foreign exchange turnover each day of the year.

The second variable plots the annualized foreign exchange turnover (assuming constant turnover each day) as a multiple of total world exports in reference to the right hand scale (rhs) also for for 3-year intervals between 1989 and 2016. As you can see, foreign exchange turnover can be as high as 100 times the value of exports. This makes it strikingly clear that, on an annual basis, global transactions in foreign exchange dwarf global trade transactions. International finance matters.

Another important feature of international finance has emerged in recent years. A typical expectation in the field of international finance is that low- and middle-income countries will naturally receive net inflows of capital from high-income countries with relatively low rates of return and invest it at relatively high rates of return. Since 2000, however, this pattern has been reversed. Due in large part to deficits in the United States (US citizens spending in excess of national savings), the "developing" world is now a significant exporter of financial capital rather than an importer. While estimates vary, it is safe to say that the capital exports of the "developing" world are approximately US$500 billion. This has been a major new development in international finance.[18]

Whether the foreign exchange transactions and **capital flows** of global finance are all for the best is a matter of current debate. Goldin and Reinert (2012, Chapter 4) struck a note of caution in their discussion of capital flows, noting that some types of global capital flows are volatile and potentially destabilizing. This is particularly the case for bond finance and commercial bank lending. Even the International Monetary Fund (IMF) has recently set a similarly-cautious tone. A publication by its staff economists (Ostry, Loungani and Fuceri, 2016) also questioned the growth-promoting effects of the bond finance and commercial bank lending. Since the IMF is the central institution of global finance, this is significant. *The Economist* (2016a) summarized these concerns by stating that "there is plenty of evidence of the trouble that floods of short-term capital can cause" (p. 11). Mitigating this "trouble" is an ongoing challenge.

The importance of international finance, seen in Figure 1.4, became very evident in the latter part of the 1990s. During this time, investors quickly sold assets in Mexico, Thailand, Indonesia, the Philippines, Russia, and Brazil, causing **balance of payments** crises and financial crises. This was a process known as **capital flight**. Capital flight involves investors selling a country's assets and reallocating their portfolios into other countries' assets and is part of the "trouble" of global finance.

Beginning in mid-2008, the power of international finance again became evident in the form of a global crisis with roots in the United States housing market. Losses in housing mortgages were transmitted around the globe via a pyramid of financial instruments related to this sector. This was the result of banks taking loans that would traditionally remained on their books, repackaging them in the form of asset-based securities, and trading these securities internationally. This provided a mechanism for a crisis related to new financial products originating in one country to take on a global profile. As the *Financial Times* noted in 2008, "the global system has shifted from financing anything, however crazy, to refusing to finance anything, however sensible." This kind of volatility is, to say the least, not desirable.

[18] This phenomenon is now known as the "Lucas paradox" after Lucas (1990).

The 2008 crisis did not just affect the United States. Its most severe effects were felt in Europe, first in the United Kingdom but then in Portugal, Italy, Ireland, Greece and Spain. The crises in Greece and Ireland were particularly acute, and the European Union struggled to contain the damage to its political and economic integration. Watching the United States and the European Union succumb to financial instability has given many experts and policymakers pause. It has even led some major players (e.g., China) to question the entire "Western model" of development.[19]

As we can see, then, international finance is a realm of increasing importance in the modern world economy. You will enter into this realm in Part III of the book. You will learn about open-economy accounting, exchange rate determination, capital flows, the international monetary system, and financial crises. Throughout Part III, the asset considerations that set international finance apart from international trade will be paramount.

Impacts on International Development

International trade, international production, and international finance make up the three areas of inquiry we will pursue in this book. The processes of international trade, production and finance reflect the many goals of their participants. From a public policy perspective, however, it is hoped that these three processes contribute to **international development**, namely to improved levels of welfare and standards of living. Two major issues usually arise here. The first is how we *conceptualize* levels of welfare or standards of living. The second is how the processes of international trade, international production, and international finance support or undermine international development. To be truthful, neither of these issues has been fully settled, and policy debates on these matters are ongoing.[20]

Development has been defined in a number of ways. The most prominent is as **gross domestic product** (GDP) per capita, the average value of production produced by a citizen of a country. This is the approach of mainstream economics. The limitation of the approach is that GDP has been explicitly developed to *not* be a measure of welfare.[21] To use it as such is very convenient, but incorrect. The main alternative to GDP per capita is the human capabilities approach that assesses development outcomes in terms of a range of human capabilities, things people can actually achieve like being healthy and literate.[22] The capabilities approach is often assessed using the **human development index** (HDI), a measure devised and maintained by the United Nations Development Program. The HDI reflects per capita income (adjusted for cost of living), average life

[19] See, for example, Zhao (2010).
[20] On this important issue, see Goldin and Reinert (2012).
[21] For example, Coyle (2014) states that "GDP is not, and was never intended to be, a measure of welfare. It measures production" (p. 93).
[22] The capabilities approach originated with Sen (1989). For a more recent treatment, see Nussbaum (2011).

expectancy, and average levels of education. It too has limitations, namely that per-capita income is *not* a human capability.[23]

Each of these approaches lead to very different types of assessment and policy suggestions. But they have one thing in common: however we measure it, development outcomes vary *widely* across the countries of the world, from severe deprivation to relative opulence. This can be seen in Table 1.1 for just a handful of countries. Across this very small collection of countries, GDP per capita varies by a factor of almost 90, the gap in life expectancy is about 17 years, and the gap in mean years of schooling is approximately a decade. Interestingly, both South Korea and Costa Rica have higher life expectancies than the United States, indicating that it is possible to increase life expectancies to high levels at lower levels of GDP per capita. The HDI is an attempt to summarize all of these gaps in a relative measure of development.

Table 1.1: Measures of Living Standards, 2015

Country	**GDP Per Capita**	**Life Expectancy (years)**	**Mean Years of Schooling (years)**	**Human Development Index (0 to 1) and Rank**
Ethiopia	646	65.0	2.6	0.448/174
India	1,613	68.3	6.3	0.624/131
China	8,069	76.1	7.6	0.738/ 91
Costa Rica	11,406	79.6	8.7	0.776/ 66
South Korea	27,105	82.2	12.2	0.901/ 18
United States	56,207	78.7	13.2	0.920/ 11

Sources: databank.worldbank.org and hdi.undp.org.

Reducing the variance in development outcomes is one of the most important challenges faced by policymakers today. All evidence suggests that it is a challenge that will persist long into the future. Dissecting how the various dimensions of economic globalization contribute to or undermine development is an ongoing, critical area of

[23] It is also possible to measure development as the extent to which human needs are addressed through the provision of basic goods and services. The focus on human needs originated with Streeten (1979). For a more recent contribution emphasizing the provision of basic goods and services, see Reinert (2018).

research. While a full treatment is beyond the scope of this book, we will definitely touch upon these issues wherever we can.[24]

Larger Realms

Each of our three realms of the world economy considered in this book—trade, production, finance—offers a different view of larger globalization and development processes. Studying each realm offers some important insights into the world economy, but these insights need to be supplemented by examining *other realms* as well. Too much specialization by focusing on one realm to the exclusion of others can be counterproductive. A few other important subjects to keep in mind are culture, the environment, politics, and technology (CEPT). The reality is that processes of international economics are strongly influenced by these CEPT factors. Let's briefly consider each in turn.

Culture has been defined in many different ways. In a discussion of the relationships among culture, globalization, and development, James (2017) defined culture as "the domain of social meaning that grounds human existence" (p. 409) or, more informally, as "how and why we do things around here" (p. 418).[25] We have a tendency to not notice culture until our own cultural norms have been violated in some way. Globalization, including economic integration among countries, is one means by which cultures come into contact with one another. This could be directly through migration or the movement of personnel within MNEs to support production abroad. The contact can also be indirect through trade in cultural products such as movies and books.

It is popular to depict cultural clashes as inevitable and growing in strength in the form of various "clashes of civilizations." Such claims often reduce human identities to singular versions of what are really *multiple* identities, a process that Sen (2006) refers to as "miniaturization." Along with being multiple, cultural identities can be somewhat fuzzy, and can change over time. Globalization can contribute to the multiple, fuzzy and changeable nature of culture.[26] Nevertheless, the extent to which cultural conflicts are managed (at the level of international politics or within a single MNE) matters a great deal to the evolution of the world economy. For this reason, we should not discount culture's importance.

The *environment* is the second CEPT realm. The transactions of international economic integration interact in a number of different ways with the natural environment. Production processes that are part of trade and GPNs have environmental impacts. These include resource extraction, pollution, and contributions to greenhouse gasses. Illicit trade

[24] For further discussion, see Goldin and Reinert (2012) and the contributed chapters of Reinert (2017a).
[25] In a more detailed way, James (2017) defined culture as "a social domain that emphasizes the practices, discourses, and material expressions, which, over time, express the continuities and discontinuities of social meaning of a life held-in-common. Culture is thus the making or expression of meaning" (p. 418).
[26] See, for example, Mathews (2000).

transactions impact endangered species and can involve toxic waste dumping. We should not downplay the importance of these issues. For example, increased greenhouse gas emissions impact global climate. This in turn impacts water availability and, thereby, water-intensive production processes of various kinds, both agricultural and industrial.[27] These environmental accompaniments of economic globalization are ongoing and need to be recognized and studied.

The environmental aspects of globalization also need to be addressed with appropriate policies. Appropriate policies can be developed at the local, national, regional and global levels. For our purposes in this book, the global policy responses to environmental issues are the most relevant. Indeed, a common theme related to global environmental issues is the importance of *multilateral* approaches, embodied in what are known as "multilateral environmental agreements" or MEAs.[28] Examples of MEAs include the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), the Convention on Biological Diversity (CBD), the Kyoto Protocol to the U.N. Framework Convention on Climate Change (Kyoto Protocol), and the Convention on Biological Diversity (CBD). The hope of many working in this realm is that MEAs will help the world economy avoid the dangers of serious and irreversible environmental harm.

The third CEPT realm is *politics*. In an ideal world, countries would interact with one another within the multilateral framework of international law, committed to dispute resolution procedures, conflict prevention, transparency, and respect for human rights. We do not live in this ideal world: country governments do not always respect international law, and armed, non-state actors exert their own influence across national boundaries. Consequently, political events of all magnitudes continually impact the world economy. Civil and international conflicts dramatically affect the supply sides of national economies, bias government expenditures towards armaments, promote the role of militaries in national governments, and undermine development. These national governments themselves are of various degrees of strength and capability, from effective to very fragile and even failed. Political instability in struggling states affects all three realms of the world economy, but also impinges directly and negatively on international development.[29] Consequently, the best-intentioned policies in the world of international economic policy can come to naught in our less-than-ideal political world.[30]

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[27] For example, Wisser et al. (2010) stated: "Water is the principal medium through which the societal stresses of climate change will be manifested. Although the exact impacts remain uncertain, in many places, even where total rainfall increases, climate change will most likely increase rainfall variability" (p. 6). For a manufacturing, business perspective on water, see *The Economist* (2008).

[28] On MEAs, see Runge (2009).

[29] This issue is potent enough to have inspired a World Bank World Development Report on the subject. See World Bank (2011).

[30] For one example of political considerations in the case of the Middle East, see *The Economist* (2015), which stated that "the Middle East… is a valuable corrective to the Panglossian view of globalization" (p. 66).

In recent years, the political realm has been characterized by a rise of what *The Economist* (2016b) has termed *ethno-nationalism*. The shift to ethno-nationalism is described as being "from the universal, civic-nationalism towards the blood-and-soil ethnic sort. As positive patriotism warps into negative nationalism, solidarity is mutating into mistrust of minorities, who are present in growing numbers." This type of ethno-nationalism was behind the 2016 vote in the United Kingdom to leave the European Union (commonly known as Brexit), as well as the vote for Donald Trump as President of the United States that same year. Such political developments are interpreted as a rejection of economic globalization in favor of ethnic identity. Managing this response to globalization, if that is what it really is, will be an important future challenge.

The fourth and final CEPT realm is technology. Technology of one kind or another is involved in nearly all human activities. Old economic models conceived of technology as, more or less, dropping from the sky. Newer and more relevant thinking in economics recognizes that the process of technological change is more complex than that.[31] We have already discussed the role of container shipping and ICT technology in the development of the modern world economy, and the accompanying box goes more deeply into the subject of ICT. But technology and technological change is part of every production process in both goods and services. It intermediates every transaction making up what we call international economics. It impacts the culture, environment and political realms of CEPT. Inversely, however, the evolution of technology is a political process in itself, with the evolution (or impediments to) technological change being outcomes of elite political processes.[32]

Here is just one example of how the CEPT realms can be deeply intertwined. I once had the opportunity to talk at length with Dr. Owens Wiwa, the brother of Ken Saro-Wiwa, a member of the Ogani people of the Niger delta. Dr. Wiwa informed me of his brother's campaign against the environmental damage resulting from oil exploration in the Niger delta for which he was eventually executed by the Nigerian government. One particular fact pressed upon me by Dr. Wiwa was that the gas flaring within the region takes place *horizontally* across the ground rather than vertically as is typical practice. Despite being a handy way to dry laundry, this technology has had severe environmental and health impacts. Today, one can view these gas flares on Google Images, and the Niger delta is in a near civil war. Global production of petroleum in its technological aspects has gravely affected the politics, culture and environment of this particular region of the world economy. Other examples of the way political, cultural and environmental issues interact are common around the globe.[33]

[31] For example, Singh (2017) stated: "Technology and development have come a long way from simplified suppositions about technological progress and diffusion to the complex social, political, institutional, and cultural or knowledge context within which technology is embedded" (p. 429).
[32] This point has been made by Acemoglu and Robinson (2006).
[33] The struggle of the Wiwa family is described in Hunt (2006).

ICT in the World Economy

As a dynamic, driving force for global economic change, technology is central. Indeed, a large part of the globalization process can be attributed to revolutions in information and communication technologies (ICT). As stated by Heshmati and Lee (2009), ICT "deals with the use of electronics, computers, and computer software to convert, store, protect, process, transmit and retrieve information" (p. 628). There is general consensus that ICT constitutes a technological innovation on the same order of magnitude as past innovations in steam power and electricity. It thereby constitutes a revolutionary change.

It is ICT that has allowed an employee of Philips, the Dutch consumer-electronics firm, to use the internet in order to adjust a television assembly line process in the Flextronics factory in Guadalajara Mexico. It is ICT that has allowed a fund manager in London to quickly buy or sell equities on the Johannesburg stock exchange. Most recently, ICT technologies in the area of "telepresence" have allowed teleconferencing to move into a new era in which it appears that participants half-a-world away are sitting across the table, greatly enhancing global coordination and reducing the need for international travel. There is also speculation that "telerobotics" will become an increasing reality, allowing a person in one country to operate robots in another, in a form of virtual migration.

In the realm of international production, ICT has had a somewhat unusual impact of moving production in two opposing directions: towards greater global integration and towards selective disintegration or unbundling of production systems. Communication and coordination costs of multinational production have long been a deterrent to FDI, requiring that MNEs possess offsetting advantages before engaging in successful foreign production. Advances in ICT have lowered these costs, contributing to increased integration of global production systems. Swissair, for example, has set up an accounting subsidiary in Mumbai India. Since close-of-business in Switzerland corresponds to morning in Mumbai, this accounting work is done on an overnight basis from the Swiss standpoint. This is an example of services being globalized but remaining *internal* to the firm.

At the same time, however, a second process has been at work. Improvements in ICT have resulted in firms *contracting out* on a global basis functions that they used to carry out in house, a process that has become known as "foreign outsourcing." ICT has substantially reduced the transactions costs of foreign outsourcing. For example, many US firms now contract their software development to Indian firms, notably to Tata Consultancy Services and Tata Unysys Ltd. Also, a number of hospitals in the United States now contract with Indian firms for medical transcription services, making use of satellite technology. These are example of services being globalized while being *external* to the firm.

Both of the above scenarios, FDI and foreign outsourcing, have been made possible by advances in ICT that are causing a global reconfiguration of the way work is carried out. This is a process that has not yet reached its final destination but has already had revolutionary impacts on the world economy, distributing production stages and tasks across the countries of the world in new ways.

Sources: Baldwin (2016), Dicken (2015), *The Economist* (2000, 2007), and Heshmati and Lee (2009)

Analytical Elements

As we begin to examine the four realms of the world economy, we will explicitly or implicitly utilize a number of *analytical elements* to improve our understanding of many complex processes. These are simultaneously actual elements at work in the real world economy and conceptual elements of the various models used by researchers to understand the world economy. We will rely on seven such analytical elements:

1. *Countries*. These are the states of the world economy, their national governments, serving as "home" to both firms and residents.
2. *Sectors*. These are categories of production defined largely in terms of final goods. An example is the automotive sector.
3. *Tasks*. On occasion, we are going to need to recognize that production in a particular sector involves a number of steps or separate tasks. Automobile production moves from a chassis to engine mounting to body mounting, for example.
4. *Firms*. Production in any sector of a country is undertaken by firms, either purely local or MNEs.
5. *Factors of production*. Production in any sector of a country undertaken by a firm makes use of various factors of production. Automobile production uses labor and physical capital.
6. *Currencies*. Most (not all) countries in the world economy have a separate currency in which transactions with other countries take place through foreign exchanges.
7. *Financial assets.* Both countries and firms issue various types of financial assets, denominated in a particular currency, which can be bought to be part of wealth management portfolios by other countries, other firms, and residents of any country.

As you read through this book, keep an eye out for these seven analytical elements and the way we draw upon them in various combinations to better understand the world economy.

Conclusion

It is becoming increasingly difficult for us to ignore the ongoing, important realities of the world economy. Students and professionals of many types are finding that a basic understanding of international economics is necessary for them to operate successfully. A thorough understanding of the world economy involves the study of three realms of international economics: international trade, international production, and international finance. These are the three aspects of the world economy that we explore in this book.

International trade is increasing faster than global production. International production, meanwhile, is taking on more and more complex forms, involving both contractual arrangements and foreign direct investment deployed along GPNs. FDI is undertaken by multinational enterprises, and these organizations play a critical role in the world economy. However, as we have seen, viewing the world economy in its trade and production aspects is also incomplete. The realm of international finance is paramount, with foreign exchange transactions dwarfing trade transactions.

It is hoped that international trade, international production, and international finance will contribute positively to international development, improving welfare and living standards. Understanding how this occurs (or does not occur) will be touched upon where appropriate throughout the book in a consideration of the links between the processes of globalization and the processes of development.

These three aspects of the world economy—trade, production, and finance—must be seen as connected. Further, these three realms are strongly affected by and affect the larger factors of culture, the environment, politics and technology (CEPT). The task of understanding how all of these realms evolve over time in a system of globalization is not, to say the least, an easy one. Indeed, it takes us far beyond the scope of this book. However, with persistence and some patience, you will begin to build an intellectual foundation for understanding this system in the remaining chapters.

Review Exercises

1. Why are you interested in international economics? What is motivating you? How are your interests, major, or profession affected by the world economy?

2. What are the three realms of the world economy addressed in this book? Define each of them *carefully*.

3. What is the difference between *trade in goods* and *trade in services*?

4. What is the difference between *international trade* and *foreign direct investment*?

5. What is the difference between *international trade* and *international finance*?

6. Identify one way in which the activities of international trade, finance, and production could *positively* contribute to international development. Identify one way in which these activities could *negatively* contribute to international development. How could you demonstrate that the activities have either a positive or negative impact on development?

7. Take a look at the websites of major venues of the global business/financial press such as *The Economist* and the *Financial Times*. Spend a little time browsing.

Further Reading and Web Resources

Osterhammel and Petersson (2005) present a concise history of globalization accessible to a broad audience. Dicken (2015) and Dunning and Lundan (2008) look at foreign direct investment in recent decades, and Prahalad and Lieberthal (2008) provide a short, interesting assessment of FDI in developing countries. On international trade, see Hoekman and Kostecki (2009). Eichengreen (2008) gives an excellent history of international finance, and the *Financial Times* (2008) takes a brief look at its recent failure. Goldin and Reinert (2012) and the chapters of Reinert (2017a) examine the relationship of a number of aspects of globalization to development and poverty alleviation. A review of globalization effects is also provided by *The Economist* (2016a, 2017b). Sen (2006) effectively addresses cultural issues in a global perspective, and Speth and Haas (2006) address global environmental issues. Szirmai (2015) provides a comprehensive consideration of economic and social development. Finally, Reinert et al. (2009) have edited a comprehensive encyclopedia of the world economy directly relevant to the three realms of the world economy examined here.

The Peterson Institute for International Economics in Washington, DC provides timely and readable analyses of many issues in international economics. Its website is www.piie.com. Two quality sources on international economic issues are *The Economist* and *The Financial Times*. Their websites are www.economist.com and www.ft.com. Important institutions of the world economy include the World Trade Organization (www.wto.org), the World Bank (www.worldbank.org), the International Monetary Fund (www.imf.org), and the International Organization for Migration (www.iom.int).

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