The United States in the World Economy

Making Sense of Globalization

Anthony Elson

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The Global Financial Crisis in Retrospect: Evolution, Resolution and Lessons for Prevention (2017)

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To Dolly,
My Lifetime Love, Wise Counselor and Delightful Companion

Preface

This is the fourth book on economic and financial globalization that I have written over the past decade. Each of these books has evolved in some way out of my professional training and experience as an international economist, a career official of the International Monetary Fund (IMF), an economic consultant with the World Bank and a lecturer at Duke, Johns Hopkins and Yale universities.

The writing of my first book, *Governing Global Finance: The Evolution and Reform of the International Financial Architecture,* began when I was teaching as the AGIP Professor of International Economics at the European Center of the Johns Hopkins School of Advanced International Studies (SAIS) during the period of the global financial crisis (2008–09). It reflected my attempt to understand the origins and evolution of the crisis and the defects in the international financial architecture that made it possible. That book tried to explain the financial crisis in the context of the evolution of financial globalization and the weaknesses in the international institutional arrangements (or "architecture") of the post-World War 2 era that were designed to promote global financial stability. It was also intimately related to my experience at the IMF and the focus of teaching that I undertook at the Center for International Development of the Duke University School of Public Policy.

My last book, *The Global Financial Crisis in Retrospect: Its Evolution, Resolution and Lessons for Prevention,* in many respects was an extension of my first book and provided a more in-depth analysis of the causes, effects and resolution of the crisis with the benefit of hindsight and the extensive analytical work that had been conducted in the decade since the crisis

erupted. One of the outgrowths of that crisis has been a critical evaluation in the United States and other countries of the costs and benefits of globalization at the level of both analytical and political discourse that culminated in the election of Donald Trump as President of the United States in 2016. This current book represents an attempt to identify and evaluate those costs and benefits for the United States, which has been a central force in the global economy and in the creation and evolution of the liberal economic international order that has underpinned globalization in the post-WW2 era. It is my view that the benefits of globalization for the United States have not been well understood and that its costs have been overstated in public debate, which has led to an anti-globalist stance in the current foreign economic policy of the US government that will impose long-term economic costs on the country. In the preparation of this book, I have drawn on and extended my thinking on topics of financial globalization that I had developed in my two earlier books.

The one book that does not fit within the sequence of books on globalization that I have just described is my second book, *Globalization and Development: Why East Asia Surged Ahead and Latin America Fell Behind*. While related to the general topic of globalization, it focuses primarily on the contrasting development experiences of East Asia and Latin America and how these can be understood, among other things, in terms of each region's degree of integration and engagement with the global economy. East Asia, as a region of successful development, has been very aggressive in linking its rapid pace of development to the goal of export promotion and integration with the global economy, whereas Latin America, by contrast, has traditionally been far more inward-oriented and less successful in achieving sustained development through the growth of its export sector. My interest in these two regions relates directly to my experience at the IMF, where for many years I was responsible for the management of the Fund's macroeconomic surveillance and financial assistance operations with a number of countries in East Asia and Latin America. I first tried to distill the lessons of that experience by teaching a course on comparative economic development at Johns Hopkins SAIS that culminated in the publication of that book.

In many respects, these four books represent my professional biography in that they cover a range of topics and themes that I have been interested in since the time of my graduate training at Columbia University, first as a student at the School of International and Public Affairs and then in the Ph.D. program in Economics at the Graduate School of Arts and Sciences.

It was at that time that I developed my interest in the economic development of Latin America and learned about the unique and essential global responsibilities of the IMF and World Bank. While at Columbia, I was fortunate to have been selected as one of the first three summer interns at the IMF, which led to my entry as a career official and over time a variety of assignments and positions up to the deputy director level in both its country and its functional activities. As both a mandarin-style international bureaucracy and a professional group of economists, the IMF is an exceptionally strong and influential organization, notwithstanding its relatively small size (less than 3000 staff members) and wide-ranging responsibilities in macroeconomic surveillance, financial assistance, research, statistics, technical assistance and training.

In the final stage of the preparation of this book, I wish to acknowledge the excellent assistance I received from Yang Liu, a graduate student in the M.A. program of Johns Hopkins SAIS, in the finalization of tables and figures for the book and for the answers he provided to a number of queries on which I needed specific responses in my final review of the book chapters.

Washington, DC, USA — Anthony Elson

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List of Abbreviations

AB	Appellate Body of World Trade Organization's Dispute Settlement Body
AIG	American International Group
ALMP	Active labor market policies
BIS	Bank for International Settlements
BITs	Bilateral investment treaties
CDOs	Collateralized debt obligations
CDS	Credit default swaps
CFTC	Commodities Futures Trading Corporation
DSB	Dispute Settlement Body of the World Trade Organization
GATT	General Agreement on Tariffs and Trade
GSEs	Government-sponsored enterprises
GVCs	Global value chains
ILO	International Labor Organization
IMF	International Monetary Fund
IOM	International Organization for Migration
ISDS	Investor-state dispute settlement
ITO	International Trade Organization
LIEO	Liberal International Economic Order
MBS	Mortgage-backed securities
MFN	Most-favored nation
NAFTA	North American Free Trade Agreement
OECD	Organization of Economic Cooperation and Development
OTC	Over-the-counter
PBOC	People's Bank of China
PIIE	Peterson Institute for International Economics
REPOs	Repurchase agreements

RTAs	Regional trade agreements
SDRs	Special Drawing Rights
SOEs	State-owned enterprises
SPV/SIVs	Special purpose vehicles/special investment vehicles
TAA	Trade Adjustment Assistance
TPP	Trans-Pacific Partnership
TRIPs	Trade-Related Aspects of Intellectual Property Rights
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNWRA	United Nations Works Relief Agency
USMCA	United States Mexico and Canada Trade Agreement
WTO	World Trade Organization

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CHAPTER 1

The Benefits and Perils of Globalization

1 An Overview of the Book

Globalization was a major theme of the 2016 presidential election in the United States. Both Donald Trump, on the right, and Bernie Sanders, on the left, pursued strong populist campaigns in associating globalization, and US trade policy in particular, with major adverse effects on American workers and the US economy more generally. A common theme of their campaign rhetoric was that trade agreements such as the North American Free Trade Agreement (NAFTA) have destroyed US jobs. This outcome has allegedly been the result of relocating auto-manufacturing plants to Mexico to take advantage of lower wage costs in that country and duty-free access to this country. There were also complaints in the campaign about imports of manufactured goods from China, resulting from its major drive to industrialize and its access to the US market on a virtually duty-free basis as a member of the World Trade Organization (WTO). As a result, these imports have led to the closing of factories in the United States and the loss of US jobs that could not match the cost advantage of imports from China. In addition, this cost advantage has allegedly been magnified by China's policy of currency manipulation that was aimed at maintaining an artificially low exchange rate for the renminbi. In the field of immigration, the complaints raised by Mr. Trump were particularly strident, especially toward Mexicans. (These claims are fully analyzed in subsequent chapters.)

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The focus on the perils of globalization for the United States in the 2016 presidential election was matched by similar complaints about the negative effects of globalization in more recent election campaigns in France and Germany, as well as the United Kingdom's earlier decision to withdraw from the European Union ("Brexit"). Altogether these developments have led some to speculate that the advanced countries are entering into an unchartered phase of globalization or possibly some reversal in the expansion of the liberal international economic order that was established after World War II (WW2).

While there may be validity to certain aspects of the claims raised in the 2016 US presidential campaign summarized above, it is also true that they provide a very selective and partial view of the effects of trade policy and trade expansion for the US economy. They also give a very incomplete view of the economic impact of globalization more generally defined to include the effects of trade expansion, immigration and financial liberalization. The purpose of this book is to elaborate on these counterclaims and provide a balanced assessment of the economic benefits and costs of globalization for the United States. At the same time, the book attempts to identify certain changes in domestic policy and in the governance of the international system that can or should be made with a view to maximizing the benefits of globalization and minimizing its costs, not only for the United States but for other countries as well.

In trying to understand the political backlash against globalization that has affected the outcome of recent elections on both sides of the Atlantic, one must also look at other factors that may account for this reaction. In this discussion, technological change must be seen as a critical factor affecting structural change in the US economy and work-force requirements in the manufacturing sector. As a result, the relative share of manufacturing in the aggregate economy has fallen sharply as economic activity in the United States has become increasingly more dependent on the delivery of services; at the same time, within manufacturing, there has been a marked shift away from traditional smokestack and machine-based industries (such as textiles and steel) to more skill-intensive, technology-based manufacturing of electronics and other sophisticated consumer goods. This process of structural change has been under way for some time and started prior to the phase of globalization under consideration in this book. Along with the declining role of trade unions in the US economy and the phasing out of traditional (defined-benefit) pension arrangements, the process and pace of structural change have contributed

undoubtedly to a sense of insecurity and frustration among certain working groups. These developments, along with the impact of globalization, raise questions about the appropriate role and effectiveness of government policies in facilitating the adjustment process for those workers who have been adversely affected by structural change in the economy. This issue is also considered in the course of this book.

At the outset, it may be useful to lay out the major themes of the book in order for readers to have a clearer perspective on the orientation of the author and the main conclusions that are reached as a result of the analysis presented in the rest of this book. These are as follows:

1. The United States has been a significant net beneficiary of economic and financial globalization as experienced in the last few decades.
2. To a large extent, this conclusion should not be a surprise, as the United States has played a leading role in defining the ground rules and conditions for globalization which have been favorable to its economic and financial interests.
3. In many respects, the gains from globalization are often ignored in public debate, as they are more diffuse and generalized than the costs, which tend to be concentrated and localized and thus easier to identify.
4. Many of the concerns raised about globalization more properly should be attributed to the impact of structural adjustment of the US economy associated with the effects of technological change and other factors that have also contributed to a growing problem of income inequality, of which globalization is only one.
5. Economists have not done a good job in identifying the restrictions and limiting assumptions of the models they use to explain the benefits of globalization, especially in the area of trade liberalization.
6. The global financial crisis of 2008–09 was not an inevitable outcome of financial globalization but rather can be attributed to speculative financial activity, fraud and abuse in financial transactions, a breakdown in the counter-party risk assessments of the private sector and defects in the financial regulatory framework.
7. Immigrants have contributed importantly to the industrial development of the United States and more recently to its strength as a high-tech service economy; the association between migrants and higher gross domestic product (GDP) per capita appears to be broadly based and not a significant factor in the growth of income inequality.

8. The US government has not been effective in assisting those workers or individuals adversely affected by trade or technological change; in this respect, a new social compact among business, labor and government is required, while government policies are needed to address the growing problem of inequality in the US economy.
9. Improvements in the global governance of the international economic and financial system are needed to ensure that the benefits of globalization can be maximized and its costs can be minimized, not only for the United States but for other countries as well.

These themes and conclusions are fully elaborated upon in the chapters that follow.

2 What Do We Mean by "Globalization"?

By way of introduction, it is important to be clear as to what is to be understood by the term "globalization" and what have been some of the main markers in its development. In this respect, the focus on the United States in this book is appropriate, as being the largest economy in the international economic system in the post-WW2 era, it has had a major impact on the expansion of globalization through its policies and the activities of its business and financial sectors, while also being a significant beneficiary. Given its dominance in the global economy throughout the post-WW2 era, the United States has had more freedom of action in its economic policies and a greater influence on the economic behavior of other countries than other countries have had on the United States. This asymmetric relationship is reflected in the role of the US dollar as a main, vehicle currency for international trade and financial transactions, the preference of other countries for US public debt as a major component of their foreign reserves, the size and depth of its financial markets and the major weight of US trade in global commerce. These factors are also the basis for a number of benefits that the United States draws from globalization, as explained in future chapters.

Globalization is often restricted to the discussion of increased trade in goods and services across national borders, but it should more properly be understood as encompassing the increased flow of goods and services, financial assets, workers and ideas across national borders. Globalization has been encouraged or promoted by policies and actions by governments that have reduced barriers or restrictions on these flows. In response, private

agents or businesses have initiated or expanded their international operations in order to enlarge their profit opportunities, broaden their investment choices or improve the efficiency of their main business activity. In this book, I use the term "globalization" to refer to the increased flows of goods and services, financial assets and workers across national borders, somewhat similar to the "four freedoms" (for goods, services, finance and people) of the European Union. The increased international flow of ideas covers an enormous range of cultural, intellectual and scientific phenomena that go well beyond the scope of this book. However, to the extent that the flow of ideas relates to economic activity, as in the case of intellectual property (IP) rights or foreign direct investment, they will already be subsumed within the flows of goods, services, financial assets and people that are discussed.

In understanding the forces of globalization, it is important to recognize that trade, finance and migration do not operate independently of each other, as they often have interacting effects. Trade and finance, for example, are intimately related as trade flows could not take place without the benefit of short-term credit operations and cross-border payment arrangements by banks. Also, capital flows in the form of foreign direct investment are often linked to increased international trade among affiliates of multinational corporations and between independent agents in source and destination countries. More generally, trade and financial openness can have mutually interacting effects for a country such as the United States that maintains a freely flexible exchange rate. For example, an increase in financial inflows that are attracted to its deep and well-diversified financial markets may lead to an appreciation of the US dollar that can affect over time the size of its trade sector or the composition of its trade flows. More recent experience has also shown that high-skilled immigrants have provided valuable support for high-tech industries in the United States, which have become an important source of its service exports. Migrants and trade combined can increase the variety of inputs used in domestic economic activity and thus can raise productivity and real wages. International migration is also highly correlated with financial flows in the form of migrant remittances between the host country and the country of origin of migrants.

With the rapid pace of globalization during the last few decades, we are seeing within the political debates an implied or expressed concern about the tension or potential conflict between national sovereignty and international rules. As the pace of trade and financial integration within the global economic system has intensified, there has been a need to establish com-

mon rules, norms or conventions to guide that system. Yet at the same time, these international arrangements need to be accommodated within the frameworks of national legal and institutional arrangements that guide domestic economic activity. During the early post-WW2 era, the latter were clearly dominant as the forces of international economic integration that existed prior to World War 1 (WW1) had completely broken down with the effects of the Great Depression and two world wars. However, since the end of WW2, the forces of economic and financial globalization have again become dominant, and constraints on the freedom of domestic economic activity have become more apparent. Gradually, over time, as the forces of integration at the global (or regional) level become stronger, the demand for more expansive supranational legal and institutional arrangements to guide these forces will intensify. In many respects, however, the election of Donald Trump as President of the United States in 2016 represented a political decision on the part of a significant share of the American electorate to re-assess the impact of globalization on the US economy, the pace of its economic integration, and the rules governing the global system.

This tension between national and emergent supranational authority arising from globalization is perhaps most apparent at the regional level within the European Union. Given the ultimate political objectives that lie beneath the economic goals for the European Union, political leaders have recognized that a supranational authority and a set of regional institutions were needed to guide the process of economic integration. Ultimately a regional political authority will be required to make it complete. Nevertheless, the transition from a system of national authorities to one of a supranational regional authority will be a slow and gradual process in which the division of labor and power between these two levels of authority will have to be tested and accommodated. The financial crisis of Greece, for example, showed very clearly the conflicts that can arise between national sovereignty and supranational authority in determining policy and debt management reforms that would make it possible for that country to maintain its membership within the euro zone. Throughout the crisis, Greece was in effect required to surrender its sovereignty on economic policy decisions to the dictates of a supranational authority in the form of the so-called "Troika", comprising the European Central Bank, the European Commission and the International Monetary Fund (IMF). In the case of Brexit, by contrast, a conflict between the preferences of UK popular sovereignty and supranational requirements has

arisen within the confines of the European Union, with the former taking precedence at this stage and the United Kingdom proceeding to negotiate its withdrawal.

In examining the conflicts that can arise between the preferences of domestic political choice and the rules for the international economic system, Dani Rodrik of the Harvard Kennedy School has defined what he calls an "inescapable trilemma of the global economy" that determines the political choices that countries are forced to make in adjusting to its effects. By this he means that democracy, national sovereignty and global economic integration are not mutually compatible. A country can combine any two of these three conditions but not all three simultaneously and in full.[1] For example, if a country wants to pursue deep economic integration, it will ultimately have to yield over time much of its national sovereignty in favor of some sort of global federalism. Alternatively, a country could seek to maintain national sovereignty and full control of its domestic economic policies through democratic politics, but then it would have to limit strictly the extent of its international economic integration.

3 The Two Eras of Globalization

The current era of globalization is directly linked to the rules for trade and international finance that emerged with the definition of the Bretton Woods system and the plans for the International Monetary Fund (IMF), the International Trade Organization and the International Bank for Reconstruction and Development (or World Bank) in the aftermath of WW2. That system defined the rules for exchange rate management, trade liberalization and medium to long-term flows of official financing for post-war reconstruction, infrastructure and other development projects.[2] During an initial phase from 1945 to the early 1970s, this system fostered a gradual resumption of international trade and long-term capital flows that began the process of trade and financial integration we observe today. Until the early 1970s, banking systems were tightly regulated and cross-border bank transactions and private financial market flows were severely restricted. Beginning in the mid-1970s, however, the advanced countries began a process of capital account liberalization that removed these restrictions and initiated a phase of financial globalization. A decade later a similar process began to take effect among a number of emerging market economies but at a more gradual pace. For purposes of this book, I mark the beginning of a second phase of the post-WW2 era of economic and

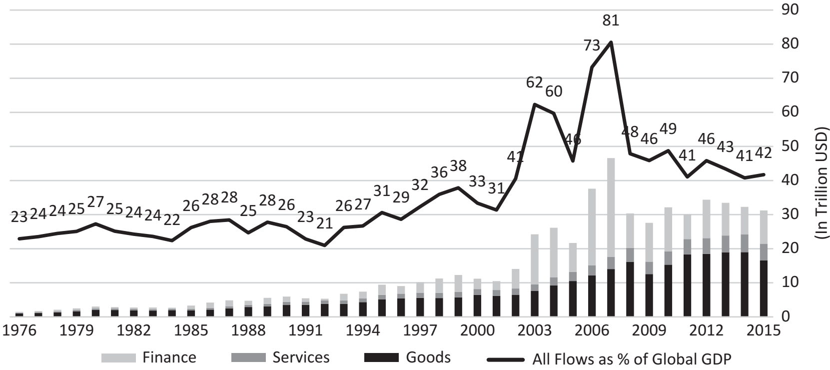

Fig. 1.1 Flow of goods, services and finance (1976–2015). (Source: World Trade Organization; External Wealth of Nations database)

financial globalization from the mid-1980s, as restrictions on international trade and financial flows were substantially reduced by then, at least among the advanced countries. This demarcation is also evident from the measures of global trade and financial flows that appear in Fig. 1.1.

The mid-1980s is also important for marking the emergence of the information and communications technology (ICT) revolution that has been a key technological innovation driving the current phase of the post-WW2 globalization era. This factor has greatly facilitated the growth of international financial transactions and underpinned the phenomenon of off-shoring and outsourcing that has been a unique feature of global trade within the current phase of globalization.[3] Measures of migrant flows followed a similar pattern of expansion from a very low level of movement after the end of WW2. However, unlike the behavioral patterns of trade and finance, migrant flows leveled off during the 1970s following a steady decline and have maintained a relatively gradual pace of recovery since then (see Fig. 1.2).

It is important to understand that the post-WW2 era of globalization was preceded by an earlier era of globalization that existed for around three to four decades prior to WWI. This earlier period of globalization was an outgrowth of the industrial revolution of the early to mid-nineteenth century and the inventions of the steamboat, railways and the telegraph. These inventions made it possible to separate the production and consumption of manufactured goods from within the same population centers

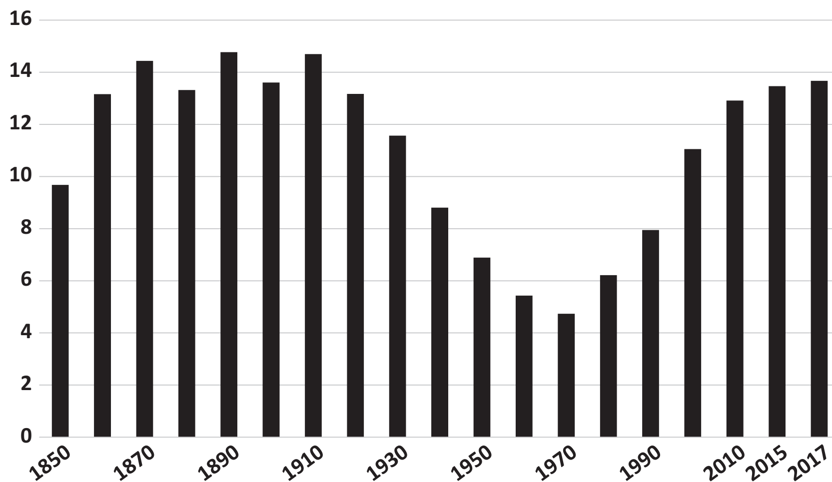

Fig. 1.2 Share of foreign-born US population (in percent). (Source: US Census Bureau and the American Community Survey)

to dispersed geographic locations across land and oceans through the rapid expansion of trade. The use of protective tariffs for agricultural and manufactured goods was common in this era, but trade was nevertheless greatly facilitated by countries' adherence to the dictates of the gold standard and fixed exchange rates. These arrangements guaranteed the freedom of financial flows among most advanced and many developing countries in support of trade, as well as automatic domestic policy adjustments in the event of significant trade and current account imbalances. Such adjustments were required if countries were to be able to maintain a fixed exchange rate and a minimum level of gold reserves. In this way, a country's adherence to the gold standard was a signal of its commitment to a mix of fiscal and monetary policies that would maintain a viable balance of payments position over time and its attachment to a regime of economic and financial integration.

In this earlier globalization era, national sovereignty was clearly subordinated to the requirements of economic integration (in accordance with the trilemma of the global economy noted earlier) to a much greater extent than it has been in our own time. In fact, this experience and the difficulty of accommodating the dictates of deep economic integration and democratic control of domestic policy choices led to many of the

compromises that were incorporated within the early post-WW2 international agreements noted earlier. In this regard, it is interesting to note that, during this earlier globalization era, there were no public international institutions similar to the IMF, World Bank or WTO of the present time to establish international rules and guidelines or help promote policy cooperation among participating countries on economic and financial matters. Two limited exceptions to this generalization in very specialized fields of international cooperation were the International Telegraphic Union and the Universal Postal Union. Where agreements on economic and financial issues were required, they were developed on a bilateral basis or by means of ad hoc diplomatic conferences or congresses. The role of managing the international economic and financial system essentially fell to the government and financial institutions of Great Britain whose banking, trade and currency operations dominated the system, as have those of the United States in the current era of globalization.

In a number of respects, it is interesting to compare the two eras of globalization along the three dimensions of trade, finance and immigration, at least among a selection of the advanced countries, comparing the two 30-year periods, 1880–1910 and 1985–2015. Migratory flows have been similar in the two eras, whereas trade and financial flows have become much more extensive in the recent period. In the case of trade, the sum of merchandise exports and imports to global GDP reached a peak of around 30 percent in 1913, which subsequently fell dramatically to around 10 percent in 1945 as a result of the Great Depression and WW2. The previous peak was not recovered until 1973, but since then it nearly doubled to a ratio of 60 percent on the eve of the Great Recession (see Fig. 1.3). Two factors, in particular, help to explain the explosion of trade in the current era of globalization. One is the continued decline in the cost of transport with the invention of containerization, which simplified and standardized freight handling and allowed for larger freight shipments by means of "mega"-containerships. The other factor has been the enormous growth in the trade of intermediate goods with the development of global supply chains that have been associated with the frequent transfer of goods among countries specializing in certain parts of the production chain for a number of high-value consumer items, such as commercial aircraft, cars and electronic equipment. Trade openness in the current era of globalization has been found to be a factor contributing to economic growth, yet paradoxically recent research has shown that this was not the case for the earlier era, given the greater reliance of domestic economic activity on tariff protection at that time.[4]

Fig. 1.3 Global merchandise exports and imports as a ratio to global GDP (in percent, 1827–2017). (Source: OurWorldinData.org; World Bank)

The flow of finance has followed a similar pattern as that of trade, reaching a peak on the eve of WW1 and then collapsing with the Great Depression and WW2. After 1945, international financial flows slowly recovered, but then with the end of the Bretton Woods system and the dawn of flexible exchange rates, there has been a major expansion in international financial integration, especially in the period since the late 1990s. This expansion coincided with a period of growing global imbalances among major trading countries that reflected a heavy demand for international safe assets on the part of many emerging market economies (in particular China). The numerous innovations in private short-term and medium-term finance that preceded the global financial crisis created a variety of financial instruments that helped to satisfy this demand for safe assets along with US public debt, a traditional investment vehicle. As discussed later, financial liberalization in the current era of globalization has had ambiguous results on economic growth, again in contrast with the earlier era when the association between capital account liberalization and economic growth was more clearly positive, in part because of the dominant role that foreign direct investment played in international financial relations.

4 Topics to Be Taken Up in the Rest of the Book

Looking more closely at the three dimensions of globalization in our current era, one can identify the following salient points to be examined in subsequent chapters of the book. One is the pre-eminent role of the US economy in the global system. On the basis of its trading activities, the United States is a relatively closed economy by comparison with other advanced economies in terms of the value of merchandise trade to GDP (even though its merchandise exports account for more than half of its merchandise production). Nevertheless, as the largest economy in the global system throughout most of the WW2 era, the value of its trade in goods and services has accounted for the largest share of global trade. A similar picture of dominance emerges in the arena of financial flows. Being the country with the largest and deepest financial markets within the global financial system, the United States has traditionally dominated cross-border financial flows. This role has been enhanced by the use of the US dollar as the main vehicle currency for international trade and financial transactions and the size of its derivative markets for covering the risk of interest rate and currency fluctuations. The central position of the US economy in the global system is examined in more detail in Chap. 2.

Trade has been perhaps the most contentious focus of debate in recent complaints about globalization. The economic arguments in favor of trade and trade liberalization are clear in terms of greater efficiency, productivity improvements, income growth and consumer choice. However, it is also evident that there are winners and losers in the process of adjusting to new trading patterns in terms of the rewards to workers of different skill levels and the distribution of the rewards to capital and labor. In addition, as noted earlier, the gains may be more diffuse, while the losses are more concentrated and visible, either for a certain industrial sector or the specific location of a factory and its workers. This concentration of losses has been an important focus of attention in understanding the effect of growing trade with, and the import of manufactured goods from, China since 2001. A related issue has been the rapid development of global supply chains in the last couple of decades and the associated outsourcing of certain components of the manufacturing process to foreign countries, which has also contributed to losses for workers in certain industries or regions. Notwithstanding the two phenomena just cited, the evidence shows that the gains from trade overall have significantly outweighed the losses. An important issue of public policy, then, is what can be done at the national

level to transfer some of the gains from trade to those most affected by the losses in order to facilitate their shift to new gainful forms of employment. These issues of trade integration for the US economy are discussed in more detail in Chap. 3.

The global financial crisis of 2008–09 highlighted in dramatic terms the perils of financial globalization for the US economy. It is also an important factor that has entered into recent public debate about the costs and benefits of globalization. From a conceptual or analytical point of view, there are clear gains from greater financial integration for an economy such as the United States in terms of new investment opportunities, the diversification of risk, consumption smoothing over time and easy access to finance for domestic businesses. There are also special benefits that accrue to the US economy from the pre-eminent role of the US dollar as the dominant currency of the global system for international transactions and investment in safe assets. Nevertheless, the global financial crisis of 2008–09 demonstrated the severe economic costs that can result from a breakdown in the private prudential safeguards and counter-party risk assessments within the financial system and the absence of an appropriate governmental regulatory and supervisory framework for the institutions that operate within that system. The crisis has also raised the question of what reforms within the international financial architecture are needed to deal with the problem of persistent global imbalances and the volatility of international capital flows. These issues are pursued in Chaps. 4 and 8.

The flow of persons across borders, or immigration, raises a number of different issues for an advanced economy such as the United States. Immigrants have historically played an important role in the economic development of the United States, even though there have been ebbs and flows over the long term in the pace of these arrivals. By contrast with trade and finance, immigration poses perhaps the greatest long-term gains to the participants and the global economy in terms of increases in productivity and personal income. Workers migrating to the United States also tend to be young or of prime working age and can therefore bolster labor force participation at a time when that ratio has been declining because of demographic factors leading to an aging native population. Immigrants entering the US labor force have tended to be either high-skilled workers attracted to the country's technology-based industries or low-skilled workers filling in the demand for manual laborers. A number of empirical studies have shown that the relative supply of these two labor groups does not account for any significant change in inequality or wage

loss for low-skilled workers. There may also be some complementarity between low-skilled immigrant labor and native middle-skilled workers (those with at least high school training) who can fill the middle-managerial and communications requirements for many basic industries in the US economy. The issues related to immigration and income inequality, as well as the net fiscal effects of immigrants over time in terms of their tax contributions and demand for public services, are taken up in Chaps. 5 and 6.

The problem of rising income inequality in the United States has been a focus of much popular concern, and the issue naturally arises as to what extent globalization has contributed to its development, given that both phenomena have been progressing over the time period that is the main focus of this book. The problem of income inequality has manifested itself in a number of different ways: one is the growing gap between the wages of high- and low-skilled workers; another is the declining share of labor income in total national income; and a third is the widening gap between increases in labor productivity and real wages. These concerns have been matched by complaints about the rising concentration of wealth within the top 1 percent (and top 0.1 percent) of the population. Clearly one important factor that has contributed to rising income inequality is the role of skill-biased technological change in driving a rising wage premium for high-skilled workers in the economy. However, other factors related to globalization should also be considered. One is the effect of rising international trade, which for an advanced country such as the United States would enhance the rewards for factors used intensively in its exports, namely skilled labor and capital. Trade expansion also has the potential to increase income disparities among industries and among regions specialized in certain industries. Financial integration could have contributed to the problem of income inequality with the increased "financialization" of the US economy, especially in the period prior to the global financial crisis. This phenomenon was reflected in the rising share of financial services in aggregate economic activity, the growth in profits (or rents) associated with largely unregulated (and unproductive) activities in the so-called "shadow" banking sector and increasingly generous compensation packages for top managers of many financial institutions. As suggested above, the contribution of immigration to the problem of income inequality is less clear and may not be as important as that of the other two factors. The role that these three factors may have played in exacerbating income inequality in the United States is explored in more detail in Chap. 6.

Since early 2017, the US government has made a number of changes in foreign economic policy that represent a radical departure from past practice; these are examined in Chap. 7. In many respects, these initiatives represent a retreat from the multilateral approach that the United States had pursued in the past and pose a threat to the liberal international economic order that the United States did so much to create during the first phase of the current globalization era. Trade policy has been an area where this change has been perhaps most visible, as the US government has withdrawn from the Trans-Pacific Partnership (TPP) for trade and has made similar threats against the WTO. Its wide-ranging use of tariffs has also threatened long-standing, liberal trading relationships with countries on both sides of the Atlantic. China has been a principal focus of trade policy, with some justification due to that country's discriminatory trade practices, but the United States has not been clear as to what it wants to achieve in this bilateral relationship. Another problem has been the inconsistency between the government's trade policy objectives (i.e., to reduce the trade deficit) and its fiscal and exchange rate policies that are acting in the opposite direction. These latter policies are also exacerbating the government's dependence on external borrowing that over time could threaten the country's privileged position in the global financial system. Finally, in the field of immigration policy, the government has clearly been trying to reduce not only the number of illegal immigrants but the overall rate of legal immigration as well. This latter objective is a short-sighted policy as, with an aging society such as the United States, immigration can play an important role in maintaining labor force growth and a growing economy to support a rise in the dependency ratio.

Given the costs and benefits of globalization as identified in previous paragraphs and the inevitability of its advance, it is important to have arrangements and safeguards in place at the national and international levels to help maximize its benefits and minimize its costs, which are examined in Chap. 8. At the national level, policies and programs are needed to assist workers in adjusting to the structural changes associated with globalization and also with the effects of technological change. In some cases, it may not be that easy to separate the influence of these two factors. Traditionally, in the United States, the government has had in place a very limited trade assistance program that has been aimed at facilitating the retraining and relocation of industrial workers who have been displaced by import competition. Following the example of certain European countries, this program should be expanded to deal with the continuing effects

of structural change in the economy, irrespective of its source. This initiative should be an important element in the development of a social compact among business, labor and government for purposes of designing or implementing social assistance and worker training programs. This compact could also consider the common interests of its participants in tax, regulatory and immigration policies, and the coordination of private and public sector efforts in community redevelopment, all of which have the potential to maintain or improve the international competitiveness of American businesses.

At the international level, improvements in governance are needed to ensure that appropriate standards, rules and institutional arrangements are in place to guide the development of national policy frameworks, bring about the resolution of disputes and promote policy adjustments to deal with problems in the global economy. For example, two features of governance arrangements for the international financial system (or international financial architecture) where there were problems that contributed to the onset of the global financial crisis were the international regulatory framework or minimum capital requirements for large, internationally active banks (the so-called Basel Capital Accord) and the international adjustment mechanism for the reduction of persistent current payment imbalances among large surplus and deficit countries. For the discussion in this book, there are three international organizations that have an important role to play in promoting the benefits of globalization and in minimizing its costs: the IMF, the WTO and the International Organization for Migration (IOM). In a world of great institutional diversity, these organizations are not exclusive, but they are important fora where the United States needs to coordinate its policy objectives and programs for strengthening the global economy with other countries.

In the final chapter of the book, the main conclusions and lessons of the previous chapters are highlighted and summarized, and an attempt is made to identify some of the salient issues that are relevant to ensuring that the United States can be a net beneficiary from its process of integration with the global economy, based on its policies with respect to trade, finance and immigration. The pace of technological change, the growth in business applications of artificial intelligence, robotics and the internet, and the expansion of global value chains (GVCs) point in the direction of further economic and financial globalization. Immigration pressures will undoubtedly continue, although for a variety of reasons the pattern of migrant flows is likely to be very different from what it has been in the last couple of

decades. In this regard, the chapter also highlights those aspects of governance arrangements for the global economic system where improvements or innovations are needed in order to strengthen international cooperation in the oversight of economic and financial globalization.

Notes

1. This trilemma was first explained in Rodrik (2000).
2. The basis for the Bretton Woods System and other evolving elements of the post-WW2 international financial architecture is discussed in Elson (2011). The agreement for the International Trade Organization was not approved, and instead the General Agreement on Tariffs and Trade (GATT) was formalized in 1947 to handle multilateral trade negotiations until 1995 when the World Trade Organization was created.
3. Baldwin (2016) provides a vivid and thorough account of the impact of this revolution on the current era of globalization.
4. A comparison of the role of trade policy on economic growth in the two eras can be found most recently in Eichengreen (2017).

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CHAPTER 2

Key Markers in the Global Integration of the US Economy

The impact (or costs and benefits) of globalization on the US economy cannot be understood without considering the special and unique role that the US economy plays in the global system. As historically the largest economy in the international system, it has had a dominant role in all aspects of globalization covering trade, finance and migration for the past 70 years. These are reviewed briefly in this chapter.

1 The United States and the Liberal International Economic Order

The special role of the United States in the global economic system stems from its unique position at the end of World War 2 (WW2) as the only major economy that had not suffered wartime destruction. On this basis, it led the negotiations for the Bretton Woods Agreements, which created the International Monetary Fund (IMF) and World Bank in 1945. These agreements, along with the General Agreement on Tariffs and Trade—GATT (1947), essentially established the basis for the liberal international economic order, the United States' pre-eminent position in that order and the phenomenon of global economic integration that has been so evident in our own time. However, none of these institutional arrangements would have been able to flourish without the massive post-war economic assistance provided by the United States to Western Europe and East Asia and the establishment of its nuclear umbrella to protect the

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viability of the liberal international order from any encroachment by the Soviet Union and communist China.

Under the Bretton Woods Agreements, the United States was identified as the largest shareholder for both the IMF and the World Bank and thus the major funder for their activities. In addition, the US dollar was defined as the key currency to which all other currencies were pegged for purposes of the fixed exchange rate system (or adjustable pegged rate system) embodied in the IMF Articles of Agreement. The dollar, in turn, as the key currency or anchor in the international monetary system, was linked to gold at a fixed price of US$35 per ounce. This anchor was defined in terms of the commitment of the US government for an indefinite period of time to convert dollar balances held abroad by foreign central banks into gold at that price. In the case of the World Bank, the leading role of the United States was defined not only by the size of its financial contribution, but also by the fact that for a number of years the Bank would raise most of the funding for its operations by means of dollar-denominated bond sales in the US capital markets.

Along with these formal arrangements, the United States spearheaded in 1976 the creation of the Group of 7 (G7) leading industrial countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) that operated at both the ministerial and heads of government levels. The G7 acted for many years as an informal steering committee for the institutional architecture established to guide economic and financial globalization. In 2008, this group was expanded to include the major emerging market countries and was relabeled as the G20. By the time the G7 was formed, a multitude of international and regional organizations beyond the "big three" mentioned earlier had been established to promote policy cooperation and economic integration in an increasingly globalized system. These institutional arrangements have given the modern era of globalization a very distinct character from that of the earlier era of globalization in the late nineteenth and early twentieth centuries, as noted in Chap. 1.

For most of the period since 1945, the United States has maintained the largest economy within the international system; only in 2014 did it cede that position to China by a small margin, as defined by gross domestic product in international dollars on a purchasing power parity basis (even though on a per capita basis, the US economy is still some four times larger than that of China). Given its economic size, the United States has been the largest trading nation for most of the post-WW2 period, the country

with the largest net foreign asset position in the international financial system and the country with the largest immigrant population. On this basis, it has dominated all three dimensions of globalization as defined in Chap. 1 and has played a key role in setting the rules and practices that have supported its expansion up to the present day, often in concert with the G7/20. As a result, the US economy has had a significant impact on most other economies within the global system. Increasingly, however, as these economies have expanded more rapidly than the United States through a natural process of economic convergence, and as the degree of economic and financial integration has intensified, the United States has been impacted more significantly than in the past by developments in the global economy. It is the nature of these latter effects that has been the focus of recent public debate and is one of the main topics of this book.

As suggested earlier, the expansion of globalization in the current era has been a gradual process. Initially beginning in the late 1940s, under the leadership of the United States, the liberalization of foreign exchange transactions for current account payments and receipts and the reduction of tariff and non-tariff barriers for foreign trade operations were promoted by means of IMF surveillance and successive rounds of GATT negotiations.[1] Then, beginning in the mid-1970s, the coordination of exchange and trade liberalization was followed by a process of capital account liberalization, first by the advanced countries and then by the emerging market economies, that allowed banks and other financial institutions in these countries to expand their cross-border balance sheet operations. This development was accompanied by a liberalization of foreign direct investment on the part of private corporations that often was linked to an expansion of trade, for example, by means of off-shoring or the development of global value chains. The process of post-war immigration reform was managed on a more decentralized basis by each country; in the case of the United States, immigrant flows were on a downward trajectory following WW2 until 1970, but then as a result of a major legislative reform of the mid-1960s, these flows began to rise steadily at a pace that exceeded population growth until recent times.

The paragraphs that follow quantify and outline more specifically the evolution of the United States' integration with the global economy. Even though by its very size the United States accounts for a major share of global economic and financial transactions, its international transactions do not represent a major share of its total economic activity, which is still today predominantly oriented to its domestic markets. This characteriza-

tion is particularly true in the case of foreign trade and immigration. It is less the case for finance because of the leading role of the US dollar in international currency operations, the depth and breadth of US financial markets and the role of US government debt as the principal safe asset for the rest of the world.

2 Foreign Trade and the US Economy

Throughout the post-WW2 period, the United States has been the dominant trading nation in the global economy, for both merchandise exports and imports, although in the case of exports in recent years it has ceded that position to China. In 1948, the United States accounted for somewhat more than 20 percent of global exports and 13 percent of global imports. The US share of global imports has remained virtually the same until recent times (at 14 percent in 2016), but in the case of exports, given the phenomenal rise of China, its share has fallen to just under 10 percent in 2015–16, compared with 13.6 percent for China. In 2015–16, the value of total trade for China and the United States was roughly equal (see Table 2.1).

However, unlike China, the United States is the single largest export destination for one-fifth of the world's countries (including China) and for one-half of the countries in East Asia and Latin America.

While the United States has remained a dominant participant in global trade, it is important to recognize the major expansion in international trade that has occurred since the middle of the last century. In 1950, according to World Bank data, global exports and imports represented

Table 2.1 Merchandise exports and imports of the United States and China as a share of global trade (1950–2015)

	1950	*1960*	*1970*	*1980*	*1990*	*2000*	*2010*	*2015*
Part A: United States								
Exports	16.11	15.04	13.64	11.08	11.28	12.11	8.35	9.09
Imports	15.09	11.94	12.88	12.37	14.36	18.73	12.70	13.79
Total trade	15.59	13.45	13.25	11.73	12.84	15.49	10.54	11.46
Part A: China								
Exports	0.89	1.97	0.73	0.89	1.78	3.86	10.30	13.76
Imports	0.91	1.93	0.69	0.96	1.48	3.35	9.00	10.00
Total trade	0.90	1.95	0.71	0.92	1.63	3.60	9.65	11.86

Source: World Trade Organization

nearly 20 percent of global GDP, but by 2007, just prior to the trade-depressing effects of the global financial crisis, this ratio rose to 58 percent. This expansion would not have occurred without the strong economic growth among the advanced countries and emerging market economies and the successive rounds of tariff reduction since the founding of the GATT in 1947 and its successor, the World Trade Organization (WTO), in 1994. Average tariff rates on dutiable imports by the United States were reduced from around 33 percent in 1944 to 4.8 percent in 2000. These tariff reductions have been matched by other advanced countries, with the result that the average global tariff rate has fallen from around 10 percent in 1985 to 1.5 percent in 2016.[2]

Notwithstanding the dominant role of the United States in global trade, it is interesting to note that exports and imports of the United States reflect a relatively small share of its gross domestic product. In 1950, the trade openness ratio for the United States (i.e., exports plus imports as a ratio to GDP) was only around 6.5 percent. Since then, this ratio has increased significantly, reaching a peak of 24 percent in 2011, from which it has declined to around 20 percent since then; including trade in services, the trade openness ratio would be around 5 percentage points larger (see Fig. 2.1).

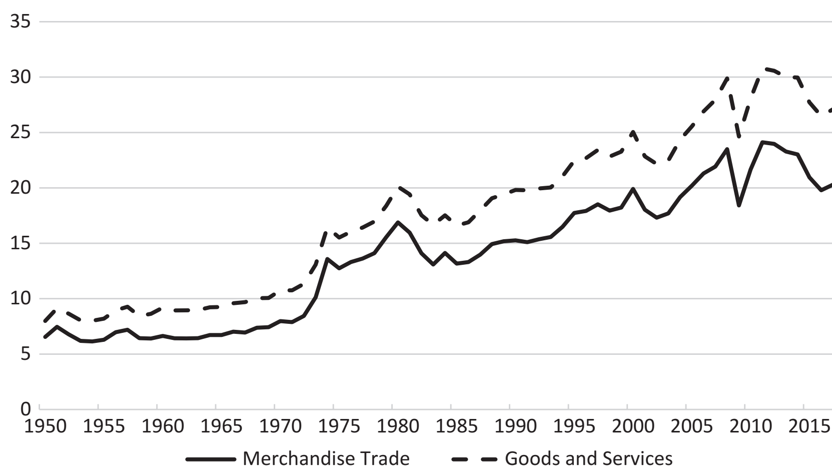

Fig. 2.1 U.S. trade openness ratio from 1950 to 2017, ratio of exports and imports of merchandise trade (goods and services) to GDP (in percent). (Source: World Trade Organization; U.S. Bureau of Economic Analysis)

Even with this increase the trade openness ratio for the United States is less than half the average for other OECD countries and around one-fourth of the ratio for a major advanced trading nation such as Germany. In the case of China, a country with an economy similar in size to that of the United States, its trade openness ratio has been nearly double that of the United States, reflecting its major dependence on export trade as a basis for its rapid economic growth. On the basis of these comparisons, it appears that the United States is still a relatively closed economy and has further scope for increasing the degree of its trade integration with the rest of the global economy. While there may be gains from a further move in this direction, they are not likely to be large given the vast intraregional trading that takes place within the large US domestic market and the low level of its tariffs. It is also the case that the share of merchandise production allocated to exports has expanded substantially since 1970 and amounted to around 60 percent in 2013, far in excess of the share of merchandise production in GDP.[3]

It is important to recognize that an important change has taken place in the structure of US foreign trade in the last 20 years or so with the development of international supply chains. Throughout most of the post-WW2 era, until around 1990, international trade had continued to take the form of cross-border exchange of goods produced in different countries made possible by the great inventions of the nineteenth century in the form of steamships, trains, telegraph and telephone, together with the more recent additions of containerships and airfreight. Then in the late 1980s and early 1990s, with advances in information and communication technology (ICT), it became possible to separate tasks within the export process and transfer (or "off-shore") certain low-skill, low-tech components of manufacturing production to foreign countries where they could be completed more cheaply than in the United States. Under this system of trade, the total assembly of foreign and domestic components into a final export product was still managed by a firm located in the United States.[4]

This process of decomposing the manufacturing of export goods into different components, some of which can be produced in foreign countries, is captured by the use of the term "global value chains" (GVCs). Firms participating in GVCs did not reduce their export values, but rather they expanded them with the benefit of lower costs of manufacturing abroad and increased their activity in the early and later stages of the manufacturing process related to R&D, design, engineering and marketing, along with the high-skill- and high-tech-intensive components of

export manufacturing. The increased emphasis on the service-related activities at the headquarters of export production has led to what has been called the "servicification" of exports in the current phase of trade and globalization.[5]

The growth of GVCs has given rise to a major spurt in international trade since 1990 as the production of manufactured goods for export has increasingly involved the transfer of unfinished products or intermediate goods across national borders as different parts of the manufacturing process are completed in different countries before a final export product is completed. This feature of trade has been typical of the manufacturing of automobiles within the North American Free Trade Agreement (NAFTA) region involving Canada, Mexico and the United States. The rise of GVCs is important as trade in manufactured goods (final and intermediate products) has accounted for most of the growth in global trade in recent decades. Currently, around 80 percent of global trade passes through GVCs managed by multinational corporations. Manufacturing firms in the United States, Germany and Japan have been the leaders in the development and management of GVCs.

In an effort to measure the growth of GVCs, economists have invented the value-added export (VAX) ratio which is a measure of the ratio of domestic value added to the total value of export goods. As a country's participation in GVCs increases (mainly for the production of manufactured exports), this ratio will decline, or its inverse, the ratio of the total value of exports to domestic value added in the production of those exports, will increase as more intermediate goods produced abroad are incorporated in those export goods. For the global economy, this latter ratio for manufactured exports showed a relatively stable value of around 1.5–1.6 from 1975 to 1990, but then after the latter date, it rose substantially to a ratio of 2.2 by 2009.[6]

The development of GVCs has given rise to a deeper integration by means of trade than was the case with the reduction of tariff barriers that typified trade relations and trade agreements during the 1948–90 period. During the first phase of the current globalization era, the emphasis was on the reduction of overall tariffs and quotas on imports on a multilateral basis through the GATT and then the WTO. Since 1990, however, the focus of trade agreements has shifted to a regional or bilateral basis and has entered into a host of areas supporting the development and maintenance of GVCs including intellectual property rights, investor-state dispute resolution mechanisms, labor and environmental conditions and the role of state enterprises in trade, among other things. NAFTA, which was completed in

1994, was one of the first of these new types of regional trade agreements (RTAs). The United States has also developed along with these RTAs bilateral investment treaties (BITs) with a number of its trading partners that are intended to protect the rights of US investors abroad through understandings and commitments in the areas of freedom of capital flows and protection of property rights. At present, the United States has entered into 19 bilateral or regional trade agreements since NAFTA and 42 BITs, mainly with developing countries that are important participants in US-controlled GVCs or did not have adequate guarantees to support US foreign direct investment.

What is also remarkable and unusual for the case of the United States as a trading nation is the substantial shift over time that one can observe in its trade balance from a significant surplus to a significant deficit. Until around the mid-1970s, the United States maintained either a trade surplus or an approximate balance in its trade flows, but then it began to register a deficit which it has maintained up until the present time. This deficit widened significantly after 1980. This trend has also been evident for the balance of trade in goods and services and for the current account position of the United States.[7] What is important in trying to understand the causes for this shift is to recognize that the balance of trade in goods and services (as well as the current account balance) reflects from a national accounting perspective the difference between domestic saving and investment. When domestic saving is larger than domestic investment, this difference will be reflected in a balance of trade surplus (and net capital outflows of an equivalent amount); when the opposite is true, a country will register a balance of trade deficit (and net capital inflows). While these relationships reflect the results of accounting identities, understanding the reasons behind shifts in the saving-investment balance can help us explain the causes for shifts in the overall trade balance.

The shift from a positive saving-investment gap during the first half of the post-war period to a negative one since the mid-1980s essentially reflected a deterioration and weakening in the domestic saving of the United States, which declined from around 24 percent of GDP in the mid-1960s to around 17 percent in 2016. Over this time period, domestic investment fluctuated within a range of 20–25 percent of GDP percent until 2009 when it fell below 20 percent for the first time, while still remaining higher than domestic saving by 2–3 percent of GDP (see Fig. 2.2). The decline in domestic saving, in turn, reflected a weakening of both personal saving and government saving. The former development

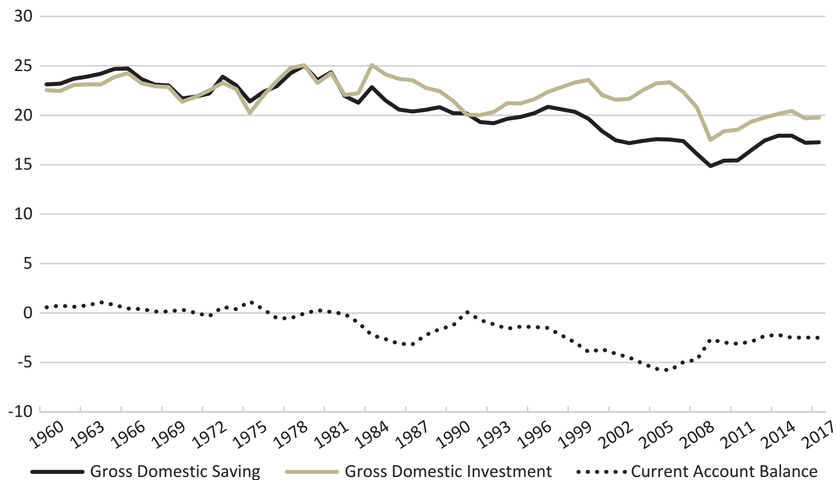

Fig. 2.2 Domestic saving, investment and current account balance for the United States as a ratio to GDP (in percent). Notes: Gross domestic saving includes a statistical discrepancy. (Source: US Bureau of Economic Analysis)

has been evident in the growing share of personal consumption in GDP, whereas the decline in government saving resulted from a marked deterioration in the overall government balance from approximate equilibrium during the 1950–70 period to a deficit position of around 5 percent of GDP in the mid-1980s, which subsequently rose to one of around 7 percent of GDP in 2008–12. This deterioration in fiscal policy accounted for most of the long-term erosion in the domestic saving-investment balance.

The major shift in the overall government position of the United States during the mid-1980s can be traced to the impact of two tax reforms during the 1980s that effectively lowered the nation's tax effort in a significant way. This same result can be observed during the first half of the first decade of the current century. The implementation of the tax cut package that was approved by the US Congress at the end of 2017 is expected to reverse a recent decline in overall government deficits since the end of the global financial crisis (2008–09) and, on the basis of past experience, lead once again to an increase in the trade deficit in future years.

A second key phenomenon that helps to explain the shift in the trade deficit of the United States in the post-war period is the tendency for the US dollar to appreciate in real terms during this period. The growing gap

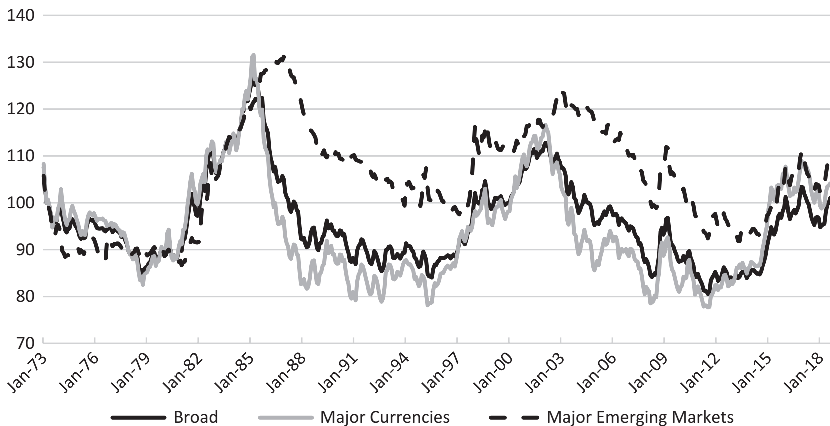

Fig. 2.3 Real trade-weighted foreign exchange value of the dollar since 01/1973. (Source: Federal Reserve Bank of St. Louis database (FRED); data are in real terms (March 1973 = 100))

between investment and saving would help to explain the growing gap between imports and exports, which would also be induced through an appreciation of the US dollar. During the post-war period, the dollar has clearly been subject to periods of appreciation and depreciation (or overvaluation and undervaluation), but over time, there has been a tendency for appreciation, especially with respect to other major international trading partners (see Fig. 2.3). One important factor contributing to that appreciation has been the attractiveness of US capital markets as a destination for foreign investment in "safe assets" by other countries (see below). This tendency became more pronounced after the mid-1980s following the period of capital account liberalization noted earlier. This development coincided with the shift of the US trade balance into a sustained deficit position and thus with the need for the United States to undertake net borrowing from abroad to cover or finance the excess of its imports over its exports (and its excess of domestic investment over saving).

On the basis of the above discussion, one can conclude that the long-term deterioration in domestic saving in relation to investment and the appreciation of the US dollar associated with sustained net capital inflows were both contributing to the shift in the US trade (and current account) balance from a surplus to a deficit position. These developments put the

United States in a very anomalous position for a major advanced economy in the global system. As an advanced economy and trading nation, one would have expected the United States over time to run a net export surplus, as it provided to the rest of the world capital-intensive manufactured goods and other sophisticated electronic equipment that were in high demand by other countries. The export surplus generated by this trading activity would be offset by foreign direct investment and other long-term capital outflows that would, in effect, help to provide the financing for other countries to pay for their imports of the kinds of goods just mentioned. This pattern of trade and finance has been typical of other advanced country exporters, such as Germany and Japan. However, unlike the United States, they are not major reserve currency countries and producers of safe assets (such as US government debt) that are in high demand by other countries, nor countries with significant fiscal imbalances.

The special role of the US dollar in foreign trade is evidenced by a number of factors. Recent studies have shown that the dollar's share as an invoicing currency for imports is around 60 percent or 4.7 times the share of its imports in international trade. By comparison, this ratio is around 1.2 for the euro, which is the next currency most commonly used for invoicing.[8] For most countries, the share of their own currency used in trade with the rest of the world is close to zero. Not only is the US dollar the dominant currency in trade invoicing, but also in bank credit for trade operations, where it accounts for roughly 80 percent of such credit.[9] More generally, the US dollar is by far the dominant vehicle currency in foreign exchange trading for spot, forward and swap transactions among financial and non-financial institutions. According to surveys by the Bank for International Settlements, the US dollar has been used on one side of close to 90 percent of all foreign exchange trading in recent years. The euro is the next most commonly traded currency at 33 percent.

The US dollar is also the most frequently used currency by other countries for defining the value of their currency for foreign exchange trading. Roughly two-thirds of the world's currencies (for countries representing around 60 percent of global GDP) have dollar-based exchange rate arrangements in which the US dollar is used as a reference currency for defining the value of their own currency under pegged or floating exchange rate regimes. In addition, as a major reserve currency, nearly two-thirds of the international reserves held by other countries are dollar denominated, mainly in the form of US government debt. This preference for US dollars also applies to the private use of dollars in cash transactions or cash holdings in

countries other than the United States; in recent years, it is estimated that around 60 percent of US currency issued by the Federal Reserve is held abroad. Finally, approximately half of the international debt securities issued by countries which do not use the US dollar as their medium of exchange are denominated in US dollars. On the basis of this set of facts, the US dollar clearly serves as the main global currency in terms of its use as a unit of account, medium of exchange and store of value. The special role of the US dollar in the global trading and financial system is examined in more detail in Chap. 4.

The size of the US economy, the prominent role of the United States in global trade and the dominant position of the US dollar imply that changes in US economic activity can have major spillover effects on other countries. In this regard, it should be noted that business cycles in the United States and other advanced countries have become more highly synchronized as a result of the significant extent of economic integration that has developed since the mid-1980s. More specifically, an acceleration in US economic activity can raise the rate of growth in other advanced countries as a result of an increase in import demand and indirectly by means of trade-induced productivity improvements. Through these channels, for example, recent studies have estimated that a 1 percentage point increase in the rate of US economic growth can raise growth in other advanced countries by a 0.8 percentage point, and by a 0.6 percentage point in emerging market economies, after one year.[10] It is also the case that an acceleration in US economic activity tends to spur global demand for primary commodities and an increase in their prices which, in turn, can have favorable effects on economic growth and the external position of emerging and developing economies.

3 International Financial Flows and the US Economy

As noted in Chap. 1, there are close links between the expansion of foreign trade and financial activity, and this close relationship was evident through roughly half of the post-war period for the United States. The ratio of financial openness (which is commonly measured by the ratio of foreign assets and foreign liabilities to GDP) to trade openness for the United States rose relatively slowly from 1950 to 1985, but then after that date it increased quite sharply with the liberalization of restrictions on international banking and investment activity. Figure 2.4 provides a

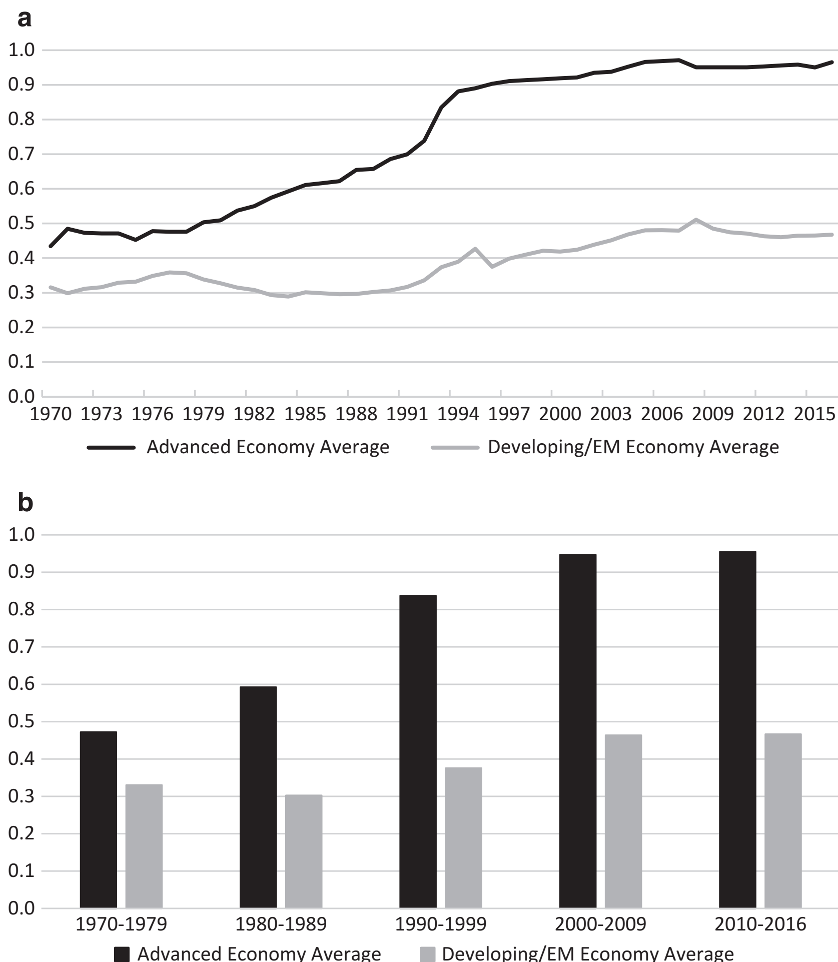

Fig. 2.4 (**a**) Chinn-Ito capital account openness index for advanced economies and developing and emerging market economies (1970–2016). (Source: The Chinn-Ito Index (http://web.pdx.edu/~ito/Chinn-Ito_website.htm)). (**b**) Chinn-Ito capital account openness index for advanced economies and developing and emerging market countries (decennial average). (Source: The Chinn-Ito Index (http://web.pdx.edu/~ito/Chinn-Ito_website.htm))

composite measure for the liberalization of restrictions on international investment activity for the United States and other advanced countries since 1970.

The financial openness of the United States or the extent of its financial integration with the rest of the world since the 1980s also reflects the appeal to the rest of the world of US capital markets for their depth and breadth, as well as the demand by other countries for the services offered by US multinational banks and the attractiveness of foreign investment by multinational non-financial corporations. This growth in financial integration has been most evident among the advanced countries and increasingly has been reflected in an increase in both foreign asset and liability positions abroad among these countries reflecting their diversification of risk and investment positions. As a result, net international investment positions, or the difference between foreign asset and liability stocks for these countries, have tended to be relatively small. This trend, however, has not been true for the United States, as explained further below.

The evolution of the international investment position of the United States in the post-war period shares a certain similarity with its foreign trade position in that the value of its foreign assets and liabilities (like the value of its exports and imports) has traditionally been much larger than those of any other country and yet is much smaller than other advanced countries when scaled in relation to GDP. By these measures of trade and financial openness, it is clear that the production of goods and services and financial intermediation in the United States are mainly oriented to the domestic market.

According to the External Wealth of Nations database, the financial openness of the US economy (i.e., the sum of its foreign assets and liabilities) evolved at a fairly steady pace, not unlike the change in its trade openness, rising from around 30 percent of GDP in 1970 (the first year available in the database) to 55 percent in 1984 and 87 percent in 1994. Thereafter, with more dramatic changes in US capital account liberalization, the pace of change in this ratio accelerated, reaching around 300 percent of GDP in 2008 at the peak of the global financial crisis (see Fig. 2.5). The expansion in international financial activity during the eight years preceding the crisis for the United States, as well as for many other advanced countries, was particularly dramatic, as explained further in Chap. 4. Since the crisis, however, there has been little or no further expansion, and even some decline, as banks have cut back their foreign borrowing and investment activities.

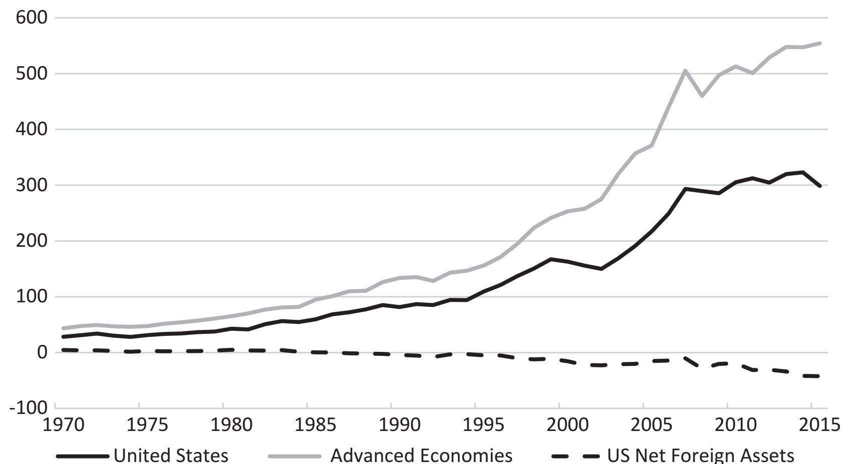

Fig. 2.5 Foreign assets and liabilities as a ratio to GDP for the United States and advanced economies (in percent). (Source: External Wealth of Nations database (http://www.philiplane.org/EWN.html))

Estimates of the McKinsey Global Institute indicate that total foreign assets and liabilities of the United States amounted to US$51 trillion at the end of 2016, or nearly 2.5 times the values for the countries with the next two largest exposures (Luxembourg and the UK), both of which are international financial centers.[11] However, scaled to GDP the gross external positions of these countries are far in excess of that of the United States; even in relation to the average ratio for OECD countries, that for the United States is somewhat less than half.

This relatively low position of the United States vis-à-vis the rest of the OECD is about the same when one combines trade in goods and services with gross international financial flows (based on changes in foreign asset and liability stocks) in relation to GDP as a combined measure of trade and financial openness. By this measure, one can conclude once again that the United States is less integrated with the global economy than most other advanced economies, and thus it is less exposed to external shocks than these countries. By contrast, the global financial crisis demonstrated how important financial developments in the United States are for other countries. This outcome reflects the dominant size of US financial markets in the global financial system, as noted earlier; for example, US stock market capitalization represents one-half of the value of global stock markets.

The evolution of the international investment position of the United States reveals one of the important ways in which its financial activity is critically important on a sustained basis for the rest of the global economy. Throughout most of the second half of the twentieth century, many analysts have shown how the United States has acted in effect as the global banker to the rest of the world and the center of the global financial system. During the 1960s and 1970s, this role of the financial intermediary was reflected in an increase in short- and medium-term liabilities abroad on one side of the US external accounts as other countries, for example, sought to acquire government treasury bills and notes for their foreign reserves. On the other (asset) side of the US external accounts, these receipts were recycled as long-term foreign lending by banks or investments abroad by corporations. If the balance of trade in goods and services for the United States (or its current account balance) was in a small surplus position or in rough balance, these financial inflows and outflows would roughly offset each other within the capital account of its balance of payments.[12]

Beginning in the 1980s, with further capital account liberalization on the part of the United States and other advanced countries, the US role as banker to the rest of the world shifted to one more analogous to that of a global "venture capitalist".[13] The United States continued to be a destination for other countries' investment in safe assets, which then were recycled in part as long-term investments increasingly in the form of foreign direct investment or more risky long-term portfolio investment. However, unlike the earlier period, the United States became a larger source for the acquisition of safe assets (and foreign reserves) by other countries, increasingly in excess of its foreign investment abroad. These developments led to a tendency for the US dollar to appreciate in real effective terms and for net capital inflows to be in surplus, consistent with the emergence of a current account deficit and saving-investment imbalance, as discussed earlier. This unique role of the United States in the global financial system is examined in more detail in Chap. 4.

These developments have afforded significant benefits for the United States, given the unique reserve currency status of the US dollar, as they have lowered the cost of US government debt and widened the spread between its interest earnings and payments abroad. As a result, the United States has run a significant net surplus in the financial services component of its external current account that has helped to cover some of its trade deficit. However, the continuation of these favorable financial develop-

ments depends upon the confidence of other countries that the United States will maintain a position of public debt sustainability and be able to meet its debt-service obligations. As long as the public debt of the United States continues to rise in relation to GDP, as it has since the onset of the global financial crisis, there is a growing risk that at some point in the future other countries may begin to question its creditworthiness or the sustainability of its external debt obligations and the rising possibility of default or debt-service problems. Such a concern would be analogous to the concerns that arose about the ability of the United States to meet its obligations under the gold exchange standard of the Bretton Woods system, which came to an end in 1971. At that time, the US government suspended the conversion into gold of US balances held abroad by other governments or central banks, as these balances had accumulated abroad in amounts far in excess of the value of gold reserves held by the United States and thus its ability to redeem them, as stipulated under the Bretton Woods Agreement.[14]

As in the case of trade, the major weight of the United States in the global financial system and the exceptional role of the US dollar imply that changes in its monetary and fiscal policies can have major spillover effects on the rest of the global economy by means of their impact on import demand, currency movements and changes in international borrowing conditions. For example, a shift by the Federal Reserve to an expansionary monetary policy can induce an acceleration in capital flows to emerging market economies as banks and other lenders in the United States seek higher returns abroad with the prospect of lower yields at home. By the same token, a tightening of US monetary policy can reduce such flows and put upward pressure on global interest rates. In the wake of the global financial crisis, it was demonstrated that even the announcement (or expectation) of a tapering in the accommodative policy stance of the Federal Reserve could have a significant dampening effect on capital flows to emerging market economies and an appreciation of the US dollar in international currency markets (the so-called "taper tantrum").[15]

4 Immigration and the US Economy

Immigration plays a much smaller role in the global economy than does trade or finance. In 2015, there was an estimated stock of 244 million international migrants or around 3.3 percent of the global population.[16] In addition, total migrant remittances amounted to US$375 billion in 2016 or only around 1.3 percent of the international flow value of goods,

services and finance in that year. However, these figures vastly understate the potential flows of migrants, which are limited by restrictions in both source and destination countries. It is also the case that migration is the domain of globalization where possible efficiency gains from removing barriers to international labor mobility are the largest. In the case of trade and finance, such gains are estimated to amount to a few percent of global GDP, whereas for migration or labor mobility, the potential gains have been estimated to be in the range of 50–150 percent of global GDP.[17]

These latter gains are estimated essentially on the basis of the substantial differences in the marginal productivities of workers in rich and poor countries and the enormous increase in global income that would result from removing barriers to the unrestricted flow of workers from poor to rich countries. However, realizing such gains is not simply a technical matter of removing barriers to cross-border labor mobility, as immigration is a politically fraught issue as reflected in recent elections on both sides of the Atlantic, on account of both economic and cultural concerns. The massive redistribution of income arising from a movement toward an equalization of wages between rich- and poor-country workers associated with much more open immigration, as well as the costs for the rich countries in absorbing such inflows, would sharply intensify political resistance in those countries.[18]

In the area of migration, the United States has played a similarly dominant role in this dimension of the global economy, as it has for trade and financial flows. For example, it has traditionally been the largest source of migrant remittances, accounting for around 18 percent of the total in 2016, which was nearly double the share of the next largest source (Saudi Arabia). Notwithstanding the relatively small flows of remittances, they have been an important source of economic stabilization for recipient countries, where they can promote consumption smoothing, boost fiscal revenues and support financial stability. They may also lower poverty and inequality.[19]

Since 1970, the United States has also been the main country of destination for international migrants, with foreign-born residents rising from 12 million in that year to 44 million in 2015 (or 13.5 percent of its domestic population). It has the largest immigrant population of any country and accounted for nearly 20 percent of the immigrants registered in all countries as of the end of 2015; Germany had the second largest contingent at 12 million. This dominant position of the United States reflects the strength of its economy, the opportunities it offers for education, work and prosperity and the basic freedoms enjoyed by its residents.

Traditionally, during the first era of globalization and the early post-WW2 era, the major source of migrants to the United States was Western Europe. However, since the 1970s, the main sources have shifted to Latin America (and Mexico, in particular) and East Asia (e.g., China, India and the Philippines). Interestingly, the current share of immigrants in the population of the United States (13.5 percent) is about the same as it was, on average, during the first era of globalization, having fallen to a low of around 4.5 percent in 1970 (see Fig. 1.2). Since that year, there has been a fairly steady and similar increase in the share of migrants in total population for both Western Europe and the United States. Most of the increase for the United States can be attributed to the rules and guidelines established by the Immigration and Naturalization Act of 1965, which still governs immigration policy.

Currently, the United States is about in the middle of the range for OECD countries in terms of the share of its population that is foreign born, which ranges from around 5 percent to 30 percent. However, by absolute numbers, the United States is clearly the dominant destination country for immigration. For example, according to 2010 data, the 32.8 million working-age immigrants residing in the United States in that year represented around 42 percent of all foreign-born individuals living in an OECD country. No other OECD country had a share exceeding 8 percent of the total. For the OECD as a whole, immigrants accounted for around 40 percent of the total population growth during 2001–11. The main reasons motivating these immigrants to destinations in the United States and other OECD countries have been family connection, followed by humanitarian reasons and work purposes.

Along with the increase in the share of legal migrants in the United States, there has been an increase in unregistered or undocumented migrants (mainly from Mexico and Central America), rising from around 5.5 million in 1995 to 11 million in 2014. However, since 2009, the number of undocumented migrants has remained unchanged as the number of arrivals has been about the same as the number of departures. The flow of migrants from Mexico to the United States has represented one of the strongest migration patterns between two countries ever recorded. According to 2010 census data, the ten million immigrants from Mexico living in the United States accounted for nearly one-third of all working-age immigrants residing in that country and 13 percent of all immigrants living in an OECD country. They were also equal in number to 13.5 percent of Mexico's working-age population, a ratio that was only exceeded by El Salvador at 27 percent.[20]

Traditionally, migrants to the United States have congregated in gateway cities such as New York, Miami, Los Angeles and Boston. However, more recently, they have been settling in communities with historically fewer foreign residents, such as Atlanta, Charlotte, Dallas, Denver and Minneapolis. In addition, the average age of migrants has been declining; in 1970, the peak concentration was in their 60s, whereas in 2012, the major concentration was in their 40s. While most of the immigrants to the United States since 1970 have come from non-rich countries (e.g., Latin America and the Caribbean), as distinct from the pattern of the first globalization era, these more recent immigrants have tended, on average, to be more highly educated than other people in their countries of origin and destination.[21]

When economists have tried to explain patterns of bilateral migrant flows across countries, the variables that have usually been found to be statistically significant in these exercises are the cost of migration from one country to another (or distance), the difference in their relative wage earnings and economic opportunities in alternate locations. Other variables that have been shown to have explanatory power in certain cases are the sharing of a common border, a colonial relationship or a common language. It is also evident that exceptional factors, such as a natural disaster, economic shocks or political conflict, can be powerful inducements to migration. In the case of Mexico, for example, its economic crises of the early 1980s and mid-1990s provided a strong impetus to the flow of migrants to the United States, over and above the attraction of a common border and large income differentials. By the same token, an improvement in economic conditions in Mexico since the beginning of the last decade (along with a sharp decline in its birth rate) has brought about a sharp decline in net migratory flows between the two countries, with the result that arrivals into, and departures out of, the United States have been about equal since 2009. The impact of legal and illegal immigration on the US economy is discussed further in Chap. 5.

5 The Role of the United States in the Global Economy

The United States plays a dominant role in the global economy. It has maintained this role throughout the post-WW2 era and therefore has had a major impact on the course of globalization. It is the largest economy in the global system, it accounts for the largest shares of international trade and is the center of the global financial system. It also has been the largest

recipient of migrants from other countries. As a result, developments in the US economy can have significant spillover effects on other economies. Notwithstanding its major role in all three dimensions of globalization, it is surprising to realize that trade, finance and migrant flows for a number of other advanced countries are significantly higher than for the United States when scaled in relation to their respective GDPs.

In addition to its economic impact, the United States has played a pre-eminent role in establishing the institutional arrangements that have guided the process of globalization. In the modern era, this began with the creation of the IMF and World Bank at the Bretton Woods Conference of 1944, the establishment of the GATT in 1948 and the emergence of the WTO in 1994. The United States also played a leading role in the creation of informal ministerial and heads of government groups such as the G7 leading industrial countries and the G20 leading industrial and emerging market countries. These groups have served as important fora for the coordination of economic and financial policies among these countries and for the development of policy initiatives and operational practices to be managed by the institutional architecture for economic and financial globalization. Over time, this architecture has expanded significantly as a host of regional and international institutions has emerged to guide the process of economic integration.

One of the major manifestations of the dominant position of the US economy in the global system is the unique role of the US dollar in international trade and finance. It is the main currency used in the invoicing of international trade and for the conduct of cross-border financial transactions, while most of the domestic currency issued by the Federal Reserve circulates abroad as an informal medium of exchange and store of value. In addition, most foreign reserves and international debt obligations are denominated in US dollars. Beyond the special functions of the US dollar, the US economy is unique in that its public debt is viewed by other countries as the main global safe asset for their official reserve holdings or for low-risk investment by private sector agents.

Notes

1. Exchange and trade liberalization have a symbiotic relationship, as current account convertibility, or the freedom of foreign exchange transactions for current account payments and receipts, is a necessary condition or prerequisite for the conduct of foreign trade.

2. The reduction in tariff rates for the United States and other advanced countries is discussed in Scott Bradford et al. "The Payoff to America from Global Integration" which is chapter 2 of Bergsten (2005).
3. These data are taken from Irwin (2015), p. 12.
4. The evolution of what has been called the first and second "unbundling of trade" described in this paragraph is discussed in detail in Baldwin (2016).
5. The term "servicification" is taken from Baldwin (2016).
6. These data, based on the work of Robert Johnson and Guillermo Noguera, were reported in Helpman (2018).
7. The current account of the balance of payments includes the balance of goods and services, net income payments or receipts (e.g., investment income) and net transfers (e.g., migrant remittances). For the United States, merchandise trade is the main determinant of its overall current account balance.
8. These data on trade invoicing are drawn from Gopinath (2015).
9. This estimate is drawn from Bruno et al. (2018).
10. These spillover effects are reviewed in Ayhan Kose et al. (2017).
11. These data are based on Exhibit E5 in a report by the McKinsey Global Institute (2017).
12. With the most recent revision to the IMF Balance of Payments Manual (2013), the "capital account" has been relabeled the "financial account", even though it is still commonly referred to as the capital account.
13. The reference to hedge fund managers in this context was first advanced by Pierre-Olivier Gourinchas and Helene Rey in "From World Banker to World Venture Capitalist: US External Adjustment and Exorbitant Privilege" that can be found in Clarida (2007).
14. The breakdown of the Bretton Woods System is discussed in more detail in Elson (2011).
15. For a discussion of the "taper tantrum" by the Chairman of the Federal Reserve at the time, see Bernanke (2015), pp. 347–50.
16. This number excludes an estimated 22.5 million refugees due to internal or cross-border conflict, the highest on record (as reported in the *World Migration Report 2018* of the International Organization for Migration 2017).
17. These estimates are discussed in Clemens (2011).
18. An analysis of the gains and costs associated with a more unrestricted flow of migrants from poor to rich countries is examined in Borjas (2015).
19. For an interesting analysis of the effect of migrant remittances mainly from the United States on selected countries in Latin America and the Caribbean, see Beaton et al. (2017).
20. The main features of immigration between Mexico and the United States are presented in Hanson and Macintosh (2016).
21. These and other characteristics of immigrants to the United States are discussed in Peri (2016).

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CHAPTER 3

Trade Globalization and the US Economy

The purpose of this chapter is to examine the impact of trade globalization on the US economy, as the first of three chapters dealing with the effects of trade, finance and migration. In the first section of this chapter, the theoretical case for trade liberalization is reviewed in order to clarify the conceptual basis for estimating the benefits and costs of removing barriers to trade. These have often been misunderstood in public debate, as economic advocates for free trade have usually tended to emphasize the benefits and downplay the costs. The fallacy of focusing on bilateral trade balances as a measure of the success or failure of trade policy is also examined in this discussion. The chapter then turns to three concrete cases of US trade relations as a means of measuring the economic effects of trade globalization on the United States: the major growth in trade with China since the end of the last century (the so-called China "shock"); the pros and cons of the Trans-Pacific Partnership (TPP); and the economic impact of the North American Free Trade Agreement (NAFTA) and its recent renegotiation. In the discussion of the impact of trade with China, the US government's trade adjustment assistance program is examined, including an assessment as to how this program compares with similar ones in Europe.

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1 The Pros and Cons of Free Trade

The economic arguments in favor of free trade represent one of the oldest and most enduring conceptual frameworks guiding policy that dates back to Adam Smith in the late eighteenth century and David Ricardo in the early nineteenth century. Ricardo's explanation of the gains of trade based on "comparative advantage" applies to any situation in which economic agents restricted to one location and producing certain goods shift from a position of autonomy or self-sufficiency to one of economic interaction and trade with other agents producing those same goods in another location. The positive effects of this interaction in its simplest form apply in principle to two pairs of producers/consumers in two different towns within the same region, in two different regions within the same country or in two different countries within the global economy. Ricardo was clearly thinking of trade between two countries, as he assumed that there was no factor mobility between the two countries, which would have to be the case for his theory to apply to trade at the town or regional level as well.

The principle of comparative advantage in its simplest form means that rather than having each country produce two different goods in a situation of autonomy, it is more advantageous for each country to produce that good which it can produce relatively more of from a given amount of resources and to exchange that good for the amount of the other good that it needs. In the event of trade, each agent will be specializing in the production of the good in which it has a comparative (not an absolute) advantage in terms of output per worker and trading that good for the amount it needs of the other good.

The benefits from trade based on comparative advantage essentially arise from the efficiency and higher productivity associated with specialization in production and the lower costs in terms of resource use involved in mutual exchange. The theory also assumes that producers in the two countries use different technologies for the production of similar goods under conditions of constant returns to scale and that producers can easily shift from the production of one good to the other or to the production of some other good in the non-trading sector of the economy.

This latter assumption is a critical one in terms of current experience and debate, as many free trade advocates tend to ignore the actual or potential adjustment costs for workers associated with their shift from one line of production that becomes threatened by import competition to another that is not. For this shift or transfer of labor to be successful in the

real world, workers may have to learn new skills or production techniques or move to new work locations, all of which involve time without pay and other financial costs that they may not be able to afford. In that situation, the government has a potentially important role to play in facilitating that transfer through its temporary social welfare and trade adjustment assistance. All of these considerations are absent in the basic theory of comparative advantage.

The twentieth-century extensions of Ricardo's theory highlighted another critical feature of international trade, namely its redistributive effects. With the Heckscher-Ohlin (H-O) theory of the 1930s, it was shown that international trade based on comparative advantage will result in a country using intensively factors of production in which it is relatively well endowed. With the basic assumption that two countries produce two goods using two factors of production (capital and labor), it can be shown that the country that is relatively well endowed with capital will export capital-intensive goods, while the country that is relatively well endowed with labor will export labor-intensive goods. This result is generally apparent when examining, for example, the pattern of trade between advanced and developing countries. If land is introduced as a third factor of production, then the theory will predict that countries richly endowed with land will produce agricultural commodities and exchange them for labor- or capital-intensive goods that are produced by countries which do not have abundant land resources. This result in the case of exports of agricultural commodities can easily be observed for land-intensive countries such as Argentina or Australia.

One of the extensions of the H-O theory (the Stolper-Samuelson theorem) showed that in the two-country, two-good, two-factor ($2 \times 2 \times 2$) framework suggested above, one of the two factors in each country is made worse off with the opening of trade. For a country importing labor-intensive goods and exporting capital-intensive goods, for example, the theorem shows that that country will experience a decline in the relative income of labor and an increase in the returns to capital, whereas the opposite results will obtain for the country exporting labor-intensive goods. Under an extension of the Stolper-Samuelson theorem (the so-called factor price equalization theory), there will be a tendency for wages of unskilled workers in the country exporting labor-intensive goods (poor country) to increase and for wages of unskilled workers in the country exporting capital-intensive goods (rich country) to decline until a point is reached where they are the same. This theorem lies behind the commonly

cited notions that trade produces winners and losers, but that net gains are positive because those who gain from trade do so to a greater degree than those who lose. Advocates for trade liberalization would then claim that, in principle, it should be possible to compensate those who lose from trade without using up all the gains from trade. However, the manner by which such a transfer would be made rarely enters into political debate; one of the practical means of achieving it, at least on a partial basis, is through trade adjustment assistance, which is discussed later on in this chapter.

Another practical consideration arising from trade theory is the effect of trade liberalization on the balance of trade. In the simple 2 × 2 × 2 model referred to above, the opening of trade will result in balanced trade between the two countries, but in a multi-country framework this will not necessarily be the case for any pairing of countries. What is important for policy is the balance of trade on a multilateral basis and how any imbalance is settled, either by borrowing or by investing abroad. To insist that bilateral trade between any two parings of countries should be balanced is to argue an extreme form of mercantilism, which defies the true purpose of trade: a country engages in foreign trade to obtain goods from abroad more cheaply than it can produce them at home. For example, a country may import certain minerals from one country, without exporting anything in return, which it then uses in the production of manufactured goods that it sells to a third country from which it imports less in exchange. To argue in favor of strict bilateral balance between any two of the three countries noted above does not make any sense given the nature of the trade among them. More generally, to argue in favor of overall balance in trade on a multilateral basis also does not make sense, if one does not consider the relationship between domestic saving and investment, as the former and the latter relationships are inherently related, as discussed in Chap. 2. If domestic saving is less than domestic investment, then by necessity exports will be less than imports and a trade or current account deficit will be registered, whereas if saving is greater than investment, then a trade or current account surplus will be evident.[1]

Further extensions of trade theory under what has come to be known as modern trade theory (MTT) originated with the work of Paul Krugman in the early 1980s. MTT emphasized that gains from trade arose from the effect of firms exploiting increasing returns to scale in an environment of imperfect or monopolistic competition, as distinct from the gains from

trade arising from different technologies or factor endowments emphasized in earlier trade theory. The earlier theory also assumed that firms traded under conditions of perfect competition and constant returns to scale. The appeal of MTT is that it helped to explain why trade is often dominated by a small number of firms trading across countries that are quite similar in economic structure. In these conditions, the gains from trade can be associated with a larger variety of goods available to consumers (consumer choice) and a larger production of each individual variety resulting in rising real income due to lower prices on account of increased market size and more competition than what existed prior to trade.

Various attempts have been made in recent years to measure the net benefits of trade for the United States arising from its trade liberalization efforts and technological advances (associated with falling transportation and communication costs) from 1947 to 2016. These efforts were carried out during the course of eight rounds of multilateral trade negotiations of the GATT/WTO and various other regional and bilateral trade deals and resulted in a reduction in the average tariff on dutiable merchandise imports for the United States from around 33 percent in 1944 to 3–4 percent today and a more than doubling in its trade openness ratio.

Economists at the Peterson Institute for International Economics (PIIE) have attempted to measure the net benefits of trade reform for the United States covering the long-term effects of its tariff reduction efforts described above. Their calculations, based on different methodologies, yield a cumulative increase in GDP of around US$2.1 trillion from 1950 to 2016 or an increase in per capita income of US$7014. This result implies that GDP would have been 11 percent lower than its recorded level in 2016 (US$18.57 trillion), in the absence of the government's trade expansion efforts over that time period. By the same token, these studies have attempted to estimate the long-term income losses arising from the unemployment effects of import competition associated with trade liberalization and arrive at an overall cost of US$40 billion. Only a small portion of these costs, which are often permanent for the workers involved, have been covered by the government's trade adjustment and welfare assistance, as explained later in this chapter. This fact helps to explain why these costs have attracted so much political attention. Nevertheless, in net terms, these headline figures imply that the long-term benefits of trade liberalization have exceeded the costs by a factor of 50 to 1.[2]

2 US Trade with China

The experience of US trade with China since the latter's entry into the WTO at the beginning of the current century is an important case study, as it raises issues related to the adjustment costs of trade liberalization and the net gains from trade, or its benefits and costs, that illustrate some of the points raised at the end of the previous section of this chapter.

As noted in Chap. 2, export expansion has been a key aspect of China's exceptional pace of economic development, which has been unprecedented in the post-WW2 era. This export growth has been especially robust since the late 1990s and the timing of China's accession to the WTO as a full member in late 2001. A particularly important change during this time period was the granting by the United States of permanent normal trading relations (PNTR) to China in late 2000. The establishment of PNTR for China eliminated the prior requirement that it had to request from the United States access to its low tariff rates on an annual basis in order for its exports to enter the US market at those favorable rates. The decision on PNTR status removed a great deal of uncertainty for China's foreign trade and encouraged its exporters to scale up their production. On the side of the United States, the decision created incentives for US producers to move some of their export production to China or increase their sourcing from Chinese producers. The greater import competition from China also increased incentives for US producers to adopt labor-saving technologies.

The resulting surge in Chinese exports to the United States (or China trade "shock", as it has been called) coincided with a sharp drop in US manufacturing employment during the 2000–07 period and thus raises a number of questions as to how US domestic manufacturers and factory workers adjusted to the change in trade relations between the two countries during the course of the last decade. Employment in manufacturing had been on a declining trend both before and since the China trade "shock". The adverse effect of increased import competition from China on US employment occurred in a number of industries and regions across the United States, but was concentrated in certain locations of the industrial mid-west and southeastern regions where labor market adjustment was very slow or non-existent. Instead of workers in the affected industries finding new employment or moving to new work locations, researchers have found that unemployment rose and remained very high, while labor force participation declined, and crime increased in the communities

where businesses closed or moved to new locations. These results stand in sharp contrast with the standard assumptions of trade theory, as discussed earlier. Workers were able to get access to government welfare assistance, but this assistance was provided in very limited amounts. Some assistance for retraining was also provided, but this too was very limited and not well targeted. No assistance was made available for the relocation of workers to other communities within the region or nearby where employment opportunities were available. On the basis of this evidence, one would have to conclude that trade adjustment assistance at the state and federal levels was clearly inadequate and that relatively little was achieved in transferring some of the gains from trade in areas of higher employment and output expansion to those who were adversely affected by import competition. These general facts about the China trade "shock" are fleshed out in the following paragraphs.

While the share of US non-farm employment in manufacturing had been on a declining trend since 1950, there was a particularly sharp decline in this indicator in the first years of the new century prior to the global financial crisis, precisely at the time of a surge in imports of manufactured goods from China. US employment in manufacturing stayed relatively unchanged in absolute numbers during the last decade of the twentieth century, but then fell from 17 million in 2000 to 13.9 million in 2007 and to 11.4 million in 2011, a decline of one-third over the full 11-year time period. By contrast, over this same time period, there was a surge in the share of manufacturing exports from China in global trade, as well as in the growth in US imports of manufactured goods from China. Between 1990 and 2011, the share of global manufactured exports originating from China rose from 2 percent to 16 percent, while China's share in total US imports of manufactured goods increased from 4.5 percent in 1990 to 10.9 percent in 2001 and to 23.1 percent in 2011. These increases reflected the effect of China's extraordinary export-led development drive, as well as the impact of the US government's decision to grant PNTR to China, as discussed earlier. The obvious question that arises is how much of the decline in US manufacturing employment during the first decade of the current century can be attributed to the surge in US imports of manufactured goods from China.

In explaining the factors behind the deficit in the US merchandise trade account, one needs to consider not only the reduction in US duties on imports from China, but also the effect of exchange rate policy of China and the United States. During the period of rapid growth in manufactured

imports from China during the first half of the last decade, it is evident that the value of the yuan was undervalued as suggested by the massive gains in foreign reserves accumulated by the People's Bank of China. At the same time, the external value of the US dollar on a trade-weighted basis experienced an appreciation. Trade practices of China involving subsidies for certain exports have also given an unfair advantage to Chinese exports. China's exchange rate policy during the period of its major export drive is discussed further in Chap. 4.

On the question of the possible link between import competition and reduced employment in manufacturing, two recent independent studies have concluded that during 1995–2011 import competition from China resulted in the loss of US jobs in manufacturing of around two million, roughly one-third of the decline in manufacturing employment mentioned earlier. Of the two million, roughly half could be attributed to the direct effect of imports of manufactured goods from China on US jobs in manufacturing and the other half could be associated with the indirect effect of those first-round job losses on the suppliers of intermediate goods and other businesses in the input-output chain of links.[3] These results imply that inter-industry linkages magnify the first-round employment effects of trade shocks to a significant extent.

Prior to the expansion of trade with China under PNTR, the consensus among economists was that the reallocation effect associated with import competition from China, in the absence of labor market frictions, would have induced a shift of labor and capital resources away from sectors that experienced a decline in relative prices because of rising imports to other sectors that were experiencing an increase in relative prices. These shifts would have been expected in principle to offset the direct, upstream and downstream effects of increased imports from China so as to maintain full employment. Instead, what was observed by researchers is that the effects of import competition from China resulted in increases in unemployment or reductions in labor force participation in certain regions of the US economy that were not largely offset over the course of a decade by labor mobility or sector reallocation. This result also varied for workers at different wage levels, with those at the top able to reallocate to other sectors or locations and those at the middle or lower levels less mobile.

One of the reasons for the difficulty of adjustment for those at the middle or lower wage levels was the inadequacy of the government's trade adjustment assistance (TAA) program. This assistance is only one form of transfer payment from the federal government in the form of medical

payments, disability benefits and income assistance that workers affected by trade dislocation were eligible to receive. However, in practice these programs only covered around 10 percent of the decline in wage and salary income of those in the sectors most exposed to import competition from China, of which TAA was the least consequential, as workers relied mainly on social security disability benefits and unemployment insurance rather than TAA. This result can only be explained by the inadequacy of the retraining and income support offered under the TAA and its assistance with new job search. As a result, most of the affected workers tended to stay in their same location and sector of work, where job and income prospects were the poorest.[4] In this regard, there was very little achieved by way of using some of the gains from trade to compensate those adversely impacted by it.

These recent studies on the impact of the China trade "shock" since the beginning of the current century have led to a re-assessment of the economist's canonical model on the reallocative effects of trade expansion and a re-evaluation of the rigidities and impediments that in reality can prevent those effects from working most efficiently. The long-term adverse effects on certain labor groups of trade expansion, as demonstrated by the recent experience with China, also highlight problems of a structural nature that deserve greater attention from the government. At the same time, however, one needs to counterbalance the adverse effects of trade expansion with China with two other positive effects: one is the favorable employment effect of the growth in US exports during the time period of trade expansion with China and the other is the positive welfare benefits of a cheaper and more diverse import basket of goods for American consumers.

One of the studies cited earlier attempted to measure the employment effects of the increase in US global exports that occurred during the time period of the trade expansion with China noted above. That study concluded that the growth in total merchandise exports from the United States during the 1995–2011 period less the surge in imports from China created a net demand for 1.7 million new jobs. When one compares the growth in total merchandise exports and imports (including that from China), there is a fall in net labor demand due to trade of around one million workers, which is around one-sixth of the total loss of jobs in manufacturing during this period, as noted earlier. However, when one compares the growth in total exports of goods *and* services with total imports of the same, then there was a growth in the demand for labor because of the growth of service exports.[5] This latter result is consistent

with the fact that, while the United States in recent years has recorded a deficit on its merchandise trade account, it has recorded a surplus on its services trade account.

Recent studies have also shown that US manufacturing firms at the national level were able to respond favorably to the China shock by increasing their output in areas where they had a comparative advantage vis-à-vis China, namely high-skill-/high-tech-intensive manufacturing and complementary service activities such as R&D, design and engineering. In these areas of production, producers were able to take advantage of lower-cost imports of intermediate goods from China while shifting some of their non-tech-intensive tasks there as well.[6] As a result, these firms contributed to the export growth that was cited in the previous paragraph. This is an important finding, as it confirms a result for the US economy that has been associated more generally with the growth of global value chains (as discussed in Chap. 2) and the shift of low-cost manufacturing operations to emerging and developing countries. Nevertheless, it does not negate the problem of dealing with the local impact of employment decline in those communities most directly affected by the surge in imports of manufactured goods from China or the shift of low-tech and low-skill manufacturing activity overseas.

Efforts have also been made to measure the consumer welfare benefits of a decline in the cost of consumer goods associated with an increase in merchandise imports. One recent study has demonstrated that during 2000–06, or immediately following China's WTO entry and access to US PNTR status, the impact of expanded imports from China was equivalent to a real decline of 7.6 percent in the US price index for manufactured goods, reflecting both a reduced cost of imports and an expanded basket of imported goods.[7] This decline represented an increase in real income of the same amount for US consumers and a significantly expanded basket of consumer items available in the US market. In the absence of increased trade with China, the price of popular consumer electronic goods, such as the iPhone, would have been significantly higher if its production and assembly had been restricted to the US market.

There has also been much discussion in the economic literature of the factors behind the long-term decline in the share of US employment in manufacturing. As a share of private sector employment, manufacturing employment reached a peak of 35 percent in 1953 but then fell steadily to a low point of 10 percent in 2016. This trend has been paralleled by a fall in the share of manufacturing in private sector GDP, from a peak of 33

percent in 1953 to 13 percent in 2016. These trends have been consistent with the long-term structural change in the US economy from one based on manufacturing and other secondary industries to one based on services. The long-term decline in the share of manufacturing also reflects the effect of productivity improvements arising from automation. By all measures, the impact of import competition from China has not been a major factor in accounting for the decline in the relative size of the manufacturing sector in the US economy, especially if one considers the relatively small impact of total US merchandise trade on the net demand for jobs. This fact is buttressed by the conclusion of a recent study that showed that only 15 percent of the reduction in manufacturing employment during the 1992–2012 period can be attributed to rising US trade deficits with the rest of the world (including China), whereas 85 percent is explained by rapidly rising labor productivity in the manufacturing sector.[8]

Some analysts have argued that the substantial productivity improvements in manufacturing due to the effect of automation may be overstated because of problems related to the measurement of productivity growth in an important sub-component of the manufacturing sector dealing with high-tech products such as computers and semi-conductors.[9] These gains represent improvements in high-tech products rather than the effects of automation over the long term. In any event, the direct job loss in manufacturing due to rising import competition from China is a relatively small share of the total job loss in US manufacturing over the long term as a result of productivity improvements and the shift of employment to a more service-oriented economy.[10] It is even a smaller share of the total involuntary separations that take place on a yearly basis in the US economy that currently amount to around 20 million workers, according to data collected by the Bureau of Labor Statistics.

A final commentary on the impact of import competition from China relates to the US government's trade adjustment assistance (TAA). As noted above, the TAA was a relatively small part (around 10 percent) of the government's total social assistance to workers adversely affected by import trade with China. More generally, the total number of workers covered by TAA for all trade dislocations during 2003–07 amounted to around 730,000, whereas the number of workers displaced by the direct and indirect effects of increased import competition from China alone amounted to two million, as noted earlier.[11] Notwithstanding the long-term existence of the TAA (since 1962), recent evaluations have concluded that its programs of job retraining and other worker assistance have been

relatively ineffective. One study examined the impact of TAA programs on the earnings of displaced workers over a nine-year period (2002–11) and found that after four years participants who had received TAA assistance earned US$3300 or around 10 percent less than a control group of unemployment insurance claimants who were not eligible for TAA support.[12]

The inadequacy of the TAA is symptomatic of a larger problem with the US government's labor market policies in that they are highly fragmented and underfunded. These policies are typically split between passive labor market policies (including unemployment insurance and related welfare benefits) to provide partial compensation for job loss during periods of temporary or cyclical unemployment and active labor market policies (including, in particular, job training/retraining and job search assistance) to help reduce long-term or structural unemployment. The case for active labor market policies is especially strong when one considers the constant "churn" in the labor market with the opening and closing of businesses due to the forces of automation and import competition and the pressures low-skilled workers face in terms of spells of unemployment and a weakening in earnings over time. The longer those spells last, the less likely it becomes that re-employment will occur and the more likely it is that withdrawals from the labor force will take place.

When one compares the size of public outlays on active labor market policies among OECD countries, it is clear that the United States commits far fewer resources than most other OECD countries. In 2014, public outlays on active labor market policies in the United States per unemployed worker amounted to 3.6 percent of GDP per capita (one of the lowest ratios for the OECD countries), compared with an average of 14.4 percent for the OECD as a whole. This wide discrepancy within the OECD reflects a very different attitude among governments in the United States and Western Europe regarding the role of active labor market policies, with governments in Europe being much more aggressive in the use of such policies. In fact, reliance on such policies by the United States has declined over time, with the US government spending in 2014 in relation to GDP less than half of what it spent 30 years earlier.[13] Public outlays for these policies by countries such as France, Germany and the Nordic group were each significantly higher than the OECD average. Germany has been especially committed to worker training and retraining programs, which have been an essential support for its long-term success in maintaining a sophisticated, high-tech manufacturing sector oriented to exports. Most technical studies have shown that active labor market policies are effective

in reducing unemployment and that they can be cost effective in the sense that their cost in relation to GDP has tended to be less than the gains to GDP that they can promote.[14]

The figures noted above for outlays on active labor market policies are matched by substantial differences between the United States and its Western European counterparts in the scope of social protection programs for workers who have struggled in the face of labor market dislocations caused by the forces of technological change and globalization. As a result, there has been a decline or no increase in real wages of American workers over the long term, while the share of labor income in total national income in the United States has declined. Governments in the United States have tended to minimize the role of social protection programs for workers with an emphasis instead on policies to reduce labor market rigidities and lower unemployment through a better functioning of labor markets. While these policies are desirable, they have often been based on a weakening of labor union influence and a reduction in the scope and coverage of passive labor market policies. Again, in relation to the rest of the OECD, the United States ranks very low in its commitment to such policies. For 1998–2008, the size of public outlays on these policies per unemployed worker in the United States, on average, amounted to 12 percent of GDP per capita or less than half the ratio for the OECD as a whole. The weakness of social protection programs in the United States is certainly one reason for the rise of worker discontent and the appeal of populist political rhetoric in recent years that has focused on the negative and long-lasting effects of trade liberalization on unskilled workers.

3 The Trans-Pacific Partnership (TPP)

The TPP was the focus of political attack during the 2016 presidential election campaign, along with NAFTA, on account of its allegedly negative implications for trade relations and employment in the United States. The TPP negotiations, which were initiated in 2010 and concluded in 2015, were simply the latest attempt by the US government to promote trade liberalization and economic integration among 12 countries in the Pacific region and gain the benefits from a further advance in economic globalization.[15] Against the backdrop of negative political campaign rhetoric, it is striking to realize how little was understood about the TPP in the public domain and the changes in trade and trade-related practices that it was seeking to introduce. Notwithstanding a decision by the US government to sign an agreement for the TPP in February 2016, this decision was reversed in early 2017.

No written explanation was provided by the White House or the Office of the US Trade Representative (USTR) for this decision, except for a brief 150-word memorandum from President Trump to the USTR on the day of the announcement (January 23, 2017). That memorandum referred only to the intent to pursue "fair and economically beneficial trade deals… to promote American industry, protect American workers and raise American wages" by means of bilateral trade agreements, as distinct from multilateral ones. One means of determining the considerations that went into the decision to withdraw from the TPP is to examine the criticisms raised during the 2016 presidential election campaign by then candidate Trump, many of which were shared by other opponents of the arrangement. However, most of these were not well grounded in the reality of the TPP, nor were they valid from an economic point of view. At least six objections or concerns were raised about the TPP during the election campaign.[16]

1. One objection was that the TPP would continue a marked trend of US trade agreements resulting in major losses of jobs, wealth and income. It is very difficult, however, to find technical studies that sustain such a claim. Studies by the US International Trade Commission and the Peterson Institute for International Economics (PIIE) have concluded that US trade agreements, such as NAFTA and TPP, create economic benefits for the United States in terms of larger output, lower consumer prices and higher employment (see below). Admittedly, these gains have not been, or would not have been, substantial in view of the already low tariffs on imports by the United States and the relatively low value of imported goods and services in relation to domestic production. Nevertheless, these studies have shown that the economic gains from these trade arrangements have significantly exceeded, or would be expected to exceed, the costs. As noted in the previous section of this chapter, the most sensitive area of costs relates to employment dislocation for import-competing industries. However, the number of unemployed workers laid off through plant closings has represented a fairly minor part of the large, regular "churn" of separations and hiring that represent an inherent feature of business and labor market dynamics in the US economy. They have also not contributed to the long-term decline in the share of manufacturing employment, nor to the overall rate of unemployment. As argued before, clear improvements in

the US government's trade adjustment assistance can and should be made in order to facilitate labor transfers by means of allowances for retraining, skills upgrading and geographic relocation.

2. A second concern raised during the presidential campaign was that the TPP would make it possible for other countries to dump cheap, subsidized goods in the US market, while continuing to maintain barriers to US exports. However, it is more likely that the TPP would have worked to reduce the problem of dumping, while lowering barriers in other Pacific region countries to US exports. The TPP would have eliminated more than 18,000 regional tariffs on US export items by 2030, while increasing US exports by an estimated US$357 billion by that year.[17] The TPP also would have placed restrictions on the trading activities of state-owned enterprises (SOEs) in other countries that have often been used to subsidize cheap exports to the US market. In addition, the TPP would have had an impact on child labor practices in countries such as Vietnam and introduced minimum wages for labor that would have made it easier for US companies to compete. Even without the TPP, 80 percent of US imports from TPP countries are not subject to duty, but the TPP would have brought forward the reduction of duties on many US exports across the Pacific region.
3. A third problem posed in the election campaign was that the TPP would create an international commission whose decisions the United States would be forced to accept. The TPP would have created an international commission to oversee the administration of all aspects of the TPP agreement, but any decisions by this body would have been made by consensus or mutual agreement. One of the features of the agreement to have been overseen by the commission was its dispute settlement system, under which arbitration panels would have been created for the resolution of any dispute among its members over the implementation of the agreement. This feature was included at the insistence of the United States in order to avoid arbitrary or anti-competitive practices in its partner countries and ensure, among other things, that US businesses could by-pass weak property rights protection or ineffective court proceedings in TPP countries to seek remedies for unfair treatment. The United States has entered into 19 trade arrangements which have included a dispute settlement arrangement and has never lost a case. It already has such a system with five of the signatories to the TPP in other trade agreements (Canada, Chile, Korea, Mexico and Peru).

4. A fourth objection raised prior to the 2016 presidential elections was that the TPP would have given an unfair trade advantage to China. In fact, China was excluded from the negotiations for the TPP because of its inability to take on some of the reforms required for the TPP, such as in the area of state enterprise operations. This exclusion granted the United States certain strategic advantages in terms of its relations with 11 key economies within the Pacific region other than China. The establishment of the TPP would have imposed a certain cost on China as a result of being excluded from the largest free trade area in the global economy. In this regard, the TPP would have represented a certain check on China's geopolitical ambitions within the Pacific region. The TPP also would have overshadowed China's own regional cooperation agreement or its Regional Comprehensive Economic Partnership (RCEP), which is far less ambitious than the TPP and excludes the United States.
5. A fifth concern raised in the presidential election campaign was whether the TPP was adequately favorable to the interests of American businesses. Clearly, the TPP was designed to promote both US exports to the region through the reduction of trade barriers and tariff restrictions and foreign investment by US businesses in the Pacific region. The TPP also would have strengthened the protection of intellectual property rights and patents of US business and the monetary rewards to be gained from them that go beyond the requirements of the WTO Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement.[18] This agreement was established at the urging of software, electronic and pharmaceutical companies in the United States to extend the protection of intellectual property (IP) rights embodied in US domestic law into the international arena in order to limit the theft or involuntary transfer of technology and IP content.[19] As noted above, the TPP would also have established a strong dispute settlement system that would have avoided the threat to American business interests arising from weak legal regimes or court proceedings in partner countries for the protection of property rights more generally. By all accounts, US business interests were well represented in the TPP negotiations, and some critics would argue that the provisions on regulatory practice, intellectual property and investor-state dispute settlement (ISDS) would have entailed greater redistributive than efficiency gains for large American corporations.[20]

6. A final issue raised during the presidential campaign was whether the TPP would stop currency manipulation by countries such as Japan. That country is one of six (China, India, Japan, Korea, Germany and Switzerland) for which there is intensified surveillance of exchange rate policies by the US Treasury Department. In its regular semi-annual report to the US Congress of October 2016, the Treasury Department concluded that the Japanese government had not engaged in currency manipulation for the previous five years.[21] More generally, the TPP was unique as a trade agreement in that it established clear procedures to avoid the problem of currency manipulation with a view to preventing one country from gaining an unfair competitive advantage over another. In a special side agreement ("Joint Declaration of the Macroeconomic Policy Authorities"), the TPP created a monitoring arrangement on exchange rate policies of the countries in the partnership and elaborate data reporting requirements under the supervision of a regional committee of economic officials from each country.

Instead of the TPP, the US government has indicated that it intends to pursue American foreign commercial interests by means of bilateral trade deals. While the United States is a party to a number of bilateral trade arrangements, it is worth noting that such deals have certain disadvantages vis-à-vis regional agreements, such as the TPP. One problem with bilateral trade agreements is that they involve separate rules for trade with each country, which can give rise to a complex "noodle bowl" of regulations. This complexity obviously can give rise to excessive costs of compliance for American businesses as they seek to take advantage of each trade arrangement. The TPP would have made trade and other rules simpler and more uniform across the economic territory covered by the Partnership, thus making it easier for US companies to find new business opportunities abroad in a dynamic economic region. Bilateral trade deals also create fewer incentives for countries to offer concessions to the United States. In the case of the TPP, Canada and Mexico accepted fairer agricultural prices and stricter labor laws as terms of a revised NAFTA that was to be a by-product of the TPP in order to gain access to the markets of a broader Pacific region.[22]

The TPP, as in the case of NAFTA, was based on a legal framework and institutional structure that covered a number of areas of economic relations among the 12 signatories beyond the liberalization of trade restrictions. For this reason, it was expected to be the vehicle for updating NAFTA, as

the three participants in that agreement were also signatories of the TPP. In this regard, it is interesting to note that the term "partnership" was used to describe the agreement, rather than "free trade" area, as in the case of NAFTA. Apart from the broad-ranging economic nature of the agreement, it is important to understand that there was a clear political objective being served by the TPP to enhance regional solidarity and US engagement with key allies in the Pacific region, which is the most dynamic region of the global economy. In this connection, it is interesting to note that the TPP did not include China, as noted above, essentially because it was not viewed as being prepared to make the kind of commitments required for the TPP. Once in existence, however, the TPP was expected to create pressure on China to make the reforms over time that would allow it to join in order to benefit from its economic arrangements. These reforms would be significant, as the TPP incorporated standards for labor market and environmental practices and investor-state dispute settlement, for example, at the insistence of the United States that were fully compatible with its own standards or those created by other international agreements which it helped to establish. A number of these standards required changes in governmental regulations and practices on the part of Brunei, Malaysia, Mexico, Peru and Vietnam. In this way, the United States by means of its participation in the TPP negotiations continued to play an indispensable role in defining the terms of the liberal international economic order in which it (and many other countries) had prospered since the end of WW2.

The TPP created rules for its participating countries across a range of economic activities and governmental operations that go well beyond the rules for free trade. In this regard, it is important to recognize the extent to which free trade deals have evolved in the last 25 years and the deeper economic integration that has been achieved through this domain of globalization. At one level, it may not seem that the TPP achieved that much in view of the relatively modest economic benefits that were seen to flow from it for the United States. According to studies sponsored by the PIIE, the TPP would have increased real GDP of the United States by 0.5 percent, while increasing annual export flows by US$357 billion (or 9 percent of exports), as noted earlier, with respect to baseline projections for 2030 when the TPP would have been fully implemented.[23] Admittedly, these benefits have been quantified only on the basis of the trade dimension of the agreement, and thus they exclude, for example, any economic gains arising from higher foreign direct investment abroad, which has been an important source of foreign income to the United States, and

royalty payments associated with the expanded use in the Pacific region of intellectual property and copyrights owned by American businesses.

Apart from the economic gains of the TPP, which were viewed as positive but modest, the TPP established a host of obligations and requirements on Pacific region countries that certainly would have enhanced the influence and prominence of US business interests abroad. In this respect, the TPP would have continued to advance the economic interests of the United States and its gains from globalization. By comparison with NAFTA, the TPP represented a significant advance in regard to the commitments of its participants regarding e-commerce, trade-related activities of SOEs, intellectual property protection, environmental and labor standards affecting trade and exchange rate policy.[24]

In the absence of the TPP, the 11 signatories other than the United States discussed the possibility of proceeding with a similar agreement without the United States or of joining a less-ambitious trade agreement sponsored by China, that is, the Regional Comprehensive Economic Partnership (RCEP). Then, on March 8, 2018, the 11 signatories of the TPP (other than the United States) signed what they called the "Comprehensive and Progressive Agreement for the TPP". This agreement is substantially the same as the original TPP, except that the provisions of the earlier one designed to protect the intellectual property of American content, software and pharmaceutical companies, which had been added at the insistence of the United States, were suspended. Apparently, these provisions were suspended, rather than removed, in case the United States decides to re-join. Without the participation of the United States, the revised TPP would not yield the same kind of economic benefits as the original agreement. However, as a regional initiative, it continues a strong tradition of regional cooperation within the Asia-Pacific region that could be expanded to include other member states; for example, Korea, the Philippines and Thailand have expressed interest in joining. Significantly, the withdrawal of the United States from the TPP will weaken its strategic leadership and involvement in the Pacific region, in particular at a time when China is advancing its economic and political influence in that region.

4 The Impact of NAFTA and Its Renegotiation

The North American Free Trade Agreement (NAFTA) has been a topic of much current policy debate in view of the criticisms raised about it during the 2016 US presidential election campaign and the US government's deci-

sion to open discussions for its renegotiation soon after its inauguration. NAFTA has been in effect among Canada, Mexico and the United States since 1994, just prior to the establishment of the WTO. It was the first of a wave of free trade agreements for the United States and a number of other countries that proliferated with the failure of the Doha round of multilateral trade talks via the WTO that were focused on tariff reductions between the advanced and developing countries. By value of trade, it is the largest free trade area in the global economy, followed by the European Union.

During the 2016 US presidential election campaign, it was alleged that NAFTA had been highly unfavorable for the United States because of its negative impact on manufacturing activity and employment and on the overall trade balance. These complaints echoed similar criticisms raised during the 1992 presidential campaign, prior to the completion of NAFTA negotiations, by candidate Ross Perot who predicted that it would create a "giant sucking sound" reflecting its effect on the transfer of manufacturing jobs and activity from the United States to Mexico. The concerns raised in the two presidential campaigns have not proven to be valid, for reasons explained below.

The main effects of NAFTA were as follows: (a) it established a 10-year timetable for the elimination of most tariffs (and a 15-year timetable for all tariffs) on traded goods among Canada, Mexico and the United States; (b) it eliminated immediately tariffs on 50 percent of industrial goods imported by Mexico from the United States; (c) it eliminated a number of non-tariff trade restrictions of Mexico (e.g., import licenses, local content quotas); and (d) it established for the first time in any trade agreement (by means of side agreements) understandings on environmental protection and labor standards. The changes in trade policy between Mexico and the United States were greater than in the case of Canada and the United States, as NAFTA incorporated tariff reductions that had already been established in 1989 in a bilateral trade agreement between the latter two countries. As noted earlier, the NAFTA agreement extends well beyond the elimination of tariffs and trade restrictions among the three countries involved, as it has an extensive number of chapters that cover issues such as labor and environmental standards, intellectual property protection, investor-state dispute settlement and arbitration procedures, competition and regulatory practice and state enterprise trade.

Since 1993, total (two-way) trade of the United States with its NAFTA partners has grown in line with its total trade on a global basis. In 2016, total US trade with Canada and Mexico represented around 25 percent of

its global trade, almost unchanged since 1993. Within NAFTA, there has been some increase in the relative share of US trade with Mexico during this time period and some decrease in that with Canada. As a result of NAFTA, the United States has experienced the classic effects of trade liberalization as noted earlier, especially vis-à-vis Mexico, namely, an increase in the supply of intermediate goods for manufacturers drawing on new lower-cost suppliers of these goods; a reduction in the cost and widening of the scope of consumer products, again drawing on new lower-cost suppliers of these goods; and a positive impact on the relative wages of higher-skilled labor and employment in US manufacturing industries with an offsetting effect on lower-skilled wages and employment in manufacturing industries as some of these positions were shifted overseas. This last-mentioned effect was intensified with the development of international supply chains across the three countries that became a dominant feature of international trade in the period after NAFTA came into effect. Nevertheless, wage differentials between the United States and Mexico have remained substantial.

It has been estimated that NAFTA trade has resulted in a relatively small increase of GDP in the United States, of around US$50 billion or only around 0.2–0.3 percent of GDP. In part, this result is due to the fact that external tariffs for the United States were already very low prior to the agreement, while US trade with Canada and Mexico represented only 4 percent of its GDP when NAFTA came into effect in 1994. By contrast, the impact of NAFTA on Mexico has been much more significant because of the larger reduction in its tariff and non-tariff barriers achieved under the agreement and the larger role that trade with the United States plays in its economy. For the United States, NAFTA had particular benefits in that it promoted a rationalization of its auto industry by allowing a shift of those parts of the industry to Mexico that could be performed by relatively low-skilled workers there. As a result of the efficiency gains from this result and increasing returns to scale associated with a greater specialization within the automotive industry and a widening of the market, US auto producers gained an important cost advantage vis-à-vis European and Japanese producers.

Most of the debate about the merits and demerits of NAFTA relates to its impact on employment in the United States. With the structural changes that have taken place within some industries and the emergence of a trade deficit for the United States with its NAFTA partners, it has been estimated by economists at the PIIE that net job losses under NAFTA

in recent years have amounted to around 15,000 per year. This is a net figure resulting from annual job losses associated with an increase in imports of 203,000 and job gains of 188,000 associated with an increase in exports.[25] However, for each of these lost jobs, it has been estimated that the United States has earned US$450,000 in terms of new jobs created, productivity and income gains and lower consumer prices.[26] In part, this result is due to the fact that new jobs created as a result of increased NAFTA trade have tended to be higher-paying jobs than those lost due to that trade. Moreover, were all the job losses cited above to have occurred in the manufacturing sector, these losses would represent only 5 percent of the separations that typically take place within that sector on an annual basis owing to the normal and continuous churn of job separations and hires that are associated with the persistent technological and competitive forces operating within the US economy. It is also the case that during most of the period from 1994 to 2008, the United States experienced a decrease in its rate of unemployment, so many of the workers adversely impacted by trade under NAFTA would have found a favorable environment in which to find a new job. This estimate is substantiated by the fact that the number of unemployed workers in the manufacturing sector that were certified for TAA assistance in recent years has averaged only around 10,000 a year. It is also the case that from 2000 to 2011, as noted earlier, employment in the manufacturing sector declined by around 5.5 million jobs. The net job displacements of NAFTA accounted for less than 3 percent of that decline.

The economic case for or against NAFTA can also be judged by considering the impact of suspending the agreement altogether. At an aggregate level, NAFTA trade does not account for a significant share of US GDP, as noted earlier; however, at a more disaggregated level, a suspension of NAFTA would have represented a significant disruption to regional supply chains for automobile assembly with a negative impact on employment and the cost of final goods to the consumer. The export of agricultural goods from the United States to Mexico would also have been significantly impacted, as these goods would have become subject to much higher tariffs without NAFTA. At present, Mexico imports 28 percent of the US maize crop, and together with Canada accounts for nearly one-third of beef exports from the United States. On the basis of these facts, a disruption of NAFTA would have had an important effect on economic activity and employment in a number of states, including Pennsylvania, Ohio, Indiana, Wisconsin and New Hampshire, in particular. A study sponsored by the Business Roundtable

in January 2018 concluded that the decline in exports and output associated with a suspension of NAFTA would have resulted in a loss of 1.8 million jobs in the short-to-medium term before partial re-absorption by the labor market would have taken effect.[27]

On balance, it is fair to conclude that NAFTA has been advantageous for the United States, even though in strict quantitative terms it has not provided a major stimulus to the growth of its GDP. The domestic automobile industry has become more efficient and competitive with its rationalization and re-organization via regional supply chains, while new exports of agricultural products have been promoted. It is also the case that the impact of NAFTA on the manufacturing sector in the United States has not been negative in that it has promoted the expansion of higher-paying jobs in the United States, offsetting to a large extent the loss of lower-paying jobs to Mexico. This restructuring of the industry appears to have been accommodated without significant disruption to the labor market or impact on the long-term decline of employment in the US manufacturing sector that started before NAFTA was formed and has continued up to the present time. In general, it seems fair to conclude on the basis of the US experience with NAFTA that the costs of job disruption caused by a trade agreement can be significant for the individuals and communities concerned, but these have not been significant in scale. By the same token, the benefits have far outweighed the costs.

The US government's current concern about trade deficits provided a key motivation for its desire to renegotiate the NAFTA agreement. While it is very unlikely that changes in the terms of the agreement can have any significant effect on the size of the trade deficit of the United States, it is still the case that a number of issues have arisen since the agreement was first concluded that warranted its re-examination. For example, there are no chapters in the current agreement dealing with digital trade or e-commerce, through which roughly 50 percent of service trade is handled. Service trade, in general among NAFTA participants, is still subject to significant trade restrictions, as distinct from merchandise trade, and therefore it represents an area where liberalization efforts could be made with significant benefits for the United States. There is also a strong case for incorporating stricter environmental and labor standards directly within the NAFTA agreement (instead of side agreements), as was done in all US trade agreements since the inception of NAFTA. Other areas that were considered in the negotiations touched on intellectual property rights, improved dispute settlement procedures, reforms on trade facilitation and customs procedures and trading

rules for state-owned enterprises (SOEs). In many of these areas, the understandings developed in the negotiations for the TPP essentially served as a template for revising the NAFTA agreement, given that Canada, Mexico and the United States were among the 12 participants in those negotiations. However, since the United States withdrew from the TPP early in 2017, these issues needed to be taken up again separately in the negotiations for revising NAFTA. Clearly, the range of issues covered in the agreement encompassed a host of different policy, institutional and regulatory fields that went well beyond trade liberalization.

The NAFTA renegotiation process essentially played out over a period of 13 months, beginning in August 2017 and concluding by the end of September 2018. The agreement among the three countries (now known as the USMCA—the United States, Canada and Mexico Agreement) was signed by their leaders at the G20 Summit Meeting in Buenos Aires at the end of November 2018.[28] At this point what is lacking is the ratification process involving congressional approval in each of the three countries. This should not be a problem in Canada and Mexico, given the majority held by their leaders' parties, but the process in the United States is far less certain given the current control of the House of Representatives by the Democratic political party. While the USMCA is an improvement over NAFTA in terms of its modernization with the incorporation of many provisions from the TPP, on substantive grounds regarding the structure of trade, the new agreement remains largely unchanged from the old one with some risk that the cost of producing automobiles in the United States will actually increase with certain provisions that were included, as explained below.

Some issues that were advanced by the United States served as significant stumbling blocks for finalizing a revised NAFTA agreement. The most prominent of these was the goal of reducing or eliminating US trade deficits under the agreement. Most of the US trade deficit under NAFTA arises from its trade with Mexico, as US trade with Canada is roughly in balance with a slight goods deficit offset by a surplus in service trade. However, all three countries run global current account deficits of a roughly similar amount when measured in relation to their GDPs. In view of this last-mentioned fact, both Canada and Mexico were unsympathetic to any demand from the United States for changes in the agreement aimed at reducing the size of its trade deficit. In any event, a reduction in the size of the US trade deficit within NAFTA would not contribute to a reduction of the global trade deficit of the United States, which is the government's ultimate aim, for the reasons discussed earlier in this chapter. It is also the

case that the regional deficit of the United States reflects to a large extent the nature of the supply chain trade that exists among the three countries, rather than any unfair advantage that the other two countries may have over the United States. Over the long term, the most effective way of reducing the trade deficit that United States maintains vis-a-vis Mexico would be to increase the rate of economic growth of the latter country.

One of the methods the United States insisted on for reducing its trade deficit under the agreement was a revision of the "rules of origin" (ROO) for the production of automobiles within the region. The ROO of NAFTA specify the minimum value of inputs from inside the region that auto producers in any country must include in their manufacturing without limiting the duty-free access of these goods from countries outside the region. Currently the share of regional inputs must be 62.5 percent, and this ratio was increased to 75 percent under the USMCA. In addition, it was specified that 40 percent of the value of regional car production and 45 percent of the value of truck production must occur in plants where the minimum wage is US$16 an hour. This pay level is far in excess of the prevailing wage rates in Mexico and was intended to require American automakers to shift some of their production back to the United States.

Apart from the unfavorable positions in which the new higher requirements insisted on by the United States put Canada and Mexico, it can be argued that it is likely to be counter-productive and damaging to the competitiveness of North American car-makers. Given that the ROO are very costly to administer, any increase in their restrictiveness could encourage regional producers to choose the alternative route of paying relatively low, normal most-favored nation (MFN) tariffs for the component parts they need from countries outside the region, thus defeating the purpose of the ROO and potentially weakening the competitive advantage of these producers vis-à-vis producers from outside the region. It may even encourage foreign manufacturers within the United States to relocate outside, since the US tariffs they would face for their exports would be very low. A move to simplify the ROO is likely to have been more beneficial, of which the easiest approach would have been to convert the NAFTA to a customs union with a common external tariff, rather than a free trade area with different external tariffs by country. But such a move would have defeated the industrial policy objectives currently advocated by the US government, which are to promote an increase in auto-manufacturing production in the United States. If this occurs, however, production costs and retail prices are likely to rise.[29]

It is also a concern that the US government has decided to maintain its new tariffs of 10 percent and 25 percent on global imports of aluminum and steel that it introduced in March 2018 in the case of Canada and Mexico, notwithstanding the renegotiation of NAFTA. This tariff action violates the terms of the agreement and undermines the government's commitment to free trade. Canada has retaliated by introducing similar tariffs and has joined Mexico in a complaint against tariff increases in accordance with NAFTA and WTO rules. The recent changes in trade policy introduced by the US government are discussed further in Chap. 7.

5 Trade Globalization and the US Economy: A Summary Assessment

Trade liberalization has been a key dimension of economic globalization throughout the post-WW2 era and has been a source of significant economic gains for those countries that have been active participants. These gains have been made clear from both theoretical and empirical studies. However, these studies have also revealed that, while the overall gains from trade are positive, there are redistributive effects that disadvantage certain workers in import-competing activities that often require temporary government support, which have become an important topic of political debate in recent years in the United States.

The United States has been a leading country in promoting trade liberalization within the global economy and has played an indispensable role given the size of its economy. This role was clearest during the eight rounds of multilateral trade negotiations via the GATT/WTO system from 1947 to 1994 during which time the United States reduced its average tariff from more than 30 percent to 3–4 percent. Since that time period, there has been a breakdown in multilateral trade talks involving the advanced and developing countries, but trade liberalization within the global economy has continued through bilateral and regional trade agreements. Throughout the post-WW2 era, empirical studies have made clear that the economic benefits from efforts by the United States to expand its trade relations have far exceeded the costs. Nevertheless, there have been three important cases of US trade relations in the last 20 years where critics have challenged the benefits of trade liberalization: one is the opening of trade with China since 2001; the second relates to the TPP; and the third deals with NAFTA.

US trade with China was unique as it intensified at a time period of China's major advance in global trade. This phase of China's development was the result of its entry into the WTO in 2000 and the decision of the United States to grant it permanent normal trade relations (PNTR) status in 2001. China's surge in exports initially represented a "shock" to a number of import-competing industries in the United States and contributed to a sharp decline in manufacturing employment during the 2000–10 period. Recent studies have concluded that this shock during this period caused around one-third of the decline in unemployment, taking account of both the direct and indirect effects of those imports on jobs in manufacturing and affiliated industries. However, when one takes account of the net impact on employment of the growth of global US exports and imports (including trade with China) during this period, the decline in net labor demand falls by half, and when one considers the effect on jobs of trade in goods *and* services, the gains and losses of jobs about even out. This result reflects the fact that many firms were able to take advantage of cheaper inputs from China to expand their high-tech, skill-intensive and export-oriented manufacturing, while increasing the affiliated aspects of their business involving service-oriented activities (e.g., R&D, engineering).

The experience of trade with China has highlighted the role of the US government's trade adjustment assistance in easing the adjustment burden on workers in import-competing industries of China's surge in exports. This experience adversely impacted certain communities and manufacturing businesses in a significant way, yet the assistance in job retraining and employee relocation provided through the government's trade adjustment assistance program was quite minimal and largely ineffective. Active labor market policy is an area where European countries have clearly been more successful than in the United States and can offer lessons for reform.

The Trans-Pacific Partnership represented a regional trade arrangement that the United States negotiated with 11 other countries in the Pacific region during 2010–15. It was signed by all the participating countries in early 2016, but then with the election of a new president, the United States withdrew its participation in early 2017 without any substantive explanation for this course of action. This was a surprising decision given the favorable conditions for US exporters set out in the agreement, many of them at the insistence of the United States. The TPP also would have resulted in an automatic revision and upgrading of NAFTA, as Canada, Mexico and the United States were signatories of the TPP. In addition to the elimination of all tariffs by TPP countries on exports of US manufac-

tured goods, the agreement established important safeguards and minimum standards in the areas of intellectual property, labor rights, environmental protection and state enterprise trading activities. It would have also fostered higher inward and outward foreign direct investment within the region, thus helping to strengthen the United States' strategic role in the region and the international supply chains for American businesses. In early March 2018, the TPP came into effect without the United States as the Comprehensive and Progressive Agreement for the TPP among the other 11 original signatories, with the prospect that other regional countries may join. The United States should reconsider its decision to have withdrawn from the TPP.

NAFTA has been an important trade agreement, as it deals with trade relations with two of the major trade partners of the United States, that is, Canada and Mexico. It was also the first international trade agreement that covered a wide range of trade-related issues beyond the reduction of tariffs involving, for example, sanitary and phytosanitary standards, intellectual property protection and environmental and labor standards, among others. In this respect, it represented an important departure from the previous pattern of multilateral trade liberalization managed under the GATT/WTO system. Economic gains for the United States from NAFTA have been positive, if not substantial. The agreement has also fostered greater efficiency and competitiveness in the US auto industry through the creation of regional supply chains that have lowered its cost of production and made it more competitive in global trade. This restructuring of the auto industry has resulted in the transfer of certain lower-skill jobs from the United States to Mexico and an increase in higher-skill, higher-paying jobs in the United States. Notwithstanding the benefits of NAFTA for its participants, its renegotiation was justified in order to upgrade some of its provisions and include clauses for certain new areas of trade, such as e-commerce and digital trade, that were not active when NAFTA was negotiated in the early 1990s. However, the conclusion of negotiations of the USMCA, which is intended to replace NAFTA, does not represent an unambiguous gain in terms of trade activity because of the US government's insistence on changes in the "rules of origin" for car manufacturing that are more restrictive than under NAFTA.

Notes

1. The primary role of macroeconomic factors in determining trade imbalances has been demonstrated empirically for a broad sample of advanced and emerging market countries in a recent study by the International Monetary Fund (IMF 2019).
2. These conclusions are summarized in Huffbauer and Lu (October 2016) and (May 2017).
3. These results are reported in Acemoglu et al. (2016) and in Feenstra and Sasahara (2017).
4. These features of the government's transfer programs are described in Autor et al. (2016).
5. The results reported in this paragraph are drawn from the study by Feenstra and Sasahara (2017).
6. A major study in this area has been carried out by Magyari (2017). Similar results have been reported by Caliendo et al. (2018).
7. These results were reported in Amiti et al. (2017).
8. This conclusion is based on Kehoe et al. (2018).
9. These issues are examined in a careful study by Houseman (2018).
10. One study that attempts to distinguish between the effects of foreign trade and technological change on manufacturing industries in the United States is Autor et al. (2015).
11. The data on workers covered by the trade adjustment assistance (TAA) during 2003–07 are drawn from a study by Collins (2014).
12. This study was conducted for the TAA by Mathematica Policy Research and Social Policy Research Associates, "Estimated Impacts under the Trade Adjustment Assistance (TAA) Program Under the 2002 Amendments" (2013), which is available at the research division of the US Department of Labor (wdr.doleta.gov/research).
13. These data are drawn from a study by the US government's Council of Economic Advisors, "Active Labor Market Policies: Theory and Evidence for What Works" Council of Economic Advisors Issue Brief (December 2016), which can be accessed at www.whitehouse.gov/cea
14. The coverage and effectiveness of active labor market polices among OECD countries are examined in Nie and Struby (2011) and Martin (2014).
15. The participants in the TPP negotiations were Australia, Canada, Chile, Japan, Korea, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam and the United States.

16. For the identification of the six points of criticism raised during the presidential election campaign, as well as some of the responses, I have relied on Blackwill and Rappleye (2017).
17. The reference to 18,000 tariff items was cited in a White House press release of October 5, 2015; the projected level of exports was drawn from Petri and Plummer (2016).
18. This point is emphasized by Schott (2016).
19. According to the *2018 Economic Report of the President* (US Council of Economic Advisors), recent estimates of the annual cost to American businesses arising from intellectual property theft range from US$227 billion to US$600 billion a year (pp. 251–2).
20. Rodrik (2018) has been a prominent spokesman for this point of view.
21. This conclusion is presented in the report of the US Department of the Treasury Office of International Affairs, "Report to Congress: Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States" (October 2016), which can be accessed at home.treasury.gov
22. The main points raised in this paragraph draw from Blackwill and Rappleye (2017).
23. These results were developed by Petri and Plummer (2016).
24. These provisions have been analyzed by a team of experts from the Peterson Institute for International Economics (2016).
25. The figures on job losses and gains are taken from Gary Huffbauer et al. (2014), page 6.
26. These results are reported in Slaughter (2018).
27. This estimate also appeared in Slaughter (2018).
28. One source for comparing the provisions of the United States, Mexico and Canada Agreement (USMCA) with NAFTA is Huffbauer and Glberman (2018).
29. These and other adverse effects of the replacement of NAFTA with the USMCA agreement are presented in Mary Burfisher et al. (2019).

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CHAPTER 4

The Special Role of the United States in the Global Financial System

The United States has played a dominant, if not a more dominant, role in financial globalization during the post-WW2 era as it has in trade globalization. Rather than being simply a participant in the process of financial globalization, the United States has been the central player within the global financial system, and the US financial sector has been the most important element within that system. Unlike the case of trade globalization where trade volumes expanded throughout the post-WW2 era, the development of financial globalization was relatively subdued during the period of the Bretton Woods System (1945–73), after which it evolved in a much more expansive manner. During the Bretton Woods System of fixed exchange rates and widespread capital controls, international financial transactions by banks and private nonbank institutions were severely restricted. However, with the breakdown of that system, there was a shift to more flexible exchange rate regimes and a relaxation of capital controls among the advanced countries, and financial globalization began to take hold. (Figure 2.4 shows one standard measure for the relaxation of capital controls among the advanced countries and Fig. 2.5 presents one standard measure for the extent of financial globalization as reflected in the value of external assets and liabilities in relation to global GDP, both for the period since 1970. Both measures point to a particularly strong period of financial globalization since the early 1990s.)

The remainder of this chapter focuses on three topics relevant to assessing the role of the United States in financial globalization and its impact

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on the country. The first deals with the benefits and costs of financial globalization; the widespread expansion of financial globalization during the last 40 years or so implies that there must be significant benefits from this phenomenon for its participants, but it is important to recognize its costs as well, in particular in the form of financial crises. The second theme of the chapter examines more closely the role of the United States in financial globalization and the reasons why it has played such a dominant role in this phenomenon. The third topic of the chapter is the global financial crisis of 2008–09 and the role played by the United States in its causes and resolution. This crisis originated in the United States after a period of particularly rapid growth in financial globalization and represented in dramatic form the cost that could accompany an intense period of international financial integration. It is important to understand the flaws that gave rise to the crisis and the measures that were critical to its resolution and the avoidance of a repeat of the Great Depression of the 1930s. This discussion leads naturally to a consideration of critical reforms that could help to maintain global financial stability and minimize the risk of another crisis in the future, which are taken up in Chap. 8.

1 The Benefits and Costs of Financial Globalization

As suggested earlier in Chap. 2, there are a number of benefits that economists and policymakers have identified for countries in moving toward capital account openness that have commonly been cited in the case for capital account liberalization. As in the case of trade liberalization, these benefits have been judged to significantly outweigh the costs, which only recently in the light of experience have been given more prominence.

At a basic level, international financial transactions are necessary for the conduct of international trade, as regards the disposition of export receipts, the financing of imports and the conduct of spot and forward exchange rate conversions when traders use currencies in trade different from their home currency. The development of international banking relationships between one country and another or the establishment of branch banking operations in one country by a large international bank in another may also facilitate the development and expansion of trade between those countries where little existed before these changes occurred. Similarly, the placement of foreign direct investment in one country by a private company in another is very likely to promote trade between those two countries.

Apart from its connection with trade, financial globalization or international financial integration is viewed as having a number of other benefits. Cross-border financial ties can protect economic stability by promoting international risk-sharing and providing insurance against external shocks. Financial openness can help to diversify the sources of consumer goods and income generation of economic agents in different countries and can help to reduce the volatility of consumption growth in the face of domestic or foreign shocks to production. Over time, banking integration will lead to more synchronized business cycles among closely linked countries in terms of growth in GDP and employment. Similarly, international financial integration by means of foreign direct investment can help countries to diversify their economic activity, thus creating greater allocative efficiency and improving macroeconomic stability. In addition, cross-border diversification of large banks can improve the soundness of national banking systems by making bank failures less likely, while the expansion of the interbank market can provide banks with an efficient risk-sharing mechanism. International financial integration will also allow businesses in one country more easily to identify and diversify their investments in worthwhile projects abroad. With an improvement in resource allocation, the possibility of a crisis from the mispricing of risks is reduced.

Undoubtedly, all the factors identified above have been at play in the growth of foreign direct investment, international banking operations and portfolio investment since the end of the 1970s, especially among the advanced countries where financial globalization has expanded so sharply. However, it is important to be clear as to the potential costs of financial globalization as reflected, for example, in the macroeconomic dislocations of the global financial crisis of 2008–09. That crisis reflected in dramatic form the failures that can arise in international financial regulation, and from the mispricing of risk in the widespread use of new financial instruments, as well as fraud and abuse in basic banking and financial transactions. These are examined in more detail in the last section of this chapter.

Other costs of financial liberalization and capital account openness have been identified to the effect that these factors have not always been associated with higher rates of investment and growth in capital-deficient countries. In some cases, a country has embarked on capital account liberalization prematurely in the sense that it had not established a sound banking system with a strong regulatory environment that could manage capital inflows and outflows and their potential impact on bank credit operations. In other cases, countries have liberalized controls on short-term capital

and portfolio flows prior to the liberalization of long-term capital and foreign direct investment, thus exposing their economies to the more volatile elements of international finance before they had the policy and institutional capabilities to manage those flows.

In addition, capital flows from advanced to emerging market economies have often moved in surges in response to policy actions in the former countries which have created imbalances and conditions in the latter countries giving rise to financial or economic crises due to institutional or market deficiencies in those countries. This phenomenon has become more evident with the expansion in financial globalization since the mid-1990s and the increased responsiveness of private investors and financial agents to changes in the interest rate policy of the US Federal Reserve. An increase in short-term Federal Reserve policy rates may signal a decline in financial asset prices or a rise in interest rates at other maturities along the yield curve and may attract international capital flows from other countries to take advantage of those higher yields with possibly destabilizing effects on those countries. By contrast, a relaxation of US monetary policy and a lowering of short-term policy rates may induce an outflow of these funds to take advantage of higher yields in other countries.

These shifts can have dramatic effects as, for example, in mid-2013, during what has come to be called the “taper tantrum”, as noted in Chap. 2. At that time, the Federal Reserve signaled its intention to moderate in the coming months its policy of “quantitative easing” by which it purchased government bonds circulating in the market in an effort to lower medium-to-long-term interest rates as an inducement to private spending to support the economic recovery from the global financial crisis. Simply the announcement of this policy intention came as a surprise to market participants and induced a surge in capital outflows from other countries to take advantage of an expected change in the interest rate environment in the United States. This experience only occurred because of the central importance of US financial markets in the global financial system and the credibility and influence of the Federal Reserve within that system. Because of its dominance in the system, the United States is clearly the key global driver of changes in asset prices, risk premia and other financial variables, which implies that in an age of financial globalization developments in the US economy have a much greater importance for other countries than suggested simply by considering the weight of its foreign trade in international commerce.

As global financial integration has expanded since the turn of the century, there has been some evidence of financial spillovers from large emerging market economies on the exchange rates and financial markets of the advanced countries. China is one example of this phenomenon, notwithstanding the significant controls it continues to administer on outward capital movements. Its outward foreign direct investment can have significant impacts on the financial markets of other East Asian countries where it has strong commercial relations. In the case of the United States, one possible channel of China's influence on financial markets arises from its extensive holdings of US government debt as part of its official reserves. China accounts for around 30 percent of global official reserves, most of which take the form of US government securities. Its policy of reserve accumulation or exchange rate management has the potential to affect the price or yields on US government and other bonds. Some analysts have made the case that China's substantial reserve accumulation during 2004–07 contributed to keeping yields on US government debt lower than otherwise would have been the case during that period of time.[1] More generally, it has been shown that a reduction in foreign official reserve holdings of US treasury debt by US$100 billion would raise yields on that debt by 1.5–1.8 basis points.[2]

In light of the issues arising from financial spillover effects, economists have called attention to a financial trilemma, which stipulates that it is not possible for a country to maintain national financial stability, financial integration and national control of financial policies at the same time; all three of these objectives are not mutually compatible. In an age of financial globalization, in order to maintain national financial stability and financial integration, there must then be closer coordination of national financial policies, if not some form of international oversight. As financial integration has progressed, the growing scope of financial markets and the national scope of financial regulatory practices have become increasingly incompatible. The Basel Committee on Banking Supervision, which is discussed in the last section of this chapter, has represented one informal effort of the advanced countries to foster closer coordination of national regulatory policies, but the global financial crisis demonstrated that this has clearly not been sufficient.[3]

2 The Role of the United States Within the Global Financial System

The United States has derived significant benefits from financial globalization because of the central role that it has played in the global financial system. At one level this central role arises from the fact that the United States has the largest economy in the global system, the largest financial markets within that system and the largest stocks of foreign assets and liabilities among the advanced countries. At another level, the central role of the United States in the global financial system is reflected in the fact that the US dollar is the most important currency within the global economy for trade and financial transactions, and US government debt is the most important form of safe asset that provides a reliable store of value for international investors and a critical benchmark for a variety of financial operations. All five of the descriptive characteristics noted above are intimately related and have reinforced the central role the United States has played in financial globalization. In addition, perhaps more than in the case of trade, the growth of the domestic financial system within the United States and financial globalization have been mutually reinforcing. The soundness of the American financial system has attracted capital inflows from abroad as financial globalization has expanded because of the breadth and depth of its financial markets, whereas the US financial system has expanded in response to the external demand for its services and the relative safety of its investment outlets.

The pre-eminent role that the US dollar plays in the international financial system and the role that the US government and some forms of private debt play as global safe assets are integral to the dominant position that the United States has maintained in financial globalization. As noted in earlier chapters, the dominant role of the United States in the international economic and financial system was institutionalized with the creation of the Bretton Woods System under which the US dollar was pegged to gold as the anchor of the system, while other currencies were pegged on an adjustable basis to the US dollar. In one sense, this arrangement simply reflected the fact that the United States was the largest holder of gold reserves, but in a more important sense it reflected that the United States was the largest economy in the system with less war-time destruction than any other major economy. Over time, the central role of the US dollar has been maintained even though other currencies such as the UK pound, the euro and the Japanese yen have also served as reserve currencies. Today, around 120

countries use the US dollar as an anchor or reference currency; this is more than double the number of countries that use the euro, which is the next most commonly used anchor currency.[4] In addition, a further 13 countries use US dollars as their domestic currency or maintain a currency board in which a local currency is pegged to the US dollar on a permanent basis at a fixed exchange rate. As one example of the latter arrangement, Panama has a domestic currency (the balboa) that has been pegged to the dollar at a 1 for 1 conversion rate since 1904; the number of balboas in circulation is determined by the inflows and outflows of US dollars, which also circulate as legal tender. The National Bank of Panama and other banks only issue balboas in response to the surrender of US dollars by local residents or by foreigners visiting or doing business in the country.

On the basis of the currency arrangements just described, it is possible to calculate a dollar currency zone that represents close to 60 percent of the global economy and is far greater than the share of US GDP in the global economy (currently around 24 percent).[5] The euro zone, the next largest currency zone, is less than half that of the US dollar, even though its GDP is roughly the same share of global GDP as that of the United States. The dollar currency zone comprises countries that either peg their currencies to the US dollar or maintain managed flexible exchange rates that are closely linked to movements in the US dollar. Within this zone, the United States is likely to be the largest trading partner for participating countries, while most trade is denominated in US dollars. Similarly, foreign debt transactions of these countries are predominantly denominated in US dollars, while most of their official foreign reserves are held in the form of US public debt.

In other respects, the US dollar serves as a unique global monetary unit for the services it provides as an international medium of exchange, store of value and unit of account. The United States derives significant benefits from these services. For example, around 60 percent of all banknotes issued by the Federal Reserve circulate overseas (nearly 75 percent in the case of US$100 notes).[6] Based on this arrangement, the United States derives a significant amount of what economists call "seigniorage" revenue. Seigniorage can be measured as the savings in debt-service costs that accrue to a government from being able to issue interest-free debt (i.e., currency) in exchange for foreign goods and services compared with the cost of issuing treasury bills of an equivalent amount. For the United States, this savings has amounted to around US$30 billion a year in recent years.[7]

As a unit of account, it is clear that the US dollar is the most heavily traded currency in foreign exchange markets and was represented on one side of the trade in 85–90 percent of all foreign exchange transactions between 1999 and 2016, according to data compiled by the Bank for International Settlements (BIS); the euro was the next most traded currency in only one-third of these transactions. In addition, foreign exchange transactions in the United States account for nearly 45 percent of global foreign exchange market turnover and a similar share of global cross-border payments. In the case of trade invoicing, around 60 percent of all import transactions are invoiced in US dollars, even though the United States accounts for only 12–13 percent of global import trade. In the case of Japan, for example, as much as 70 percent of its imports are invoiced in dollars, even though the United States accounts for only 13 percent of its imports.[8] A similar high proportion (i.e., 70 percent) of cross-border corporate and sovereign bonds and syndicated bank loans are also denominated in US dollars.[9]

The dominant role that the US dollar plays in foreign exchange and trade transactions reflects the “positive network externalities” for traders in using the same currency for comparing prices for traded goods or the value of currencies in foreign exchange markets. These two facts about foreign exchange and trade transactions have also implied significant benefits and savings for US individuals and businesses in the ease and cost of conducting international trade and financial operations using their own currency and having less exposure to exchange rate risk. In addition, the dominant role of the US dollar as a unit of account in trade and exchange transactions helps explain its major role as a unit of account for foreign currency funding and claims of non-US banks. According to BIS data, 60 percent of the foreign currency liabilities and claims of these banks are denominated in US dollars. When more internationally traded goods are denominated in US dollars, there will be a greater demand for dollar deposits or for financial claims that pay off a guaranteed amount in dollar terms.[10] In this way, there is mutual interdependence between dollar dominance in trade and financial transactions.

As a store of value, it is important to recognize that nearly two-thirds of all official foreign reserves held by countries other than the United States are invested in dollar-denominated assets. Given the primary reserve currency role of the US dollar throughout the post-WW2 era, there has always been a large demand on the part of foreign governments and central banks for US treasury notes as an investment for their reserve hold-

ings. Under these conditions, the US government has effectively been relieved of any constraint on its borrowing and has benefitted from a significantly lower cost for the financing of its budgetary operations than it would face in the absence of this arrangement. As a result, the US government benefits from another form of seigniorage associated with this savings in interest expenses. This unique role of the US dollar in the international monetary system has been characterized as an "exorbitant privilege", as the United States has not been subject to the same constraints or restrictions as other countries in the creation of its government debt.[11]

This privilege initially was institutionalized with the Bretton Woods Agreement under which the US dollar was established as the anchor of the international monetary system. In this system of fixed exchange rates, foreign central banks had a growing demand for foreign reserves to cover international payment imbalances that they satisfied by investing in US government debt. This system was sustainable as long as the United States did not issue more government debt than it could potentially redeem for gold. By the late 1960s, however, the sustainability of the system began to be questioned because the stock of US government debt held abroad by foreign central banks had increased to a level that was well in excess of the stock of its gold reserves, and in 1971 the United States suspended any conversion of that debt into gold, faced with a request for conversion by certain European central banks. By 1973, a decentralized system of fixed and floating exchange rates began to operate, in which the US dollar continued to serve as the anchor currency for most countries but without any formal link to gold.[12]

Notwithstanding the collapse of the Bretton Woods System, US government debt has continued to be seen as a preferred form of global safe asset by most countries because of its unique characteristics of stability, liquidity and low risk of default, along with its continued wide acceptance by international traders, investors and governments. Over time, this demand for US government debt securities as a global safe asset drew foreign investors and other institutions to other investment assets offered in the US financial markets, as financial liberalization began to take hold after the end of the third quarter of the last century. As a result, the share of dollar-denominated bonds in international portfolios has continued to be larger than for any other currency; around 50 percent of all international debt securities are denominated in US dollars. Most debt issued by emerging market and developing countries has traditionally been dollar based.

Denominating bonds in US dollars has created another positive network externality in that it makes it easier for traders and investors to compare the yields on bonds offered by different international borrowers, while facilitating the issue of debt by new borrowers on international financial markets.

The special role of the US dollar in international financial markets has in fact been strengthened since the global financial crisis. In the five-year period leading up to the crisis, roughly half of all cross-border holdings of corporate debt were denominated in US dollars, while around 35 percent was denominated in euros. Since the crisis, however, the share in dollars has risen to 70 percent by 2015, while that in euros has fallen to 20 percent.[13] The fall in preference for the euro would seem to reflect the spillover effects from its continuing debt and bank problems since the crisis. This development further exhibits the dominance of the US dollar as an international currency and the advantages (or "exorbitant privilege") this role creates for domestic American firms in accessing international markets for their financial needs. It has been estimated that the benefit which the United States receives from the use of the US dollar as a reserve currency and the demand for dollar-denominated securities amounts to around 2.5–3 percent of its GDP on an annual basis.[14]

These data on the dominance of the US dollar in the currency denomination of foreign debt are consistent with the major role played by US debt securities as global safe assets. A safe asset is any debt asset that promises a fixed amount of money in the future with little or no default risk and is easily tradable. It is natural that global safe assets would be associated with the country of the dominant currency and largest financial markets within the international financial system, as long as its government has a track record of responsible fiscal management. With these characteristics, a global safe asset provides a reliable store of value for international investors and can serve as collateral for financial transactions. It can also be used to satisfy prudential requirements (e.g., liquidity requirements for banks or insurance companies) and serve as a pricing benchmark for other forms of debt. Traditionally, US government treasury debt has been viewed as a primary form of global safe asset, as reflected, for example, in the demand by other countries for an investment outlet for their official reserves noted above. Given the preeminent role that US treasury debt has played as a global safe asset, roughly half of the outstanding stock of this debt has been held by foreign entities.[15] But over time, with the advance of financial

globalization and the diversification of financial markets, other forms of debt have filled the role of global safe assets as well.

The demand for safe assets at the global level has a clear parallel at the national level, where it is possible to see a very stable relationship between those public and private liabilities that serve as safe assets and the total assets in the financial system. In the United States, the ratio of safe assets to total assets has fluctuated at an average of around 32 percent during 1952–2010. Remarkably, a roughly similar share has been estimated for a number of other advanced countries. At the official level, in addition to government debt, highly rated US agency debt (such as Fannie Mae or Ginnie Mae bonds) and municipal debt obligations have been considered safe assets, while at the private level, bank deposits, money-market shares, highly rated commercial paper and AAA-rated securitized or corporate debt have played this role. At the beginning of the period noted above, public and private forms of debt (mainly US treasury debt and bank deposits) accounted for roughly equal shares of the measured safe assets in the United States. But over time, with the diversification of private financial markets, the share of private forms of safe assets gradually increased to nearly 70 percent.[16] As the share of private sector safe assets increased, so too did the variety of private debt instruments that were viewed as safe assets. In the early 1950s, bank deposits represented 80 percent of the private sector liabilities that were generally considered to be safe assets by investors and other agents, but by 2010, however, this share declined to around 30 percent with the growth of money-market funds and AAA-rated corporate and securitized debt. Perhaps the most significant example of the latter group (which played an important role in the global financial crisis, as explained below) were AAA-rated asset-backed securities in the form of mortgage-backed securities (MBS) or collateralized debt obligations (CDOs). During the immediate run-up to the crisis (2003–07), roughly half of the issues of these debt instruments were sold to non-US residents, reflecting the large global demand for safe assets during an intense period of financial globalization. These financial instruments are discussed in more detail in the next section of this chapter.

Given the dominant roles played by the US dollar in international currency and trade transactions and by public and private debt of US residents as global safe assets, it should come as no surprise that the United States has been a major force in the growth of financial globalization. Economists have used a variety of indicators to measure the growth and extent of financial globalization, and the United States has been the lead-

ing country in each of these. One of these measures is the change over time in the extent of capital account openness according to a de jure measure of capital account restrictions as reported by the IMF for most of its members. Another is the growth in the stocks of foreign assets and liabilities by advanced countries as these restrictions have been eliminated. A third indicator is the size of global current account imbalances that give an indication of the magnitude of international capital flows that are required between surplus and deficit countries in order for those imbalances to be sustained. In the period leading up to the global financial crisis, there was a significant expansion in financial globalization as measured by each of these indicators.

According to one widely used measure of de jure capital account openness (see the Chinn-Ito index in Fig. 2.4), there has been a clear relaxation of capital account restrictions, especially among the advanced countries, since the end of the Bretton Woods System in the early 1970s. At that time, the United States was the only country with little or no controls on capital inflows and outflows, but by the early years of the current century 24 other advanced countries had moved to a similar position. Progress among the rest of the global community has been much slower, which is not surprising given the pre-requisites for capital account liberalization in terms of a strengthening of domestic financial systems and their regulatory framework and the time required for these pre-requisites to be established.

During this modern period of capital account liberalization, the United States has set the standard for managing the so-called monetary trilemma (as distinct from the financial trilemma noted earlier), which posits that it is impossible to maintain a fixed exchange rate, capital account liberalization and an independent monetary policy at the same time; one of these objectives must be sacrificed. For the United States, it was clear that a floating exchange rate would replace a fixed exchange rate so that the other two features of the trilemma could be maintained. Other advanced countries have generally moved to a similar position since the end of the Bretton Woods System. By contrast, during the first era of financial globalization in the late nineteenth and early twentieth centuries, it was an independent monetary policy that was sacrificed in order to allow for a fixed exchange rate under the gold standard and the freedom of capital movements.

Throughout the post-WW2 era, the United States has also been the dominant country in terms of its external asset and liability positions, both in absolute terms and as a ratio to GDP (see Fig. 2.5). In recent years, the United States has accounted for around one-quarter of the external wealth

position of the advanced countries. In absolute values, as noted in Chap. 2, the external asset and liability position of the United States is valued at more than double that of each of the next two largest countries (Luxembourg and the United Kingdom), even though they are both major international financial centers.[17] These data generally reflect the overwhelming size of capital market activity in the United States. In the case of equity markets, for example, the market capitalization of stock markets in the United States represents around 50 percent of the capitalization of all the advanced and emerging market countries' stock markets in the global economy.[18]

What is unique among the advanced countries is the extent to which the net foreign asset position of the United States has turned negative since the mid-1980s and increased over time since then. Normally for a large, sophisticated economy such as the United States, one might expect that it would generate a large export surplus in its external current account reflecting global demand for its advanced manufactured goods and professional services, which would be offset by large capital outflows to assist in financing the purchase of those goods by other countries. Such has been the pattern exhibited by other advanced industrial countries such as Germany and Japan. It was also the pattern exhibited by Great Britain during its time as the lead economy in the global system during the second half of the nineteenth century. However, as noted in Chap. 2, the United States has demonstrated exactly the reverse pattern, especially since the early 1980s. As in the case of Germany and Japan, the United States has been a source of long-term capital outflows to foreign countries in the form of foreign direct investment or bank lending. This function was particularly important in the first half of the post-war period when there were fewer other sources of foreign borrowing for foreign countries. However, what was unique in the case of the United States were the capital inflows for the purchase of US government debt as global safe assets by other countries noted earlier. Over time, these inflows have exceeded long-term capital outflows, yielding a capital account surplus for the United States. This sustained surplus of net capital inflows has offset a sustained current account deficit, so that one can see a clear parallel between the growth in the net foreign liability position of the United States and the cumulative sum of its external current account deficits (see Fig. 4.1a, b).

During 2001–2011, the net foreign liability position of the United States averaged around 20 percent of GDP, which was reflected in a persistent current account (and trade) deficit over time. Remarkably, however,

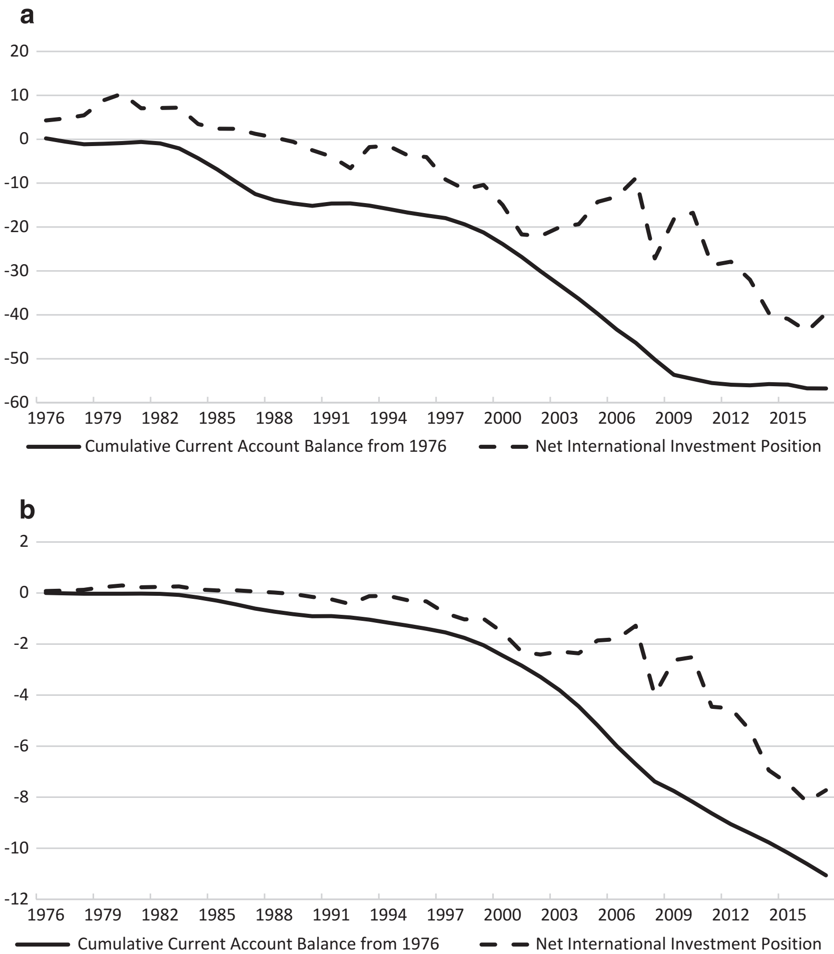

Fig. 4.1 (**a**) Cumulative external imbalances as a ratio to GDP for the United States (in percent; 1976–2017). (Source: International Monetary Fund, International Financial Statistics and BOP/IIP Statistics). (**b**) Cumulative external imbalances for the United States in trillions of dollars (1976–2017). (Source: International Monetary Fund, International Financial Statistics and BOP/IIP Statistics)

notwithstanding this net liability position, the United States has sustained a significant net inflow of interest earnings as the yield on its external assets exceeded the payments on its external liabilities. The relatively low cost of these liabilities reflects the unique role that short-to-medium-term US government debt plays as a global safe asset, whereas the relatively high yield on its assets reflects the riskier quality of medium-to-long-term investments abroad by private and public entities of the United States. As noted in Chap. 2, this unique pattern of capital inflows and outflows characterized the United States as "global banker to the world" throughout the post-WW2 era.[19] Like a commercial bank, the United States borrows from foreign entities at the short-to-medium term with the sale of US treasury debt (instead of bank deposits) and in effect intermediates those funds by lending or investing at the medium-to-long term to other foreign entities throughout the world. On a cumulative basis, these flow transactions show up as an increase in the foreign asset and liability position of the United States in the External Wealth of Nations Database.

The borrowing and lending operations that take place within the financial account of the United States are entirely separate in their origin but are connected, as with banking operations, in the sense that the proceeds from the foreign sale of treasury debt on the liability side are monetized by means of domestic budgetary or banking transactions, which in turn provide the liquidity for the financing of foreign bank credit operations on the asset side. Banks may lend directly abroad to foreign companies or branches of domestic corporations, or they may lend to support domestic business operations that may result in foreign direct investment abroad. As noted in Chap. 2 economists have suggested that the role of the United States as an international financial intermediary has shifted from one of "banker to the world" to that of global "venture capitalist" in more recent times. With the increase in financial integration, one can see in the data that the United States has become an increasingly more leveraged intermediary whereby it continues to issue short-to-medium-term fixed income liabilities in response to foreign demand, but it has been investing more of these proceeds than in the past in more risky equity and foreign direct investment operations.[20] As a result, this shift in the nature of the United States' financial intermediary role has increased the net interest differential on these foreign asset and liability operations in its favor. In recent years, the net income in the US external current account for financial services has amounted to around US$75–80 billion, which is one of the largest sources of net income in the overall services account surplus of the United States

amounting to around US$240 billion. Without this source of service income and the surplus that the United States maintains in its net exports of services, the deficit in its trade account would have to be smaller in order to stay within the boundary of its financial account surplus. This source of income is one additional example of the particular advantages and benefits that the United States derives from its unique and special role (and "exorbitant privilege") in financial globalization.

One can ask whether there is a limit to the extent to which the United States can continue to increase its net financial liability position abroad without risking a loss of confidence among foreign governments and investors. Such a risk depends upon essentially two factors: one is the continued demand for global safe assets in the form of US government debt and the other is the sustainability of the US debt position and the soundness of its underlying fiscal situation. In the wake of the global financial crisis, there has been a decline in the stock of global safe assets, if for no other reason than a large component of private American debt that was held abroad in the form of mortgage-backed securities has been canceled or withdrawn from the market because of default. Thus, it would appear that the demand for US government debt from abroad should continue. At the same time, however, the stock of US government debt has increased sharply because of the large amounts of financial support that were required from the US government to prevent a collapse of the domestic financial system and limit the cost of economic recession that followed the outbreak of the global financial crisis in 2008. While this extraordinary fiscal action was limited in time and was followed by a period of years during which the size of government budget deficits was reduced, recent budgetary decisions under a new presidential administration that took office in early 2017 have reversed this trajectory and point to a future in which the ratio of government debt to GDP is expected to increase to levels that have not been registered before. Under this scenario, it is very likely that a major fiscal reform in the United States will be required within the next few years in order to prevent a public debt crisis and a global financial crisis at the same time. This issue is further discussed in Chap. 7.

With the third measure of financial globalization related to global imbalances, one can see additional evidence of a major expansion in global financial integration in the period leading up to the global financial crisis in which the United States again had a major role to play. Global imbalances refer to the aggregate sum of external current account surpluses by certain regions or groups of countries and the aggregate sum of external current

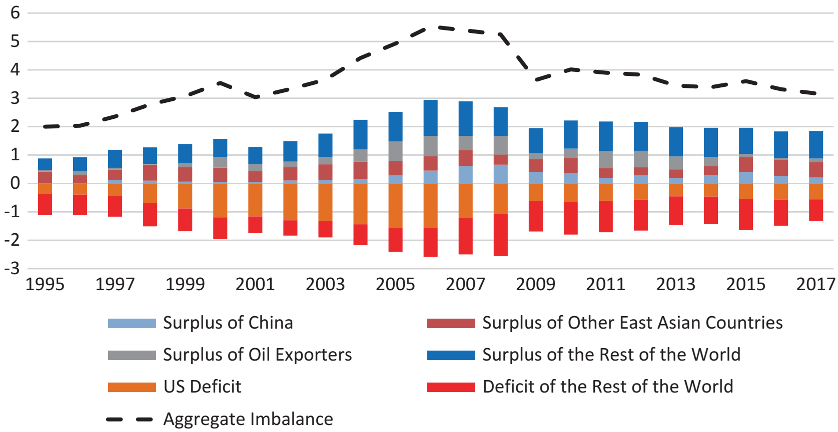

Fig. 4.2 Global imbalances as a percentage of world GDP. (Source: World Economic Outlook, October 2018, International Monetary Fund)

account deficits by other countries or geographic regions. In principle, these two sums should be offsetting (except for some relatively small amount of statistical discrepancy or mismeasurement). What allows these imbalances to persist is the net flow of capital from the surplus countries to the deficit countries, which provides one measure of the degree to which financial integration has increased, especially if the size of these imbalances has expanded over time. In Fig. 4.2, it is evident that the sum of global imbalances from 1970 to the late 1990s generally fluctuated within the range of 2–3 percent of global GDP**.** However, after the latter date, the size of the global imbalances expanded sharply and reached a value equivalent to nearly 6 percent of GDP, just prior to the outbreak of the global financial crisis in 2008. This expansion corroborates a similar view of an intensified period of financial integration that can be found in the External Wealth of Nations Database that is the basis for Fig. 4.1. These two measures of financial globalization are obviously connected in that persistent current account deficits (a flow measure) will be reflected by a decrease in a country's net foreign assets (a stock measure) or an increase in its net foreign liabilities within its net international investment position.

The United States played a major role in the development of global imbalances in that its external current account deficits were the main components of these imbalances on the negative side. During the period pre-

ceding the global financial crisis, the United States absorbed more than two-thirds of the global current account surplus or net savings of the rest of the world. Theoretically, it should not be possible for a country to run current account deficits for an indefinite period of time, as there would be some limit to the extent to which that country could secure balance of payments financing for its deficit. Normally some contractionary domestic monetary and fiscal adjustment would have occurred or the value of its currency would have depreciated sufficiently as a result of these deficits in order to move the country closer to current account equilibrium. The United States escaped these adjustments because of its special role in the international monetary system, as discussed earlier, and the demand for its government debt as a global safe asset. In addition, the United States government does not control the value of the US dollar to any significant extent because of its major use by other countries in trade and financial transactions. As a result, the value of the dollar has fluctuated in cycles around a trend line that shows a modest tendency toward appreciation (see Fig. 2.3). This tendency has been one factor contributing to the persistent current account deficits of the United States, along with the strong inflows of foreign capital year after year to purchase short-to-medium government debt.

China and other East Asian nations, as well as some of the oil exporters such as Saudi Arabia, have been the major sources of global imbalances on the positive side. China, in particular, was the major contributor to the build-up of global current account surpluses in the period leading up to the global financial crisis as a result of its major export push for economic development. (The strong link between China's exports of manufactured goods to the United States and their impact on the latter's import-competing industries was discussed in Chap. 3.) This pattern of development followed a similar export drive by Japan and other East Asian countries in earlier decades. The size of the current account surpluses generated by China was truly dramatic and suggests that currency manipulation took place in order to maintain an undervaluation of the renminbi as a support for its export drive. This behavior is corroborated by the sustained action of the People's Bank of China (PBOC) in the first half of the last decade in accumulating foreign exchange reserves in annual amounts similar to the size of its current account surplus. At the same time, China maintained significant controls on outward capital movements that could

have absorbed some of these inflows. In this respect, China followed a different response to the monetary trilemma than the United States discussed earlier in that it maintained a fixed exchange rate and capital controls in order to pursue an independent monetary policy. During 2001–07, the net official international reserves of the PBOC increased from US$216 billion to US$1530 billion, which compares with a cumulative current account surplus of US$882 billion over the same time period. It is noteworthy that most of these foreign reserves were invested in US treasury debt, thus completing the cycle of China's exports, an accumulation of official foreign reserves, the investment of those reserves in global safe assets of the United States and the use of that liquidity for credit expansion and imports by the same country.[21] Here again, as in the case of the United States noted earlier, an adjustment process in China's balance of payments did not take place in that some degree of currency appreciation and/or fiscal and monetary policy expansion would have been appropriate to moderate the growth of exports and promote an increase in imports in order to limit the growth of global imbalances.

Other East Asian countries also pursued programs to promote exports at this time with the express purpose of accumulating foreign exchange reserves. In their case, the accumulation of official reserves was motivated by the desire to have sufficient reserves to resist a speculative attack against their currencies in the wake of a series of exchange rate crises that a number of emerging market economies suffered during the 1990s. To a significant extent, government officials in these countries believed that an accumulation of global safe assets would allow them to avoid the necessity of relying on the assistance of the International Monetary Fund (IMF) in the event of such an attack, which would be subject to a number of macroeconomic policy conditions and requirements. In addition, many of these governments did not believe that the existing emergency liquidity facilities at the IMF were sufficiently flexible enough in terms of the pre-conditions that were required for countries to be authorized on a contingency basis to have access at some point in the future should a crisis situation arise. In this respect, many of the countries on the surplus side of payment imbalances engaged in a form of "self-insurance", as they did not feel that the international lender-of-last-resort arrangements embodied in the IMF were adequate. This issue is discussed further in Chap. 8.

3 The Global Financial Crisis

The global financial crisis of 2008–09 has been the most important event in the age of financial globalization and needs to be understood in order to be able to make a sober assessment of the benefits and costs of global financial integration. It is also highly relevant to this chapter as the United States was the major player as regards both its evolution and its resolution. The crisis originated within the United States as the result of a "bubble" phenomenon in its housing market, but the events and factors associated with this phenomenon and its aftermath had global implications because of the dense international network of financial links among the United States and other advanced countries that had developed during a period of hyper-financial globalization. This period essentially covers the decade or so that preceded the crisis as discussed in the previous section of this chapter.

The analysis that follows covers four topical areas that one must consider in trying to understand the causes and evolution of the crisis and its links with financial globalization. The recovery from the crisis in which the United States also played a major role goes beyond the scope of this book and is not addressed.[22] Initially, the discussion that follows focuses on how the global financial crisis was similar to other financial crises. This introduction is followed by an examination of the regulatory environment in which the crisis developed and its flaws. The discussion then considers how the monitoring and self-regulatory arrangements of the private sector that normally protect the integrity of business operations broke down and failed to do their job. Finally, the reasons for why a domestic financial crisis in the United States became a global financial crisis are identified. These topics have been the subject of many books and articles since the outbreak of the crisis. Thus, only a brief summary and highlights of key points are attempted here.

Financial crises have been fairly frequent occurrences during the age of financial globalization. In a landmark study of financial crises since the early 1970s, Carmen Reinhart and Ken Rogoff identified 58 cases of banking crises that have occurred within advanced and emerging market countries, apart from currency or public debt crises.[23] While each of these three kinds of crises have different origins, they may be interrelated. For example, if a country experienced a currency crisis or collapse of a fixed exchange rate because of a speculative attack following a period of foreign reserve losses and balance of payments deficits, this development could have negative repercussions on the banking system. Those banks with significant

foreign loans on the liability side of their balance sheet would find that the local currency value of these loans had substantially increased by an amount that could threaten their solvency. If this effect was particularly strong and common within the banking system or there was uncertainty about the exposure of the banking system, a panic by depositors could take place and a crisis could develop. Similarly, if the banks were heavy investors in government debt in part to satisfy their liquidity requirements and the government had to suspend service on its debt because of poor fiscal policy and debt management, the banks would face significant losses and a write-down of their capital position. If these losses were widespread, depositor panic might set in and a banking crisis could develop.

When a financial or banking crisis develops independently, it typically involves a surge in bank credit operations related to the financing of speculative activity, or a bubble phenomenon, associated with either housing or stock market activity in an environment of weak or limited financial regulation. In the period leading up the global financial crisis, it was the housing market that was the focus of speculative activity in the United States and specifically that portion of the market dealing with low-income housing finance related to so-called sub-prime or Alt-A mortgages. The seven years prior to the global financial crisis covered a period of particularly robust growth in household mortgage debt (including that for low-income families), with the stock rising from US$3.9 trillion in 2000 to US$9.1 trillion in 2007.[24] Roughly half of the latter stock was associated with low-income housing finance.

Most of the financing for low-income housing was managed by financial institutions outside the traditional banking system in what has been referred to as the "shadow" banking system. This system of financial institutions fulfills some of the same intermediary functions of the traditional banking system, but it operates on a parallel basis to that system outside the regulatory framework and safety net structure that applies to traditional banks. The difference in the degree of regulation applied to the traditional and shadow banks was justified on the basis that the former group was mainly dependent on private sector deposits, a major form of safe assets for families and individuals, whereas the latter relied on funding in the wholesale or capital markets frequented by private investment companies, institutional lenders and business corporations. The "shadow" banks were a heterogeneous group of financial institutions by comparison with the traditional banking system and included, for example, mortgage originators, investment banks, money-market funds, securities broker-dealers and special investment/special purpose

vehicles (SIVs/SPVs) that were often off-balance sheet operations of large universal banks. The shadow banking sector expanded rapidly in the decade or so prior to the global financial system and by mid-2007 its gross liabilities had increased to a level more than 50 percent larger than the liabilities held within the traditional banking system.[25]

The years leading up to the global financial crisis were generally a period of relaxed regulatory oversight, not only for shadow banks but also for traditional banks. The United States had experienced many years of stable macroeconomic performance and the regulatory authorities had developed a benign attitude toward the risks involved in banking operations. They also adopted a more confident view about the capabilities of financial institutions to operate on a prudent basis without intensive regulatory supervision by relying on sound internal risk assessments and full transparency in the reporting of their balance sheet exposures to enable thorough risk analysis by their counter-parties. This more relaxed attitude toward official supervision was obviously encouraged by the banks and was reflected in a number of decisions for which they had been strong advocates. One of these was the repeal of the Glass-Steagall legislation in 1999 that had required a separation of commercial and investment banking operations in the same institution. This repeal was justified at the time on the grounds that major financial institutions in the United States needed to become universal banks involved not only in banking, but also in investment and insurance activities, so that they could compete more effectively with similarly structured financial institutions in Europe and Japan. However, this change greatly increased the risk potential of banking operations in the United States, with the full protection of the Federal Deposit Insurance Corporation still in place.

A second important relaxation of the regulatory environment involved the Basel Banking Accord that established basic capital requirements for banks among the advanced countries. When this Accord was first adopted in 1988, it established a minimum capital-asset requirement of 8 percent for banks that varied according to a common set of risk weights for different classes of assets. These risk weights were based on the risk assessments set by the major credit-rating agencies, such as Standard and Poor's. Loans to businesses had a risk weight of 100 percent and therefore had to be matched by the full capital-asset requirement; mortgage loans had a 50 percent risk weight and holdings of official debt of the United States or another OECD country had a zero weight and therefore no capital requirement. In the early 2000s, the Basel Accord was revised to establish

a dual system involving a more diversified and sophisticated structure of asset risk weights than in the original Accord; in addition, for the larger banks, an alternative arrangement was introduced whereby they could essentially establish their own capital requirement based on each bank's internal risk assessment, subject to supervisory review. This revised system was adopted in 2004 and had been introduced in the largest European and American banks just prior to the outbreak of the crisis. The Securities and Exchange Commission (SEC) essentially adopted the same system of setting capital requirements on the basis of internal risk assessments for investment banks but with little or no supervisory review.

This revision of the Basel Capital Accord generally resulted in a significant reduction in the effective capital-asset ratio for commercial and investment banks in the EU and the United States and a higher degree of leverage, which in some cases exceeded 30 to 1. Such a ratio, which was generally higher in the case of the "shadow" banking system, increased significantly the fragility of the financial system in the United States in the years prior to the financial crisis. For example, under mark-to-market accounting and a leverage ratio of 30 to 1, any domestic shock or economic downturn that resulted in a 3 percent decline in the value of a financial institution's assets or investments would have nearly eliminated the capital or equity position of that institution and brought it to the brink of insolvency. The fragmented and inconsistent nature of financial regulation across the domestic financial system in the United States in the period prior to the global financial crisis was definitely a factor contributing to its onset.

The trading of derivatives was an additional weakness in the regulation of the financial system that became a critically important area of vulnerability in the period leading up to the financial crisis. In 2000, it was decided that the trading of over-the-counter (OTC) derivatives would essentially be free of governmental regulation and left to private sector monitoring and control. At the time, the head of the Commodities Futures Trading Corporation (CFTC), a government entity charged with managing and regulating the trading of standard derivatives related to commodities, exchange rates and interest rates through their trading on an institutional exchange similar to the New York Stock Exchange, had strongly advocated that non-conventional or OTC derivatives should also be supervised by the CFTC. However, this position was resisted and defeated by top officials in the Federal Reserve and Treasury Department. This resistance was based on the idea that innovation in the development of financial

derivatives, for example, would improve the efficiency of the financial system and would be stifled if they were subjected to governmental monitoring and control.

One set of OTC financial derivatives that played a central role in the financial crisis were mortgage-backed securities (MBS), collateralized debt obligations (CDOs) noted earlier and credit default swaps (CDS). Each of these derivatives related to the securitization or repackaging of mortgage credits and their conversion into a financial instrument that could be traded outside of an organized exchange or on an OTC basis, subject only to private contractual arrangements. What was unique about these derivatives was that they were used mainly for the repackaging or securitization of high-risk, sub-prime and ALT-A mortgage loans and sold to a broader investment community, rather than maintained on the balance sheet of the originating mortgage lender. Because the MBS mixed low-income mortgages with other less-risky mortgage credits or mixed them with other types of bank assets under the label of CDOs, for which investors could purchase insurance in the form of CDS, it was believed that the risk involved in the trading of these derivatives was much less than the risk that would apply to any of the individual loans. Thus, it was assumed that the potential market for these instruments was very large.

Against the background of a lax and flawed regulatory environment, the origins of the crisis can be traced to distorted incentives created by certain public policy initiatives. These, together with a pattern of fraud and abuse that applied to critical stages in the securitization of high-risk mortgage credits, created the conditions for a bubble phenomenon in the housing market. One aspect of public policy that affected the housing market was the role played by two large government-sponsored enterprises (GSEs: Fannie Mae and Freddie Mac) that had been created to promote the housing market by borrowing funds in capital markets and using these proceeds to purchase mortgage credits from household finance institutions. Because of their government sponsorship, Fannie Mae and Freddie Mac were perceived to carry in effect a government guarantee on their borrowing, even though such a guarantee had not been made explicit, which allowed them to borrow funds at a more favorable rate than other financial institutions. They also had initiated the use of MBS as a vehicle for purchasing mortgage credits that in many cases they resold on the secondary market as investment products. In the late 1990s, the GSEs, with the active encouragement of the US Congress, had begun to lower their standards for the purchase of mortgage credits as an inducement to

the promotion of low-income housing.[26] Since many of these loans were mixed with other more standard mortgage loans in MBS, it was assumed their risk would be diffused. The active engagement of the two GSEs in the securitization of these loans helped to broaden the appeal of these financial instruments to the broader investment community.

As the appeal of MBS became more widespread, a series of flaws and abuses set into the securitization process that laid the groundwork for the financial crisis. First, the conditions applied to the approval of low-income housing credits were allowed to deteriorate so that their riskiness increased significantly. As a result, sub-prime and Alt-A loans were approved with little or no down payment, and many were granted without proper risk assessment of the borrowers as regards their income, jobs and assets (so-called NINJA loans). In an environment of rising housing values, the risks of these loans were not seen as significant, as they could easily be rolled over or re-financed as housing values increased. In many cases, the poor quality of these credits was not properly disclosed to investment banks that became active in the packaging of MBS or to the investors who purchased them. In order to make these securities attractive financial investments, credit-rating agencies were under great pressure to give the MBS high ratings. In some cases, it may have been difficult for them to make a proper risk assessment, but in many other cases they were induced to give favorable ratings because of their reliance on the investment banks for their fees and business activity, which represented a clear conflict of interest. As a result, most of the MBS and CDOs that were issued were granted AAA ratings, which obviously broadened their appeal to investors and established them as safe assets.

The appeal of investing in MBS was further enhanced by a decision of the SEC in April 2003 to broaden the list of assets and securities that could be swapped for cash by means of repurchase agreements (REPOs). In the REPO market, broker-dealers or investment banks would typically exchange financial instruments from their portfolio with investors or money-market funds for cash on the basis of a commitment to repurchase the asset, typically on a very short-term basis, which they would then use for the purchase of other market instruments. Traditionally, the assets or collaterals used in these REPOs were restricted to government paper, but in 2003 the list of eligible collateral was extended to include securities related to the housing market (i.e., MBS) and foreign assets in the form of sovereign bonds and highly rated non-government bonds.[27] The extension of eligible collateral to include MBS greatly enhanced their

appeal to American investors by increasing their liquidity, while the inclusion of foreign assets extended access to the US REPO market to foreign investors and banks.

Another aspect of public policy that may have played a role in the antecedents to the crisis was the monetary policy stance of the Federal Reserve. It is important to recognize that the housing boom occurred at a time when there were significant capital inflows to the United States as a result of the global imbalances discussed earlier. These inflows significantly eased credit conditions in the United States, not only for housing finance but for consumer and business credit more generally. In addition, beginning in 2000, the Federal Reserve substantially reduced its main policy rate from a peak of more than 6 percent to 1 percent over a period of three years in order to sustain economic activity following the collapse of a brief speculative bubble in the stock market related to the valuation of new hi-tech companies. This relaxed monetary environment, along with the active securitization of low-income housing credits, clearly created the conditions in which a bubble in the housing market could develop. The collapse of stock market valuations at the beginning of the decade also created an additional spur to the bidding up of housing asset prices in the housing market. The widespread circulation of MBS and CDOs provided clear indirect evidence of the housing bubble. According to data collected by the Securities Industry and Financial Markets Association (SIFMA), the outstanding value of non-agency MBS and CDOs rose from US$1 trillion in 2000 to US$4 trillion in 2007. The increase in the placement of CDS during this period was even stronger.

According to a well-tested rule for gauging the appropriateness of the Federal Reserve's policy rate (the so-called "Taylor rule"), this rate was reduced to too low a level and then was held at that level for too long a period of time.[28] This policy action coincided with a sharp increase in real residential investment and in an index of real housing prices. In 2006, the Federal Reserve began to reverse course in setting its policy rate. During a year of frequent upward adjustments, real housing prices peaked and began to fall, suggesting some link between the Fed's policy actions and the collapse of the bubble. With the increase in the Fed's lending rate, mortgage rates also began to rise making it more difficult for homeowners to refinance mortgages for homebuyers, which served to put a brake on the bidding up of housing prices. During the housing bubble, the steady rise in home equity values allowed homeowners to easily refinance mortgages that they had difficulty in sustaining. By mid-2007,

however, the first signs of fragility in the "shadow" banking system and in the market for MBS/CDOs began to emerge.

As an antecedent to the global financial crisis, it is important to recognize that the housing boom in the United States was mirrored in a number of European countries, including Ireland, Spain and the United Kingdom, where credit conditions were also very relaxed. The low interest policy of the Federal Reserve was matched by a similar policy on the part of the European Central Bank. In addition, large European banks became major participants in the acquisition and trading of securitized instruments related to the financing of the housing boom in the United States. For example, these banks either directly or through their branches in the United States borrowed on a short-term basis from money-market mutual funds or in the REPO market and then used these proceeds to purchase MBS and CDOs directly from investment banks or in the secondary market. On a consolidated basis, these borrowing and investment activities were treated as offsetting financial flows in the balance of payments, separate from the flows related to global imbalances. In fact, the European Union made very little contribution to the problem of global imbalances in the period leading up to the financial crisis because of the approximate balance in its current account transactions. Nevertheless, its banks were still vulnerable to a financial crisis because of their involvement in the financing of housing booms in the countries cited above and in the United States.

While most attention at the international level was being paid to the growing net capital flows between surplus and deficit countries within the context of global imbalances, prior to the crisis, relatively little was known about the kind of offsetting gross flows between European banks and "shadow" banks in the United States. In certain respects, these flows were more important to the development of the global financial crisis because of the "double mismatches" they represented on the balance sheets of these banks. One of these mismatches was the extreme disparity in terms of their short-term borrowing from money-market funds or in the form of REPOs (often on an overnight basis) and the long-term commitment of funds to high-risk and mispriced securitized instruments (MBS and CDOs). The other mismatch related to the difference between the currency in which the initial transactions occurred (US$) and the currency in which the transactions were recorded (euros). Once the crisis erupted, many banks in Europe found themselves holding dollar liabilities they could not service, not only because of the collapse in the value of securitized assets on their balance sheet, but also because of their loss of access

to dollar funding in the interbank market. Without the extraordinary, lender-of-last-resort assistance provided by the Federal Reserve to European central banks by means of dollar-euro currency swaps beginning at the end of 2007, many of these banks would not have been able to repay those dollar liabilities and would have become insolvent.

The beginning of the crisis in the United States and the European Union can be traced to mid-2007, as delinquencies had increased with the rise in mortgage rates and housing prices fell. Both of these events led to a drop in the valuation of MBS and CDOs and losses for financial institutions involved in low-income housing finance or heavily invested in these securitized instruments, such as Countrywide Financial Corporation in the United States. In August 2007, BNP Paribas, the largest bank in France, suspended its trading in MBS because of a lack of liquidity and closed three of its funds invested in these securities. Similar problems affected the Northern Rock bank in the United Kingdom at roughly the same time.

In September 2007, the Federal Reserve began a series of reductions of its main policy rate, and in December, it established the first of three emergency credit lines for "shadow" banks to provide liquidity against the collateral of US treasury securities. Special credits were also extended to an important investment bank (Bear Stearns) that was facing losses from its investments in MBS in order to facilitate its acquisition by JP Morgan. However, when a similar problem arose with Lehman Brothers in September 2008, the Federal Reserve and Treasury Department decided not to intervene in order to send a signal that there was a limit to the extent to which they would engage in "bailing-out" operations.[29] This decision became the catalyst for widespread panic in the US financial markets and the eruption of the crisis, as investors suddenly became aware of Lehman Brothers' extensive holdings of MBS, its links to numerous other domestic and foreign financial institutions and the absence of an appropriate framework under bankruptcy law to handle the insolvency of a large financial institution ("too big to fail"). To a significant extent, the full disclosure of Lehman Brothers' financial position, as well as that of other investment banks, had been concealed by creative accounting practices on the part of outside auditors who concealed their holdings of securitized instruments and other derivatives at the end of reporting quarters in order to re-assure investors and financial analysts of their apparent financial soundness. This practice was another example of the breakdown of due diligence procedures on the part of private sector agents in the financial industry that contributed to the onset of the financial crisis.

The failing of Lehman Brothers led to doubts about other large financial institutions, such as Citigroup, which were heavily invested in MBS/CDOs through off-balance sheet SIVs/SPVs. Losses on the holdings of these instruments were to some extent covered by CDS, but the major issuer of these derivatives (the American International Group—AIG), it was soon discovered, had inadequate reserves to cover these losses. Unlike the case of Lehman Brothers, the Fed and Treasury decided that it was necessary to provide emergency funding for AIG because of its size and linkages through CDS to a wide range of financial institutions, both domestic and foreign. The Federal Reserve approved an emergency credit of US$85 billion for AIG on the day after the failure of Lehman Brothers on the grounds of its systemic importance, and subsequently it approved credits of more than US$50 billion for the acquisition of some of its portfolios of CDOs and MBS.

These operations were followed by more general interventions by the US government to shore up the financial industry and prevent its collapse. Soon after the failure of Lehman Brothers, the Treasury Department committed US$50 to guarantee deposits of money-market funds, while the Federal Deposit Insurance Corporation (FDIC) doubled the ceiling for its guarantee of deposits in traditional banks to US$250,000. Then in October, the government secured congressional approval for US$700 billion to fund its Temporary Asset Relief Program that was used to make temporary equity investments in solvent banks that were facing capital deficiencies, as well as special loans to two of the largest auto-manufacturers in the United States, Chrysler and General Motors. On the international side, as noted earlier, the Federal Reserve greatly expanded the size and network of its central bank swaps to provide dollar liquidity to foreign banks having difficulty in repaying dollar-denominated credits to banks in the United States. Total drawings under these swaps reached a peak of US$600 billion by February 2009. This provision of liquidity by the Federal Reserve was roughly matched by an equivalent amount of domestic lender-of-last-resort financing that it provided to banks and nonbanks through seven different credit facilities and certain special credit operations. Without this unique assistance of the Fed and the US Treasury, it is safe to say that the global economy would have suffered a repeat of the Great Depression, when no such financing was provided. Such assistance was consistent with the unique role of the US dollar in the international monetary system and the leading role that the United States plays within the global financial system.

The special role of the US dollar in the international financial system was also displayed as the financial crisis unfolded in the extraordinary demand for US government securities. Remarkably, in the period after the failing of Lehman Brothers, there was a surge in the purchase of US treasury debt on the part of foreign entities that reflected an exceptional demand for global safe assets, notwithstanding the fact that the United States had been at the eye of the financial storm. Between the end of 2008 and the end of 2010, foreign holdings of official safe assets of the United States rose from just under 20 percent of US GDP to nearly 30 percent.[30]

In retrospect, the global financial crisis does not represent a basic flaw in the concept and spread of financial integration, but instead it reflects a series of failings in how governments and private agents operated within that environment. First, there was an excessive relaxation of the financial regulatory framework in the period leading up to the global financial crisis that placed too much reliance on private prudential safeguards to maintain stability in the financial system. In addition, there was a serious breakdown in those safeguards and other private sector mechanisms that are essential for the sound operation of financial markets as regards, for example, independent auditing, credit analysis and counter-party risk assessments by lending institutions and risk analysis of securities by investment banks and credit-rating agencies. Finally, there were deficiencies in the extent to which governments understood the complexity of the networks of global finance and in the coordinating mechanisms they had available to deal with distortions in the global financial system, for example, in regard to global imbalances.

4 The United States and Financial Globalization: A Summary Assessment

Financial globalization has provided a number of benefits to the countries and financial institutions that have been major players in the system. This is evident from the enormous growth in international capital flows that followed the elimination of capital controls beginning in the 1970s among the advanced countries and increasingly among emerging market economies. The United States has been the dominant player in the international financial system because of the size of its economy and financial system. Its financial system has also expanded significantly as a result of the growing international demand for its services and the profits it has generated from international financial transactions. History has shown, however, that

there are clear risks and potentially large costs associated with financial globalization. The number of financial crises that have occurred among both advanced and emerging market countries since the mid-1970s is testimony to this fact. Nevertheless, based on the experience of the global financial crisis, it is clear that the causes for most of these crises can mainly be attributed to either a breakdown in the regulatory framework or defects in the private prudential safeguards and counter-party risk assessments that are essential for sound banking operations.

The dominance of the United States in the global financial system is evidenced by a number of quantitative facts. For example, the value of its gross international investment position is more than double the size of the next largest country and represents around one-fourth of the positions of all the advanced countries that make up the External Wealth of Nations Database. In addition, the market capitalization of stock markets in the United States represents more than one-half of the comparable value for all of the other countries with organized exchanges. Also, foreign direct investment flows of the United States represent around one-quarter of the global flows of this form of capital movement.

The dominant role that the United States plays in the global financial system reflects not only the breadth and depth of its financial markets, but also certain unique characteristics of the US dollar and US public debt within that system. Among the currencies of all the advanced countries, the US dollar is by far the main currency used in the invoicing of international trade, foreign exchange transactions, the denomination of international bonds, the currency composition of official foreign reserves and cash transactions. To some extent, this dominant position of the US dollar was institutionalized in the Bretton Woods Agreement following WW2, but its perpetuation and expansion reflect the positive network externalities for public and private agents that have developed over time in the use of the dollar as a unit of account, store of value and medium of exchange in the international monetary system. Related to these characteristics of the US dollar is the fact that US government debt serves as a pre-eminent form of a global safe asset within the international financial system. Certain forms of US private debt have also played that role as well. The global financial crisis of 2008–09 illustrated the importance of these twin forms of safe assets. Prior to the crisis, securitized instruments such as MBS and CDOs were considered global safe assets because of their AAA ratings. Then with the outbreak of the crisis and a collapse in the value of MBS/CDOs, there was a surge in the demand for US government debt. The

privileged position that US government debt enjoys in the international financial system depends critically on the continuation of a sound macroeconomic policy framework in the future.

The global financial crisis has been the clearest and most damaging example of the risks involved in the spread of international financial integration. Notwithstanding its unique institutional roots within the "shadow" banking system of the United States, it shared many common characteristics of other financial crises: its links to speculative activity in the housing market, the absence of a sound financial regulatory framework, a relaxed monetary policy stance and a breakdown of essential self-regulatory mechanisms of the private sector. These flaws, together with a lack of understanding on the part of national and international agencies of the complex network of cross-border financial links, in particular as regards the ties between banks in the EU and "shadow" banks in the United States, laid the groundwork for the crisis. Consistent with its dominant position in the global financial system, the United States played the major role in both the antecedents of the crisis and its resolution.

Notes

1. The impact of China on global bond markets is discussed in IMF (2016).
2. This relationship is cited in IMF (2018).
3. The issues related to the coordination of national financial policies are discussed in Agenor and Pereira da Silva (2018).
4. The calculation of the number of countries that use the US dollar and euro as an anchor or reference currency is based on estimates developed by Ilzetzki et al. (2017).
5. For a recent estimate of the size of the US dollar currency zone, see Ito and McCauley (2018).
6. Estimates of the foreign circulation of US currency are taken from Haasl et al. (2018).
7. This calculation can be found in Goldberg (2010).
8. These data on trade invoicing are based on a study by Gopinath (2015).
9. It is interesting to note that this dollar share is higher than it was before the global financial crisis (2008–09) because of the stronger liquidity conditions for trade in dollar-denominated assets that were demonstrated during and since the crisis (see Maggiori et al. 2018a).
10. The analytical basis for these claims is laid out in Gopinath and Stein (2018).

11. This reference has been attributed to statements by French President Charles de Gaulle in 1965, but they were not recorded in print. For a discussion of the origins of the term, see Eichengreen (2011).
12. For a discussion of the Bretton Woods System, its breakdown and reform, see Elson (2011).
13. These data and the analysis behind them are drawn from Maggiori et al. (2018b).
14. This estimate is drawn from Cecchetti (2014).
15. Data on the share of US government debt held abroad can be found in the annual surveys of the US Treasury Department and the Board of Governors of the Federal Reserve (www.treasury.gov/resource-center/data-chart-center/tic/Pages/index.aspx).
16. The discussion on safe assets in the United States draws from Gorton (2017).
17. This information is presented in Exhibit E5 in McKinsey Global Institute (2017).
18. This information is based on the Financial Times Stock Exchange (FTSE) All World Index Analytics for March 30, 2018, for which the value of the United States was 51.3 percent.
19. Charles Kindleberger was one of the first economists to identify this unique role of the United States as "banker to the world" in Kindleberger (1965).
20. This thesis is propounded by Gourinchas and Rey (2007).
21. Ben Bernanke was one of the first analysts to identify this cycle as the source of the US trade and current account deficits in a speech he made as one of the Board of Governors of the Federal Reserve (Bernanke 2005).
22. One recent analysis of the global financial crisis that deals with its resolution, as well as with its origins and evolution, is Elson (2017).
23. Reinhart and Rogoff (2009).
24. Based on Consumer Credit Panel of the New York Federal Reserve Bank.
25. This estimate of the size of the shadow banking system is based on Poszar et al. (2010).
26. The role of the government-sponsored enterprises (GSEs) in the financial crisis is examined in the Report of the *National Commission on the Causes of the Financial and Economic Crisis of the United States* (2011).
27. The liberalization of collateral requirements for REPOs by the SEC in April 2003 and the role of European banks in contributing to the housing boom and financial bubble in the United States are given particular emphasis by Bayoumi (2017).
28. An explanation and application of the "Taylor Rule" can be found in Taylor (2012).

29. The decision of the Federal Reserve to not provide financial assistance to Lehman Brothers, as it had in the case of Bear Stearns, at the time was also based on the claim that Lehman Brothers did not have sufficient collateral to guarantee emergency lending from the Federal Reserve. However, this claim has been disputed and dismissed in a recent thorough review of the case in Ball (2018). In light of this study, it now appears that the joint decision of the Fed and the US Treasury to not intervene in Lehman Brothers was a mistake.
30. These data are presented in Figure 5 of Gourinchas and Jeanne (2012).

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CHAPTER 5

The United States as a Major Destination for Migratory Flows

The impact of immigration on the US economy represents the third of the trio of globalization forces on the US economy examined in this study. The first was the expansion in the cross-border flows of goods and services; the second was the increase in international capital movements; and the third represents the rise in the international migration of labor. As in the first two cases, the United States has been a major force and participant in this aspect of globalization, as regards both the size of its immigrant community and its share of total destinations for migrants. Again, as in the other two dimensions of globalization, the United States has been a net beneficiary in terms of its economic effects.

Immigration as a phenomenon of globalization differs from international trade and finance in a number of respects. First, in terms of its weight in the global economy, migrant flows are much smaller than cross-border flows of goods and services or international capital flows. In 2015, for example, there were 244 million immigrants, representing only 3.3 percent of the global population. Moreover, migrant remittances on a global basis currently amount to around US$430 billion, compared with roughly US$41 trillion for global trade and US$200 trillion for the combined net international investment position of advanced countries. Second, migratory flows are generally non-reciprocal, unlike the case of trade and finance, where flows are mainly bidirectional among countries. Migrant flows are predominantly in one direction, from developing countries to advanced countries, largely because of the economic gains motivating

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emigration. Third, there is no internationally agreed framework at the global level governing the migration of workers (or other migrants and refugees), as in the case of trade and finance, nor international institutions with clear oversight responsibilities for its conduct, as in the case of the WTO and the IMF. The International Organization for Migration in its present form was established in 1989, and it formally became a member for the UN family as the UN Agency for Migration only in 2016. However, its activities are primarily focused on monitoring migrant flows and carrying out relevant studies, with a limited budget for technical and financial assistance to countries dealing with migrant flows. In this regard, its work overlaps with that of the International Labor Organization (ILO) and, in the field of refugees, the UN High Commission for Refugees (UNHCR) and the UN Relief and Works Agency (UNWRA). These fragmented and limited arrangements at the international level primarily reflect the fact that immigration is a politically sensitive issue which countries have wanted to maintain under strict national control. A series of elections in the North Atlantic region since 2016 have illustrated this fact, along with the UK government's decision to withdraw from the European Union (EU). The latter event was based, in part, on popular discontent with the EU's rules for the free movement of persons within the Union.

A final important difference between immigration at the global level and trade and finance is that the economic effect of additional migration on global welfare is likely to be far in excess of that for the other two phenomena by a substantial amount. As noted in Chap. 2, the various studies that have been carried out to determine the economic gains from eliminating existing barriers to the free flow of trade, capital and labor suggest that, in the case of international labor mobility, these gains could be in the range of 50–150 percent of global GDP, whereas those for the free flow of trade and capital represent only a few percent of world GDP.[1] The enormous difference in these estimates reflects the fact that immigration in recent years has been a relatively small part of the global economy compared with trade and finance and the substantial difference between labor productivity in developing and advanced countries.

Against this background, the remainder of this chapter focuses first on the benefits and costs of immigration, as was done for trade and finance in earlier chapters, and then on the economic effects of immigration on the US economy. The chapter closes with a brief discussion of the problem of illegal immigration in the United States. This issue has been the focus of intense political debate and failure as regards policy prescription.

1 The Benefits and Costs of Immigration

There are a number of economic benefits that can be ascribed to immigration. As a general matter, when immigrants enter the labor force of a receiving country, they raise the productive capacity of the country and increase its GDP. As their incomes rise, so do those of natives, at least for those workers who are not viewed as substitutable by immigrants. This idea of mutual economic benefit is captured by the concept of the "immigration surplus", which attempts to measure the added gain to an economy arising from the impact of immigrants as new members of the labor force on the employment of natives and new investment by businesses. This effect will occur to the extent that the skills of immigrants complement those of native workers, whose wages may tend to increase, and businesses experience a rise in their return to capital that leads to a higher level of investment and production over time. Generally, an increase in the supply of labor from immigrant workers will induce firms to increase their investment to offset any reduction in the capital-to-labor ratio, thereby preventing average wages from declining over the long term. If immigrant workers are imperfect substitutes for native workers because of the nature of the skills they bring, then there should not be any significant impact on the wages of native workers. In addition, the presence of immigrant workers may allow native workers to become more specialized in their work, thereby increasing their productivity. It needs to be recognized, however, that the positive economic benefits of immigration identified above depend critically on the degree to which immigrants are integrated within the domestic labor force and do not face impediments because of their language or cultural attributes.

Low-skilled immigrants (i.e., those with a high school or lower education) can improve the functioning of the labor markets in their destination countries if they fill jobs of manual labor for which there are insufficient native workers, thus removing a bottleneck or labor shortage and potential limitation on productive capacity. They may also be more willing than native workers to move from one location to another in response to shifts in labor demand, thus relieving a potential constraint on business expansion. To the extent that immigrant workers increase the supply of child care and household services, one may see an increase in the labor force participation of higher-skilled native women who have young children and would otherwise remain at home in their care.

The entry of high-skilled immigrant labor (i.e., those with a college or higher-level education) can also provide an important contribution to domestic economic activity. In the advanced countries, immigrants trained in science, technology, engineering and mathematics (STEM) and with prior work experience can provide an important stimulus to innovation, entrepreneurial activity and scientific/technological research. In this regard, the employment of high-skilled immigrant workers is likely to have a positive effect on the wages of college and non-college-educated native workers.

For an aging economy such as the United States, the inflow of foreign immigrants who tend to be of prime working age can reduce the dependency ratio (i.e., the ratio of young and older non-working population to working population) and will bolster tax payments and social security contributions over the course of their work lives. In this regard, their net fiscal impact at the national level should be positive, as they are not drawing public benefits such as social security, nor adding to the cost of public goods such as defense. The listing of these effects obviously ignores the indirect, positive fiscal impact that immigrant workers can have as a result of their contribution to the aggregate productivity of the economy.

The entry of immigrant workers into an advanced economy may also have a beneficial effect on the welfare of natives to the extent that they lower the cost of certain consumer goods and services as a result of their labor, while increasing the diversity of consumer choice. These effects could arise, for example, from the participation of immigrants in food preparation and restaurant development, entertainment, household cleaning, child care services, gardening and construction.

While the potential benefits of immigrant labor are clear, it is important to identify the potential costs that they may bring. The one area that has aroused much debate and empirical research relates to their impact on the wages and employment of low-skilled workers in the destination countries. As noted earlier, to the extent that immigrant labor is substitutable for native workers, the wages and employment of the latter group will be negatively affected. In this regard, the impact of low-skilled immigrant labor in advanced countries has some analogy to the impact of imports of low-cost manufactured goods from developing countries, as discussed in Chap. 3. As discussed there, according to the principle of comparative advantage, the liberalization of trade between advanced countries and developing countries will allow the former group to specialize in the export of high-tech, capital-intensive manufactured goods and the latter

group to specialize in the export of low-cost, labor-intensive manufactured goods. Over time, there will be some convergence in the wages of low-skilled workers in the advanced and developing countries, with those in the advanced countries declining and those in the developing countries rising (in line with the concept of "factor price equalization"). At the same time, the wages of high-skilled workers in the advanced countries will experience some gains. At the aggregate level, the gains in the income of high-skilled labor and the production of high-tech goods should outweigh the losses for low-skilled labor and the production of labor-intensive manufacturing in the advanced country.

The arrival of low-skilled immigrant labor from developing countries may have a similar effect on the wages of low-skilled workers in the receiving country as in the example of international trade just discussed. In the extreme, there may also be a convergence of wages for those workers in the developing and advanced countries involved in migration to the extent that there were large movements of migrant labor. The income distribution effects of international trade thus may have a direct analogy with the effect of immigration on the relative wages of high-skilled and low-skilled native workers. In line with this discussion, the critics of globalization have claimed that the liberalization of trade and increased flows of migrant labor have had similar adverse effects on the incomes of low-skilled workers in the United States and other countries of the North Atlantic region. This sentiment has become an important factor in the growing popularity of far-right, anti-globalization political parties and in the outcome of a number of elections for national leaders in these countries.

There may also be a cost of immigration in regard to fiscal outcomes. While the fiscal impact of immigration at the national or federal level is likely to be positive, as argued earlier, it could be different in the case of low-skilled immigrants at the state or local level. Positive fiscal transfers of immigrant workers would be significantly lower than at the national level, whereas their claims on fiscal resources could be much higher because of their demand for education and other social benefits. Such an outcome would be particularly strong in areas of relatively high unemployment of native workers and large concentrations of immigrant workers and their families.

One further cost of immigration to consider is that borne by countries from which immigrant workers originate. In particular, in the case of high-skilled emigrants, the source country is bound to experience a "brain drain" or loss of productive workers. This loss will increase the wage gap

between high-skilled and low-skilled workers in the country suffering a "brain drain" and will have negative consequences on productivity and the long-term growth prospects of that country.

2 Immigration and Its Impact on the US Economy

Immigration has played a very important role in the economic history of the United States and provided essential labor for its economic and territorial expansion and development during the nineteenth century. This was the age of mass migration when there were few controls on the flow of migrants from Europe to the New World. As a result, the share of immigrants in the population of the United States grew rapidly in the second half of the nineteenth century and reached a peak of nearly 15 percent in 1890–1910. Beginning in the 1920s, however, there was a reaction against the size of the immigrant population in the United States and national quotas were established for the first time. This policy led to a steady decline in the foreign-born share of the US population until it reached a low point of just under 5 percent by 1970.

With a change in immigration policy in 1965, there was a reversal in the size of the immigrant share of total population in the United States, and it gradually rose again to around 13.5 percent of the total population by 2016, not far below the previous peak at the dawn of the twentieth century, at which level it has remained since (see Fig. 1.2). In 2016, the number of immigrants residing in the United States amounted to nearly 44 million or somewhat more than 4 times that of the country (Germany) with the next largest inflow of immigrants.[2] A roughly similar amount of the US population has at least one foreign-born parent, so that around one-quarter of the total population represents first- or second-generation immigrants. The United States currently has the largest immigrant population of any country in absolute numbers and includes around one-fifth of the global immigrant population (and around 40 percent of total immigrants residing in OECD countries). However, each of the other Anglo-Saxon countries (Australia, Canada and New Zealand) has a significantly larger share of its population than the United States that is immigrant based. The factors that would account for the large share of the United States in global immigration would be its traditionally open attitude toward migrants, as well as its economic wealth and opportunities, along with strong liberal values, that represent a major magnate for migrants. More generally, income level, language, geographic proximity and colonial

ties have each been identified as factors in the advanced countries that can explain the countries from which immigrants have originated.[3]

During the recent period of major immigration following that of the nineteenth century, there has been a significant change in the regional origins of migrants to the United States. In 1970, the largest share of its immigrants came from Europe (30 percent), with roughly equal shares (of around 20 percent) from Asia and Latin America. By 2013, these shares had been reversed, with immigrants from Europe representing only around 10 percent of total immigrants and those from Asia and Latin America representing around 70 percent on a combined basis. China, India and the Philippines represent the most important of the Asian countries of emigration, while Mexico and Central America are the largest sources of Latin American immigrants. With this shift in the countries of origin of the immigrant population, there has also been an increase in the number of undocumented or illegal immigrants, which nearly doubled from 5.7 million in 1995 to 11.1 million in 2014. Notwithstanding this increase, there has been a significant decline since 2007 in the inflows of illegal immigrants with the result that within the last decade the size of the illegal immigrant population has remained unchanged with entries and exits roughly balanced at around 300,000–400,000 per year.[4] This is a striking and often ignored fact in public debate, especially given the heated rhetoric on illegal immigration that surfaced during the 2016 presidential election campaign and has continued since.

Immigrants in the United States have tended to fall into two separate but parallel tracks: one of high-skilled workers and the other of low-skilled workers. According to a distribution of the labor force by years of schooling, it was estimated that migrant workers in 2010 were concentrated in the two extremes of that distribution, one for workers with less than a high school education and the other for workers with a Ph.D. in science and engineering. In each of these two extreme categories, it is remarkable to note that immigrant workers represented around 40 percent of the measured labor force.[5] To a great extent, these outcomes have tended to reflect the overall priorities of the US immigration policies and visa programs that have remained largely unchanged since the mid-1960s. These priorities have been: (1) keeping families together; (2) bringing in needed employment-based skills; (3) humanitarian purposes; and (4) maintaining a diversity of countries of origin. The first and third priorities have tended in practice to favor the entry of low-skilled immigrant workers, while the second priority has favored the entry of high-skilled immigrant workers.

The last-mentioned priority has not been an important factor in determining the skill levels of immigrants, but it can account for some of the substantial shift that has occurred in the selection of countries from which immigrants have originated that was noted earlier, that is, from Europe to Asia and Latin America. However, it needs to be recognized that the overwhelming majority of the legal residents admitted to the United States (nearly 75 percent) have been approved mainly under the first priority for family reunification reasons, while only 14 percent of "green cards" or visas for permanent legal resident status have been granted under the second priority for employment reasons (with the remainder allocated for humanitarian and diversity reasons). Among this latter group, around half of the entrants are spouses or children, so only 7 percent of the legal entrants have been for principal workers, most of whom are high skilled. This share is by far the lowest among the OECD countries, where a range of 25–80 percent of annual visas have usually been allocated for employment-related reasons.[6] In the United States, the share of work-related visas has been supplemented by illegal immigrants, which currently number around 11 million, of whom 8 million are low-skilled workers, representing around 5 percent of the labor force. This count of illegal immigrants is the largest among the OECD countries.

The *economic effects of immigration* in the United States have been the subject of much analysis and debate, in particular as regards its labor market effects, but a general consensus exists that over time these effects have not been significant. According to a recent study by the National Academy of Sciences (NAS) (cited in note 4), any negative effect of immigration on the wages and employment of native workers has been very small, and to the extent that one has been measured, it applied mainly to wages and employment levels for *prior* immigrants. The overall impact of immigration on the wages of native workers has in fact been measured to be positive. These results have tended to confirm that immigrant labor has had a significant degree of complementarity, rather than substitutability, with native workers. Particular concern has been raised about the wage and employment effects of low-skilled immigrants on their native counterparts. In the case of native workers without a high school degree, the overall wage effect of immigrants has been ambiguous, with studies showing both relatively small, positive and negative effects.

A related concern has been whether immigrant workers have affected the growing polarization of the US labor force into groups of low-skilled and high-skilled workers or have exacerbated the growing income inequality

between these two groups. The available evidence points to a sharp disparity in the relative wage performance of these two groups. For example, during 1980–2014, the average weekly wage levels in real terms of college-educated native workers in the United States rose by around 20 percent, whereas those without a college education declined by around 8 percent. However, empirical studies have shown that virtually none of this disparity can be attributed to the impact of immigrant workers, in large part because immigration had very little impact on the relative supply of these two groups of workers in the labor market. Similarly, in respect of the difference in wage outcomes for those native workers with and without a high school diploma, the supply of immigrant workers can only explain around 4 percentage points of the 18 percent decline in the relative wages of these two groups during the 1980–2014 period.[7] One additional finding supporting these results is that low-skilled immigrant workers performing manual labor have often led to the shift of their native counterparts into higher-earning positions of work project coordination, sales communication and other interactions with clients or customers. This development has created more specialization in the activities of native and immigrant workers based on their comparative advantage, which has raised efficiency and productivity and led to an improvement in the wages of natives.

In the case of high-skilled immigrant workers, empirical studies have shown that they have had a positive impact on the wages and employment of both college-educated and non-college-educated native workers, in part through the transfer of wage-enhancing skills and professional or technical knowledge in interaction with native workers. They have also often been innovators in the domestic industry with positive effects on productivity overall. Remarkably, since 1980, around 25 percent of all Nobel prizes awarded in chemistry, medicine and physics and a similar share of MacArthur "genius" awards have been won by high-skilled immigrant workers in the United States. Similarly, one-third to one-half of the engineering and computer science faculty positions in top-ranked universities in the United States (such as UC Berkeley, MIT and Stanford) have been filled by immigrants.[8] High-skilled immigrants also founded one-quarter of all high-tech start-ups during 1995–2005 and were 30 percent more likely than natives to start a business venture.[9]

One way of quantifying the economic effects of immigration has been captured by the concept of the "immigration surplus", as noted earlier. The surplus attempts to measure the economic gains to natives in the short-to-medium term arising from the employment of immigrants, over

and above the amount they earn for themselves from their labor. These gains represent higher wages accruing to complementary workers, additional profits of companies hiring immigrant workers and the benefits of the lower cost of consumer items produced by immigrants. This measure obviously depends upon a number of factors, such as the ease with which immigrant workers are integrated into the domestic labor force, the extent to which immigrant workers are relatively low skilled or high skilled and the overall pace of economic activity. Estimates of the "immigration surplus" for the United States in recent years have been relatively modest, in the range of US$36–72 billion per year, or around 0.2–0.4 percent of GDP, not dissimilar, in fact, from the measured static effects of increased trade.[10] It should be recognized, however, that the "surplus" masks a significant degree of income redistribution, as the wages of some low-skilled native workers who compete with low-skilled immigrant workers will experience a temporary decline in their wages, while those of complementary workers will increase. At the same time, profits of companies that hire immigrant workers will rise. These effects also have an analogy with international trade which brings about positive economic gains overall, but losses for those native workers directly involved in import-competing industries.

However, the "immigration surplus" represents a minimum measure of the economic gain from immigration, as it excludes any economic benefit of the positive externalities associated with immigration arising, for example, from the contribution of high-skilled immigrant workers to innovation and the start-up of new companies. In this regard, the notion of the "surplus" relates only to the benefits of improved productive capacity and efficiency gains that lead to higher output in the short-to-medium term. However, immigration can also make an important contribution to the long-term growth prospects of the host economy through the impact of high-skilled immigrant workers on technological development, innovation and entrepreneurship, as noted earlier, that can be far more important than the more limited, static gains captured by the "surplus".

The other important economic effect of immigrant workers relates to their *fiscal impact* as measured by the difference between their contributions to tax receipts and the cost of services they receive over some defined time period. In general, the net fiscal impact of high-skilled immigrants has tended to be positive because of their higher wage earnings and tax payments and non-dependence on public assistance programs, whereas that of low-skilled immigrants has tended to be negative because of their

lower wage earnings and tax payments (or lack of tax payments in the case of illegal immigrants) and higher dependence on public expenditures arising from their larger families and lack of access to employer-based health insurance. Among the latter group, for example, it has been estimated that around 30 percent of migrant-headed households participated in major means-tested public assistance programs, compared with around 20 percent of native households.[11] Another distinction that has been clear in the fiscal results is that the net impact of immigrant workers has been positive at the federal level, where tax payments have been more important than services received (except for retirees), and negative at the state and local levels where immigrants' reliance on public services has been more important. A final distinction that can be detected in the data is that the net fiscal burden of immigrant workers has been much larger for first-generation immigrants than it has been for their second- or third-generation descendants, mainly because of the descendants' educational attainment and tighter integration into the labor force. In this regard, it is important to recognize that current immigrants generally have had more educational attainment than their predecessors, with the result that the net fiscal impact of immigrants across all levels of government has become more positive over time.[12]

According to estimates provided by the study of the National Academy of Sciences cited earlier, the total fiscal impact or cost of first-generation immigrants in the 2011–13 period ranged between US$43 billion and US$279 billion, depending upon the assumptions one uses as to how the cost of public goods and interest on the public debt were assigned to immigrant workers. This estimate is somewhat comparable to the static estimates of the "immigration surplus" discussed earlier. However, from a more dynamic, long-term view across generations, it is possible to conclude that the net fiscal impact becomes positive, although such a calculation is highly sensitive to a range of critical assumptions that one needs to incorporate in such a calculation.[13]

3 The Issue of Illegal Immigration in the United States

The issue of illegal immigration has been perhaps the most contentious aspect of US immigration policy and has featured prominently in recent political debate leading up to and including the 2016 presidential campaign and in the period since. This issue largely reflects a lack of coherence

in immigration policy as regards the low quotas for work-related visas and the administrative burden in their use, as well as significant differences in demographic forces in Mexico and United States that have accounted for a substantial share of illegal immigration.

Illegal or undocumented immigrants in the United States were estimated at around 11.3 million in 2016 (3.4 percent of the US population) by the Pew Research Center, down from a peak of 12.2 million in 2007 (4 percent of the US population).[14] Since 1995, they have roughly doubled and represented around one-quarter of the total immigrant population in the United States in 2016, the largest ratio among the OECD countries. During the period of rapid growth in illegal immigrants since the 1990s, Mexico has accounted for more than one-half of these migrant inflows. Since 2007, the share of illegal migrants from Mexico has declined moderately to 50 percent, while that of Central America has increased by a roughly equivalent amount.

One important fact that has been ignored in recent political debate, as noted before, is that the net inflows of illegal immigrants have been reduced to zero in recent years, with 300,000–400,000 new illegal immigrants arriving and a similar number departing each year. During the first half of the last decade, gross inflows had reached a peak of around 800,000. It has been estimated that around 45 percent of the illegal immigrant population in the United States resulted from visa holders staying beyond the time limit of their visa or work permit, with the rest arriving by means of illegal border crossings. These data suggest problems in both the internal enforcement of visa limits and the border enforcement of visa requirements.

Given the prominence of Mexico as a traditional source for illegal immigration to the United States, it is useful to examine some of the forces that have propelled these migrant flows. The migrant flows between Mexico and the United States have been the largest between any two countries in the world, with Mexico accounting for 28 percent of all immigrants in the United States (both legal and illegal). There have been forces on both the demand and supply side that can help to explain the strength of this relationship. In the first place, it needs to be recognized that these two countries share a long, common border, which is virtually impossible to control at all points, while Mexico has a per capita income that is around one-quarter that of the United States with a comparable difference in real wages. In addition to this strong economic incentive for Mexicans to migrate to the United States, Mexico experienced periods of significant

macroeconomic instability during the last two decades of the twentieth century with its debt crisis of the 1980s and a decade of stagnation that followed and the Mexican peso crisis of 1994 that can account for waves of illegal migrants to the United States during this time period. In addition, the number of unemployed workers in Mexico rose because of its demographic transition in the 1960s and 1970s that raised significantly the size of its working-age population during the last quarter of the twentieth century. This population shift in Mexico occurred at a time when the fertility and birth rates in the United States experienced some decline. As a result of growing differences in relative wages in Mexico vis-à-vis the United States and the growing size of the working-age population in Mexico in relation to that of the United States, there was a substantial increase in the supply of potential Mexican migrants to the United States.[15] During this period leading up to the end of the twentieth century, there was also a decline in the supply of native American workers willing or available to undertake manual labor at minimum wages or less.

Since the beginning of the current century, Mexico has experienced less macroeconomic instability, while maintaining a stronger rate of economic growth, in part due to the effects of NAFTA in expanding and modernizing its industrial manufacturing base. At the same time, the growth in its working-age population was slowing significantly as a result of a major decline in its fertility rate, from around seven children per family in 1965 to around two children in 2000, one of the sharpest declines observed in the developing world. Mexico's current fertility rate is only slightly higher than that of the United States. These economic and demographic changes in Mexico account for much of the decline in net inflows of illegal immigrants observed since the middle of the last decade and imply that there should continue to be a slow, steady decline in the potential supply of illegal immigrants from this major source in the past.

Illegal immigrants have been a major channel of low-skilled workers into the US labor market, representing around one-half of the low-skilled foreign labor force in the United States.[16] In recent years, there have been around 11 million illegal immigrants in the US workforce or 5 percent of the total labor force (i.e., comprising workers either employed or looking for work). This ratio had reached its recent peak of 5.4 percent in 2007. The largest shares of illegal low-skilled immigrant labor have been allocated to farming and construction activities and have been mainly concentrated in six states (California, Texas, Florida, New York, New Jersey and Illinois).

Notwithstanding the concerns raised in recent political debate about the problem of illegal immigrants in the United States, it should be recognized that as members of the US labor force they have made a number of important contributions to the US economy. First, they have been very responsive to the ebbs and flows of the US business cycle and seasonal work demand. In addition, they have tended to be mobile across different regions of the country and responsive to shifts in labor demand, thus contributing to the flexibility and efficiency of the labor force. They have also tended to be highly motivated in their work pursuit and activity, having incurred in most cases a significant cost in getting into the United States. Smugglers or "coyotes" operating across the Mexican-United States border are estimated to be charging US$3000–$4000 currently to manage an illegal border crossing for an immigrant worker.[17] In view of this significant cost of entry, illegal, low-skilled immigrant workers have higher rates of labor force participation and employment and lower rates of incarceration than native low-skilled workers. It should also be recognized that in most cases, illegal immigrant workers do not compete directly with native low-skilled labor, who are increasingly unwilling to carry out the same kind of work functions or are moving into better-paying jobs in accounting, sales or team-level managerial activities. In general, the presence of low-skilled immigrant labor in the US labor force has encouraged their native counterparts to improve their educational level in order to qualify for the kinds of jobs just mentioned. As a result, during the last five years, it can be noted that the number of low-skilled native workers without a high school education has declined by four million.

The one area where low-skilled illegal immigrant workers impose an economic cost on the US economy is in respect of their fiscal impact. At the federal level, illegal immigrant workers are not likely to impose an economic cost as they are not eligible to receive federal benefits through the social security system or via welfare programs for Food Stamps, Medicaid (other than for emergency assistance) and Temporary Assistance for Needy Families. However, at the state and local level, federal regulations require that individuals be allowed to receive certain benefits in healthcare, education and law enforcement regardless of their immigration status, if state and local governments wish to qualify for federal government budgetary transfers in these fields. Illegal immigrants draw on public services mainly through their children who are eligible to attend public schools and, if they were born in the United States, to access Medicaid services and school breakfast and lunch programs. These benefits have

been estimated to represent an average of around 5 percent of state and local government budgets, but they are not likely to be covered by any tax payments by illegal immigrants. In the mid-2000s, this net fiscal cost per household headed by an illegal immigrant was estimated to amount to US$2700 per year or, in aggregate terms, roughly 0.1 percent of GDP.[18] This cost is probably larger than the "immigration surplus" that illegal immigrants generate for the US economy, but even so it is still a relatively minor economic burden, especially if one takes into account the income gains received by the immigrants themselves, which represent an improvement in global welfare, and their potential contributions to the US economy over the medium-to-long term.

The presence of illegal immigrant workers in the American labor force represents in certain respects a compromise between US employers and the US government in the administration of the immigration system. As noted earlier, the overwhelming majority of immigrant visas are granted for purposes of family reunification, whereas only 14 percent of visas issued are work related. Moreover, half of the latter group are for non-working spouses, so only around 7–8 percent of total visas issued in a given year are for employment purposes. In addition, these visas have been set for long periods of time without adjustment according to any economic criteria and involve a significant administrative burden on those involved in the application process. Within these tight constraints on employer-sponsored visas and the enormous external demand for these visas, the government faces a problem of determining how much budgetary funding should be allocated to border enforcement to control illegal entry, while allowing some leakage to accommodate excess domestic demand for immigrant workers.

Within this context, much could be gained in terms of reducing illegal immigration by increasing the share of work-related visas in the annual allocation of visas or by increasing their absolute numbers. Recent studies have shown that during the post-WW2 history of US-Mexican border control, the number of attempted illegal entries has been inversely related to increases in work-related visas when border patrol was strictly enforced. These results were evident in the period since 2001 when H2A/2B visas for seasonal farm/non-farm work were increased significantly as a result of measures taken to facilitate their access, while border control was strengthened.[19]

It would also make sense to delegate certain authority for the authorization of work-related visas from the federal to state governments, especially in those states where demand for immigrant workers has been strong,

and to introduce a system where work-related visas could be auctioned. The latter change would reduce the amount of smugglers' fees in part through the reduction of illegal immigration, while increasing significantly the amount of government revenue to offset some, if not all, of the fiscal cost of immigrant workers. An auction system would also tend to increase their educational level, which is important from the perspective of both reducing their fiscal burden and increasing the "immigration surplus".

4 Immigration and the US Economy: A Summary Assessment

The United States has played an important role in global immigration as it has in the other two dimensions of globalization (trade and finance) examined in previous chapters. Immigration does not impact the global economy to the same extent as trade and finance, yet it generates substantial welfare gains for the workers involved and can provide important flows of income to their countries of origin by means of migrant remittances. Nor is there the same degree of international coordination and oversight for international immigration that exists for trade and international finance, as countries have maintained tight national control of their immigration policies and have been reluctant to set any broad international objectives in this sphere of globalization.

The United States has the largest immigrant population of any advanced country and currently receives the largest flow of migrants. During the nineteenth century and early twentieth century, immigrants played a key role in the development of the US economy through the expansion of its workforce. Thereafter followed a period of severe restrictions on immigration, but since the mid-1960s, the US government has again expanded its issuance of migrant visas with the result that the share of immigrants in the total population of the United States is nearly as large as it was during the peak years of the late nineteenth and early twentieth centuries. With that increase, however, there has been a significant rise in the number of illegal immigrants since the mid-1990s, mainly from Mexico and Central America. This development has reflected difficulties in managing an immigration system with rigid limits on the issue of work-related visas, problems in border enforcement and a large excess demand by foreign nationals for entry into the United States. The immigration policy of the United States is an area where significant reforms are needed.

Immigration can provide significant benefits not only for the migrants themselves, but also for the country where they settle. Low-skilled immigrants (both legal and illegal), which represent around 40 percent of the labor force with a high school education or less in the United States, can provide important flexibility and efficiency to the labor market. They tend to be more mobile than native workers and responsive to shifts in labor demand, thus helping to avoid labor shortages or production bottlenecks. They have also proven to be highly motivated in their work, with higher rates of labor force participation and employment than native workers and lower rates of incarceration. Their direct competition with native low-skilled workers has been relatively limited, as they have often assumed manual labor functions for which their native counterparts can provide complementary skills in workforce management, sales or customer relations or be incentivized to undertake additional training in order to assume these responsibilities. Low-skilled immigrants active in household services such as child care have also had the effect of increasing labor force participation of native professional women with young children who might remain at home in the absence of such services. Apart from the labor force effects of low-skilled immigration, they have provided benefits in terms of lower consumer costs and broader consumer choice from the services they provide not only for household services, but also in terms of food preparation and restaurant development, household services, gardening and construction.

High-skilled immigrants with an advanced university degree or prior work experience in a STEM field represent the other extreme of the labor force where they represent a similarly high share of the US workforce as low-skilled labor. They also provide significant benefits to the American economy in terms of innovation, technology transfer and entrepreneurial activity. Some of the leading high-tech companies in the United States have been founded or led by immigrants. They also have been leaders in science endeavors and education and have been well represented among national Nobel prize laureates and MacArthur "genius" awards.

One area where immigrants have imposed an economic cost is in regard to their fiscal impact. At the federal level, the net fiscal impact of immigrants has been estimated to be positive, as they are primarily of working age, have tended to arrive with higher educational levels over time and do not in any significant way contribute to the cost of public goods, such as national defense and environmental protection. At the state and local level, their impact has tended to be negative, as their contribution to local

revenue has been lower and their claim on outlays has been higher than at the federal level because of their reliance on educational programs, medical services and public safety. At the aggregate level, these costs are not significant and have represented only around 0.1 percent of GDP.

In view of these costs, it would make sense for the United States to increase the share of its immigrant visas for employment-related purposes and give preference for those immigrants with higher educational credentials. It would also be useful to consider delegating some of the authority for granting employer-related visas for agricultural and non-agricultural immigrant workers to those states that have been highly dependent on these labor resources and instituting a system of visa auctions for immigrant workers. These changes would help to reduce the size of the illegal immigrant base in the United States.

Notes

1. These estimates have been drawn from Clemens (2011).
2. The most recent data on global migration trends can be found in *World Migration Reports* of the International Organization for Migration and on the website of the Migration Policy Institute (www.migrationpolicy.org), in particular for the United States.
3. For a comparison of immigration patterns across OECD countries, see Hanson and Macintosh (2016).
4. The data on illegal immigrants in the United States are drawn from a comprehensive study of the National Academy of Sciences (NAS) edited by Blau and Mackie (2016).
5. The data on the distribution of migrant workers by level of education can be found in Peri (2013).
6. The data on the allocation of visas for family and work-related reasons are drawn from Orrenius (2012).
7. These results are reported and discussed in Peri (2017).
8. The data on prize winnings and faculty positions held by immigrants in the United States are drawn from Hanson and Slaughter (2013).
9. These results were cited in Orrenius (2012).
10. These estimates of the "immigration surplus" are drawn from Orrenius (2016).
11. These results were cited in Orrenius (2012).
12. These various aspects of the fiscal impact of immigration have been examined in detail in Blau and Mackie (2016).
13. This aspect of the work by the NAS study is analyzed by one of the experts participating in the study, Professor George Borjas of Harvard University,

in a separate commentary, "A Users' Guide to the 2016 National Academy Report on the 'Economic and Fiscal Consequences of Immigration'", which appears in Blau and Mackie (2016).

14. This number for illegal immigrants is a widely accepted estimate, but it should be noted that other estimates indicate that the correct number could be 50–100 percent higher; see, for example, Fazel-Zerandi et al. (2018).
15. The factors behind the great wave of Mexican emigration to the United States are examined in more detail in Hanson and Macintosh (2010). These issues have been further analyzed by the Mexican Migration Project, a binational research program managed by the University of Guadalajara and Princeton University (mmp.opr.princeton.edu).
16. For an analysis of illegal immigration in the context of US low-skilled labor immigration, see Hanson et al. (2017).
17. These estimates have been generated by the Mexican Migration Project, cited in note 15. A recent report on the smuggling costs for the four stages of an illegal migrant worker's crossing from Mexico into Texas across the southern states to farm work in Florida was presented in the *Washington Post* of June 24, 2018. Also, recent smuggling fees for illegal migrants from Mexico have increased to as much as US$12,000 per person, according to a report in the New York Times of July 1, 2018.
18. These estimates have been drawn from Hanson (2010).
19. The relationship between the issue of work-related visas and illegal immigration is discussed in Clemons and Gough (2018).

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CHAPTER 6

The Impact of Globalization on Income and Wealth Inequality in the United States

Income and wealth inequality in the United States has been a growing phenomenon during the last 30–40 years along with the rising indicators of globalization, as explained in previous chapters. In this case, the obvious question to consider is to what extent globalization can be identified as a factor in that development. If so, then the problem of rising inequality in the US economy must be seen as a negative consequence of the United States' participation in globalization that deserves a policy response, as do a number of the factors identified in earlier chapters. After a review of the facts of income and wealth inequality for the US economy, this chapter takes up the issue of how trade, finance and immigration could have contributed to the problem of growing inequality in the United States. The chapter closes with some preliminary thoughts on how the government should address any of the links that may exist. The global financial crisis of 2008–09 was the first major development that provoked extensive debate on the extent to which inequality was a factor in its causation, as well as a consequence of its disruption and the Great Recession that followed. The period leading up to the elections of 2016 in the United States was a second event that crystalized debate about the roles that trade and immigration could have also played in the continued increase in inequality.

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1 The Facts of Inequality

Income and wealth inequality were on a declining trend during and after WW2, but then beginning in the late 1970s, this trend was reversed and measures of inequality showed a rise that was intensified after the late 1990s. These time periods since the late 1970s coincide closely with the second phase of the post-WW2 era of globalization and its intensification prior to and following the turn of the new century. Income inequality is commonly measured using the so-called Gini coefficient which measures the share of total income accruing to increasing shares (or percentiles) of the population. A measure of zero indicates perfect equality of income distribution, which means that each increasing share of the population receives the same increasing share of national income, whereas a measure of one indicates maximum inequality under which all the national income accrues to the highest measured percentile of the population.[1] By this measure, income inequality in the United States has followed a roughly U-shaped curve since the mid-1930s: its Gini coefficient fell from a peak of close to 0.50 in 1929 to a range of 0.37–0.39 from the end of WW2 to the early 1980s. Since then, it has steadily risen to around 0.45 in 2006, just prior to the global financial crisis, and further to 0.46 by 2012–2013, at about which level it has remained since.[2] Inequality in the United Kingdom has followed a broadly similar pattern, although it has not been as deep, nor have the Gini coefficients been as high as in the United States.

It should be noted that these coefficients take into account the effect of governmental tax and transfer policies, or social welfare programs, that are designed to reduce the incidence of inequality in the economy. What is striking about the United States is that it has the highest measure of ex-post inequality among all the OECD countries in Europe and North America, even though some of the other OECD countries in this comparison have higher levels of ex-ante inequality, such as Greece, Ireland and Portugal. Notably, the United States achieves the lowest reduction of that inequality through its tax and transfer programs among the OECD countries. In 2014, the United States reduced its ex-ante Gini coefficient by 22 percent by means of these programs, whereas the average reduction for the OECD was 37 percent.[3]

One can see similar patterns of income inequality in the United States as measured by the Gini coefficient in other indicators. The share of income accruing to the top 1 percent of the income scale has also followed a U-shaped pattern, falling from a share of nearly 20 percent in 1928 (on

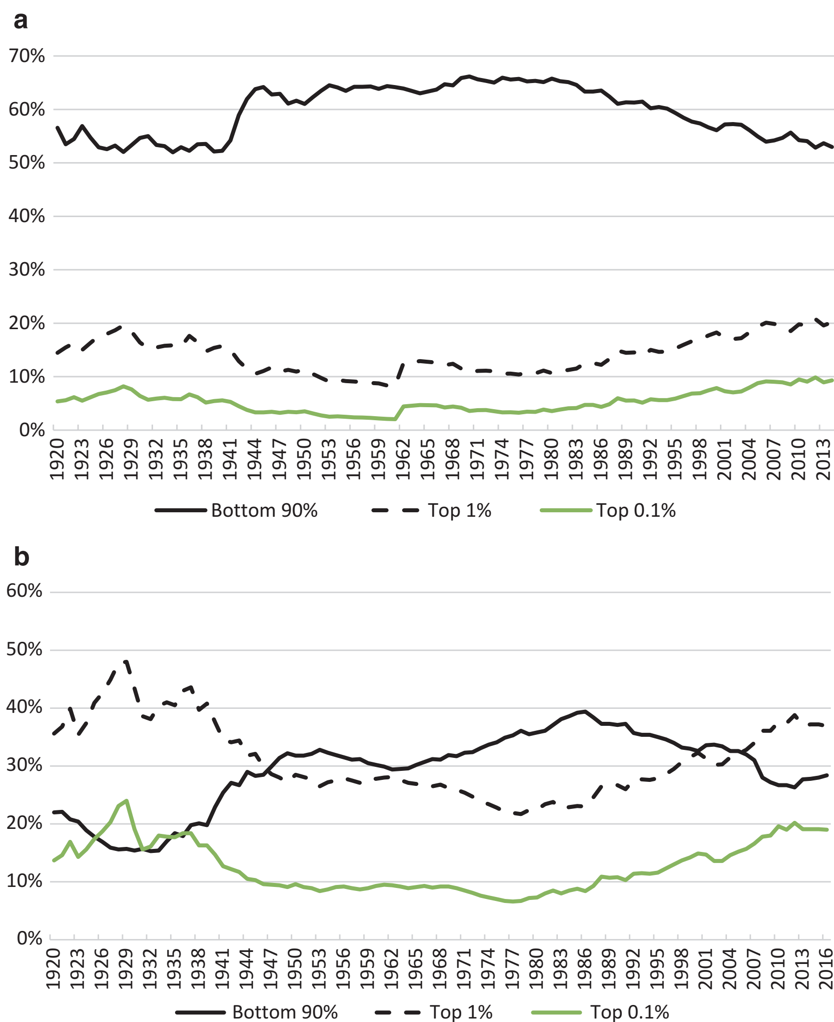

Fig. 6.1 (**a**) Share of income by population group in the United States. (Source: The World Wealth and Income Database (www.wid.world)). (**b**) Share of wealth by population group in the United States. (Source: Gabriel Zucman "Global Wealth Inequality" (2019) (http://gabriel-zucman.eu/))

the eve of the Great Depression) and to one of around 8.5 percent by 1960. It then rose again to an average of around 20 during the second half of the last decade, slightly higher than where it had been in the late 1920s (see Fig. 6.1a).

Notably with the rising share of the top 1 percent, there was a clear erosion in the income share of the bottom 90 percent of the income scale from 66 percent in 1970 to 54 percent in in 2007, on the eve of the global financial crisis, which has continued in the period since. In line with these developments, the ratio of the earnings of the top decile of the income scale to median earnings has increased from a low of around 146 in 1951 to close to 250 in 2015.[4]

As a result of the work of Thomas Piketty, Emmanuel Saez and Gabriel Zucman, analysts now have access to a unique, cross-country database on wealth inequality that has been developed from tax records for the last 100 years. The major highlights of this database were featured in a ground-breaking book by Piketty (*Capital in the 21st Century*) that was published in 2014. This book quickly became a bestseller, not only because of the clarity and sweep of its findings, but also because of the concerns about inequality that were aroused by the global financial crisis. The data presented in this book, which are now available on an updated basis in the World Wealth and Income database (www.wid.world), pointed to a U-shaped pattern of inequality in wealth in the United States that was more striking than for income, as measured by the share of wealth concentrated within the top 0.1 percent of the population.[5] In 1929 on the eve of the Great Depression, this share was 24 percent, but by 1978 it had dropped to 6.7 percent (see Fig. 6.1b). Over the course of the next three decades, it reversed course, rising to around 17 percent in 2007 and then to 20 percent by 2012, at about which level it has remained since. Remarkably, the share of wealth accruing to the top 0.1 percent of the population in 2012 was only 6 percentage points less than that accruing to the bottom 90 percent of the distribution, thus having eliminated most of the difference between these two groups that was as high as nearly 30 percentage points in favor of the latter group in 1978.

One final set of indicators that point to a growing problem of income inequality in the United States relate to labor or wage income. The first of these shows that the shares of labor and capital income in total income have been changing during the period under review with a clear shift in favor of the latter. In the mid-1970s, labor's share of total income was around 55 percent, but by 2007, this share had dropped to around 50 percent; since then, there has been some recovery in labor's share, but it is still well below its share of the 1970s. While a full explanation for this development is still being debated, it appears that one of the factors has been a second, marked change in labor data related to the divergence

between real wage gains (or hourly compensation of workers adjusted for inflation) and the growth in labor productivity (or the rise in production per hour of work). Between 1948 and 1978, there was a strong similarity in the historical trend of these two data series, as one would expect for an economy growing at or near its potential rate. However, during the following decades, these two indicators diverged sharply, with productivity increasing by 74 percent and real wages rising by only 9 percent.[6] With labor productivity growing at an annual rate of around 2 percent since 1978, this stagnation in real wages represents a substantial erosion in labor income in the United States.

This stagnation in real wages is also reflected in a third indicator of labor income that is consistent with the growing problem of income inequality in the United States, namely the disparity between the growth in wages for high-skilled and low-skilled workers. One measure of this gap, the so-called college premium, or the ratio of a typical college graduate's earnings to that of a typical high school graduate, has increased substantially since the mid-1970s, rising from around 1.1 in 1975 to 1.7 in 2015.[7] Most of this increase reflected the growing gains to college-educated workers and the relative stagnation in the wages of high school graduates. The traditional, consensus view among economists has been that the wage polarization reflected in the college premium was caused mainly by the effect of skill-biased technological change in the US economy that has increased the demand for high-skilled workers in an economy dominated by the ICT revolution. As a result, wage awards to college graduates, and even more so to those with graduate training in STEM fields, have increased at a rate that has been far in excess of those available to the rest of the labor force. Technological change has also had the effect of reducing the relative price of investment goods in the US economy and firms' cost of capital which have led them to substitute capital for labor in their operations. Over time, if capital and labor were highly substitutable, which appears to have been the case, especially for low-skilled labor, the resulting increase in the capital intensity of firms would have been a factor working to reduce the relative share of labor in total income.

The recent gains in technological progress and the capital intensity of firms as a result of the ICT revolution have also had the effect of increasing the productivity of certain firms, especially those that have been able to operate in global markets, which has been viewed as an additional factor contributing to wage polarization and the rise of "super-star" firms and individuals.[8] This factor has been clearly in evidence with the enormous

increase in CEO compensation that has been virtually without limit since the turn of the new century. In addition to the effect of technological progress, the subordination of boards of directors to the desires of corporate management, the multiple board memberships often held by individual directors (constituting a well-defined club) and the influence of specific consultancies on the determination of CEO compensation practices have all contributed to this trend. These trends have occurred most significantly in sectors where businesses have been more concentrated and have had more market power. It is also the case in these firms that labor's share of income has declined the most.[9]

As a result of these trends in labor market developments, wage dispersion in the United States, as measured by the ratio of the ninth earnings centile in the earnings dispersion (highest) to the first earnings centile in the dispersion (lowest), has been the largest of all OECD countries, rising from 4.8 in 2006 to 5.1 in 2016. The latter figure was nearly 50 percent higher than the OECD average, which had in fact declined moderately since 2006. Consistent with this wide dispersion, the incidence of low pay in the wage dispersion of workers in the US economy (as defined by the percentage of workers earning less than two-thirds of median earnings) has been one of the highest in the OECD, namely 24.9 percent or nearly 60 percent higher than the average for OECD countries.[10]

One final factor that needs to be taken into account in understanding the suppression of average wage income in the US economy and its growing dispersion since the late 1970s is the decline in union power. The share of private sector workers who were members of labor unions declined from 24 percent in 1973 to 7.5 percent in 2007 and to 6.5 percent in 2017. For a number of years until now, the rate of union membership has been far higher among public sector workers, but it is likely that this number will begin to decline as a result of a recent Supreme Court decision (Janus v. AFSCME Council 31) of the October 2017 term that is expected to weaken the power of public sector unions to organize. This decision prohibited state and local government unions from collecting fair share fees to cover the costs of representing those government workers who chose not to join these unions.

In light of the preceding discussion, one question that arises is to what extent the forces of globalization have also contributed to the increase in inequality in the US economy, to which we now turn.

2 The Contribution of Globalization to Inequality in the United States

Based on previous chapters, it is clear that trade, finance and migration have each contributed to structural change in the US economy, so it would not be a surprise to learn that over the long term these forces have also played some role in the rise of income and wealth inequality in the US economy. In fact, the popular and political discussion preceding the 2016 election cycle and the decision-making of the current governmental administration in Washington, D.C., has largely assumed that to be the case. However, at best, the evidence is mixed, and one cannot reach an unambiguous conclusion that globalization has played an important or major role.

In the area of *international trade*, the standard framework for thinking about the redistributive effects of trade liberalization is the factor price equalization concept drawn from the Heckscher-Ohlin/Stolper-Samuelson model that was discussed in Chap. 3. That model shows that with the opening of trade between two countries producing two goods with two factors of production (capital and labor), production and exports will shift in each country toward the good that it can produce most efficiently using the dominant factor at its disposal. If one country is more abundant in capital, it will shift its production and exports toward the good that is more capital intensive, whereas the other country, if it is more abundant in labor, will shift its production and export toward the good that is more labor intensive. This process of adjustment to trade will shift the relative prices of the two factors of production in each country in favor of the factor that is used more intensively in export trade, raising income to capital and lowering it to labor in one country and doing the opposite in the other country. Over time, the relative rewards to labor, or wages, in the labor-abundant country should rise, while those in the capital-abundant country should fall until they reach a point of similarity, with clear redistributive effects between labor and capital in each country. In a version of the model with both high-skilled and low-skilled workers, the tendency for wage equalization will apply to low-skilled workers in the capital-abundant country, as high-skilled workers who are complementary to capital will see an increase in their wages. Thus, a growing divergence in high-skilled and low-skilled wages would take place, along with the growing similarity between low-skilled wages in both countries. Nevertheless, with these effects, there are still net gains to be made from

international trade as the rewards to capital and high-skilled labor in one country and low-skilled labor in the other country will be larger than the losses suffered by the other factors.

With the growth of trade in manufactured goods between the United States and emerging markets or developing countries after the mid-1970s, there was obvious interest among analysts in examining whether or not the effects described above could be detected in the data. In particular, could international trade be a contributing factor to the dispersion of wages between low-skilled and high-skilled workers discussed in the previous section? In the case of emerging market economies, analysts have not detected a clear shift in factor rewards in favor of labor. To a large extent, this result may be explained by the fact that the predicted outcome has been masked by the effects of technological change that have strengthened rewards to owners of capital and business entrepreneurs. As regards wage inequality in the United States, most economic studies have found a limited effect from international trade on the college premium or wage dispersion, indicating that only around 10–15 percent of that result can be attributed to US trade with lower-cost producers of manufactured goods in the developing world.[11] Instead, most of the wage divergence has been attributed to skill-biased technological change as discussed in the previous section of the chapter.

Another important aspect of trade globalization has been the off-shoring of production that has been associated with the development of global value chains. Trade integration, the ICT evolution and advances in transportation have allowed manufacturers in the advanced countries to relocate some of the more labor-intensive phases of their production processes to countries with lower labor costs. As a result of NAFTA, for example, the final production of automobiles in the United States for domestic sales or exports has reflected the assembly of certain component parts of those goods in Mexico or Canada where production costs were cheaper than in the United States. Within the United States, this process of off-shoring/outsourcing or capital mobility via foreign direct investment has had the effect of lowering the labor share of auto production here, while reducing the bargaining power of labor within that production. It is not clear, however, what the negative quantitative impact of these effects on labor income has been, if any.

A further aspect of trade that has been the focus of criticism has been the impact of imported goods that have competed with domestic production. The case that has received the most attention recently is that of US

trade in manufactured goods with China which increased strongly following that country's entry into WTO in 2001, as discussed in Chap. 3. During 2001–11, the share of US imports of manufactured goods from China more than doubled from 10.9 percent to 23.1 percent, precisely at a time when there was an acceleration in the downward trajectory of employment in the US manufacturing sector from 17 million to 11.4 million. Economic studies have shown that around two million of those job losses could be attributed to the direct and indirect impact of trade with China. However, it should be recognized that this number is reduced by half when one examines the growth in US exports and imports of goods during this same period of time and that the number disappears when one considers the growth of exports and imports of goods *and* services during this period of time. These results suggest that the negative employment effect of import trade with China has over time been fully offset by the growth in employment in other areas of goods and services production for trade, consistent with the dynamism of the US economy and the flexibility of the US labor market. Similar kinds of positive and negative effects can also be traced to NAFTA but on a more reduced scale. In regard to China and NAFTA trade, it should also be noted that from the mid-1990s to the outbreak of the global financial crisis, there was a steady decline in the rate of unemployment confirming the overall ability of the US economy to adjust favorably to its growing integration with the global economy. Nevertheless, as a result of the China trade "shock", it needs to be recognized that there were some pockets of unemployment created in certain locations of import-competing industries (but not on a scale to affect the overall unemployment rate) where adjustment did not take place and some workers remained unemployed or simply dropped out of the labor force, thus contributing to the problem of inequality. Neither the normal churn of economic activity, nor the scope of governmental assistance programs, were strong enough to maintain these workers as productive members of the labor force.

In considering the potential impact of trade on inequality, however, one must not lose sight of the fact that perhaps the strongest effect on the US economy has come through consumption rather than production. The growth of import trade has given rise to a decline in consumer prices for many goods and an expansion in consumer choice that has represented a significant gain in real income, in particular for those at the lower percentiles of the income scale. In one study using data for the 2005–07 period, the aggregate real income effect of trade associated with lower prices for

goods and expanded consumer choice was estimated to be equivalent to 8 percent, but this effect was estimated to be as high as almost 70 percent for consumers at the tenth percentile (i.e., low end) of the income scale whose expenditures are concentrated in sectors, such as food and beverages, that are mainly traded.[12] This favorable effect of trade on inequality far outweighs any of the negative effects of trade on inequality discussed above.

The area of *financial globalization* and its impact on income inequality and the US economy raise a different set of considerations from those for trade, with both positive and negative effects. The expansion of the financial sector has generally been a positive factor in the development of the US economy, as it has promoted the growth of business operations, new business development and greater savings and efficiency in business-related financial transactions. At the individual level, access to finance would have supported income equality as it would have enabled lower-skilled workers to make long-term purchases of durable goods and housing. With the globalization of finance, these same benefits would have applied along with improved methods of consumption smoothing and the diversification of investment opportunities. Notwithstanding these benefits, since the mid-1990s as financial globalization has rapidly developed, the financial sector in the United States has contributed to the problem of growing inequality. One indicator that is suggestive in this regard is the rapid growth of the financial sector as reflected in its relative share of GDP, which rose from 2.8 percent in the 1950s to 7.6 percent on the eve of the global financial crisis. Much of this expansion reflected the growing financialization of the US economy since the mid-1990s and the churning of financial transactions related to derivative trading in mortgage-backed securities, collateralized debt obligations and credit default swaps in the period leading up to the global financial crisis that was discussed in Chap. 4. In this connection, recent research has shown that the growth of the financial sector is a positive factor for an increase in productivity and economic development for economies up to a certain level of income per capita but that after that level this relationship is reversed.[13] The United States had exceeded that level in the period leading up to the global financial crisis.

This tendency for the growing inefficiency in the US financial sector is also supported by other evidence suggesting rising costs in the delivery of financial services, notwithstanding the positive benefits for efficiency in the financial sector associated with the ICT revolution. According to the

work of Thomas Philippon, the cost of providing US$1 of financing from the financial sector rose from US$0.20 in 1989 to US$0.24 in 2011, which was reflected in a rising cost of financial intermediation. Such an increase was unusually high in comparison with that of other non-financial trading activities in the US economy. After further analysis, Philippon concluded that the share of financial services in the US economy was around two percentage points higher than it should be, signaling an annual misallocation of resources (or rent-seeking) of around US$280 billion.[14] It is quite likely that this estimate included excess profits or rents in the form of salary compensation and trading fees, as reflected, for example, in the lower-than-normal tax rates applied to the earnings of private equity and hedge fund managers. In line with these developments, it seems clear that the financial sector has contributed to the problem of growing wage inequality noted earlier. Between 1979 and 2005, the financial sector increased its share in the highest 1 percent of the income scale from 7.7 percent to 13.9 percent and from 11 percent to 18 percent of the highest 0.1 percent. Similarly, the ratio of average wages in the financial sector to those for non-financial sector wages in the US economy rose from 1 on a normalized basis in 1980 to 1.7 in 2006.[15]

The developments described above in the US financial sector all occurred during a period of rapid globalization of finance in which the United States was a leading player. Beyond the financial sector, the mobility of capital more generally in the US economy as a result of capital account liberalization would have been a factor contributing to income inequality. The mobility of capital would have shifted the tax burden onto the immobile factor (labor), and in particular low-skilled labor, as high-skilled workers were more mobile than low-skilled workers or were protected by wage gains in the high-tech sector. The mobility of capital has also created substantial competition in corporate taxation among the advanced countries which US-based multinational corporations have exploited through a manipulation of transfer pricing and the practice of tax inversion in order to allocate their profits to foreign tax jurisdictions with low tax rates. Over time, this practice has increased pressure on the United States to lower its corporate tax rate, which it did (from 35 percent to 21 percent) with the Tax Cuts and Jobs Act of December 2017. These developments have also had the effect of constraining the growth of social welfare expenditures and tax transfers in the US government budgets that have been used to reduce the incidence of income inequality.

Notwithstanding the negative aspect of international capital mobility on income inequality noted above, it should be recognized that long-term capital inflows to the United States in the form of foreign direct investment (FDI) have been a significantly positive force for employment growth and wage enhancements. Foreign direct investment is also attractive because it is less volatile than other forms of international flows such as international banking transactions and portfolio flows that were at the center of the global financial crisis. The United States has been the largest source and recipient of foreign direct investment in the global economy, with inward flows slightly in excess of its outward flows. On a cumulative basis, the inward stock of FDI for the United States amounted to US$7.8 trillion in 2017, which exceeded that of the next largest recipient (Hong Kong) by US$5.8 trillion. The strong protection of property rights in the United States, the dynamism of its economy and the flexibility and skill level of its labor force have all contributed to making the United States an attractive destination for foreign investment.

A commonly expressed concern of FDI flowing abroad is that it supports the transfer of jobs overseas. However, this is incorrect, as most outward FDI from the United States represents intra-firm operations abroad that support higher levels of US exports to those countries. In the case of inward FDI, these inflows have predominantly been motivated by foreign company interests in building US manufacturing capability to serve domestic consumer demand or use the US economy as a platform for export sales to third countries. In the case of exports generated by FDI and foreign investment in US manufacturing capacity, experience has shown that jobs related to these activities have paid wages that are significantly higher than those for other purely local manufacturing activity. Inward FDI has also been an important source of innovation and technological development in the sectors in which it has been active.

The global financial crisis highlighted an area where international capital flows can contribute significantly to income inequality. As noted earlier, the years preceding the crisis were a period of financial speculation and rent creation that generated substantial income gains for managers in the financial industry. Within the industry itself, one could see evidence of wage polarization that was common within the economy more generally. The bankruptcies and losses caused by the financial crisis mainly affected those in the upper segments of the income scale and thus would have contributed to a temporary decline in income and wealth inequality. However, the macroeconomic distress and disruption of the Great

Recession that was caused by the financial crisis, just as in the case of the Great Depression, provoked losses in employment and income that were widespread and most severe for those in the lower segments of the income scale. These losses represent the strongest justification for a robust system of capital requirements and regulatory supervision, which regrettably the United States did not have in place in the period leading up to the crisis.

The area of *immigration* has been less consequential for income inequality in the United States than international trade and finance, even though it has been the focus of attack by those who are concerned about the negative consequences of globalization. The share of foreign-born workers in the American labor force has increased over the past 25 years from around 8 percent to 13.5 percent. As noted in Chap. 5, they have been most strongly represented in the two extremes of the labor force in terms of educational levels, and in that respect, they have not had a significant effect on relative wages and wage dispersion in the US labor force that was discussed earlier. In fact, in two periods of immigration (1980–90 and 1990–2000), when the wage gap between low-skilled and high-skilled workers increased the most in the United States, the increase in immigrant workers in these two groups contributed moderately to a reduction in the wage gap.[16] More generally, economic studies have shown that immigrant workers have not been a substitute for native workers, and thus did not have any significant effect on the wages of domestic workers, except for the lowest educated segment of the labor force, where the measured effect was only around 1 percent. Their more pronounced impact was on the wages of previous groups of immigrants. Overall, the impact of immigrant workers has been very positive for the US economy in terms of their mobility and enhancement of labor market flexibility, their contributions to new business development and positive role in innovation and technological development.

3 Addressing Problems of Inequality

While there may not be major links between globalization and inequality, it is nevertheless critically important that the problem of inequality be addressed as a major issue of public policy because of its impact on social cohesion, the welfare of low-income segments of the population, the vibrancy of the democratic political process and ultimately economic growth. Rising inequality is also, correctly or not, viewed by many people as a major adverse effect of globalization that will contribute to populist

pressures to limit its further expansion and the gains associated with a further integration of the United States with the global economy. The events leading up to the global financial crisis and since, along with landmark historical studies on income and wealth inequality by Thomas Piketty and his associates, have heightened awareness of the problem of income inequality. Unfortunately, at present, this issue has not been given at the government level the importance it deserves as a problem of social policy even though it has begun to enter into the political debate, and thus it is likely to become worse before it gets better. However, it remains an important issue of concern within non-governmental bodies (i.e., universities, think tanks and non-profit organizations). The paragraphs that follow lay out some brief, but essential, elements of a strategy to reduce income inequality.

In the range of measures to consider, there are those that have a short-to-medium term effect and those that operate over the long term. Similarly, there are those that are more structural in nature and others that operate through economic incentives. As a short-term measure, the one area already identified where the United States is quite weak in relation to other members of the OECD is its tax and transfer policies. In particular, it achieves far less in terms of income redistribution through its tax system than any other advanced country. In fact, the general thrust of tax reform in the last few decades has been to reduce the country's tax effort, as well as its progressivity. This trend should be reversed. There are a number of actions that can be taken to increase the breadth of the tax system and its progressivity by closing loopholes and the special treatment of certain incomes that bestow a disproportionate benefit on high-income individuals, for example, private equity and hedge fund managers, as noted earlier.[17] More progressivity in marginal tax rates should also be considered. In the past, a more progressive tax system has not been a deterrent to sustained economic growth, as evidenced by the experience of the first 2–3 decades following WW2, during which marginal tax rates for the highest percentiles of the income scale were significantly higher than they are today. A higher marginal rate of taxation at the highest income level would also act as a deterrent to the award of very high levels of executive compensation.[18]

In addition to greater progressivity in the income tax, consideration could be given to the introduction of a wealth tax on asset holdings (financial and non-financial) in excess of a certain threshold. If this kind of change in the tax system were introduced, efforts would need to be made

to identify large holdings of financial assets by US nationals in tax havens abroad. In this connection, Thomas Piketty and his associates have recently made a proposal for the creation of a global financial register that would be part of an international effort to identify financial assets hidden abroad by wealthy individuals that they have estimated to amount to 10 percent of global GDP.[19] At the same time, further work at the international level is needed to reduce the base erosion and profit shifting of large multinational corporations that have led to their widespread tax avoidance in the United States.

On the expenditure side, public transfers have predominantly taken the form of social security payments and Medicare expenses, which have mainly protected the middle class while achieving less by way of income redistribution. By contrast, Medicaid at the state level has been an important supplement to the Medicare system for low-income individuals and families, which should be expanded. It is also important, however, that the social security system be put on a sustainable basis by raising the cap on income that is subject to payroll taxes, which would also increase its redistributive effect. Additional government transfers to support universal preschool education, nutrition programs and healthcare assistance would be a critically important contribution to the improvement of educational opportunities for low-income children that are essential for the reduction of income inequality over the longer term. Among OECD countries, the United States has the lowest share of children aged 3–4 that are in early childhood education programs (54 percent), compared with an average of 80 percent for the group as a whole, and one that is below that of Chile and Mexico.[20]

In addition, as noted in Chap. 4, efforts should be made to strengthen and expand government assistance by way of active labor market policies to workers displaced by import competition and other shocks of a structural nature associated with technological change to facilitate their shift to new employment and/or job locations. One element of the tax system that has been very important for low-income individuals as an incentive for work has been the earned income tax credit, which should be expanded, along with the possible introduction of wage subsidies to encourage the hiring of low-skilled workers. It would also be important to introduce a carbon tax as a key inducement to reduce the reliance of the United States on fossil fuels for energy consumption and as one means of providing new revenue for an expansion in social programs for low-income groups.

In the financial sector, there are a number of aspects of public policy that need to be addressed to reduce the creation of rents and the likelihood of financial crises, both of which have contributed to the worsening of income inequality. A sound framework of financial regulation and supervision with robust capital and liquidity requirements for all banks, along with stress tests and capital surcharges for the minority of systemically important financial institutions, is an essential safeguard to financial stability. In addition, actions to end the implicit bailout protection for the largest financial institutions that support unsound banking practices and excess rents for senior bank executives are needed. As recounted in Chap. 4, these elements were lacking in the lead-up to the global financial crisis. The creation of a Consumer Finance Protection Bureau in the wake of the crisis has been an important deterrent to acts of fraud and abuse in the household finance sector and the threats these pose for low-income individuals.

Changes should also be made in the governance of financial institutions to reduce unsound banking practices or the accumulation of excess rents. One is the separation of the positions of chief executive officer and chairman of the board of directors and the creation of independent or outside directors in order to introduce more accountability for the actions of senior bank officers. These changes would allow for clear guidelines for the determination of the fixed and variable components of executive pay that give appropriate incentives for maintaining the solvency of the financial institution concerned.

Finally, consideration could be given to the introduction of a tax on financial market transactions as a means of reducing high-volume, speculative trading that played an important role in the onset of the global financial crisis. Most proposals that have been made in the past have suggested a tax of 1–10 basis points (0.01–0.1 percent) on the value of a financial transaction. However, to be effective, such a tax would have to be managed on an international basis.

4 Globalization and Inequality: A Summary Assessment

In the age of globalization, growing income and wealth inequality have been significant features of expansion in the US economy. To what extent globalization and inequality have been related phenomena is an important question in terms of coming to a judgment about the costs and benefits of the United States' growing integration with the global economy.

The increase in income inequality in the US economy can be measured in a number of ways. In terms of the Gini coefficient, the United States now has the highest level of inequality of any member of the OECD, after the effect of government transfer and expenditure programs designed to reduce inequality. In this area of government policy, it is noteworthy that the United States achieves less than any other member of the OECD. There has also been a significant deterioration in income equality when one considers the relative shares of national income controlled by the top 1 percent and the bottom 90 percent of the income scale. The former group nearly doubled its share from 1980 to around 20 percent in 2014, whereas the latter's share declined from around two-thirds to close to one-half over the same time period. The deterioration in wealth inequality was even more dramatic. Finally, it is important to take note of the increase in wage polarization in the US economy, as measured by the ratio of earnings by the ninth earnings centile of the income scale (highest) to the first centile, which rose from 4.8 in 2006 to 5.1 in 2016, the highest among the OECD countries. This development has contributed to the declining share of labor income in total US national income.

Critics of globalization have alleged that it has contributed significantly to the growing problem of inequality in the United States. However, when one considers the evidence for trade, finance and immigration, the case for such an allegation is not so clear, as one can find positive and negative links between the two phenomena. In the case of international trade, a redistribution of income from labor to capital and from unskilled to skilled labor is part of the basic conceptual framework favoring trade of an advanced country with a developing economy. Nevertheless, when one considers the evidence, it seems that most of the redistributive effects just noted should be attributed to technological change. The ICT revolution has lowered the relative cost of investment goods and promoted capital deepening that has lowered the share of labor in income generated by the manufacturing sector. In terms of the effect of trade on labor income and employment, much attention has been given to the case of China's enormous expansion in its exports of manufactured goods following its admission to WTO in 2001. Undoubtedly, there were long-term dislocations of production and employment in certain areas of the United States that competed with Chinese imports, but at the aggregate level, these losses have been offset by employment gains in US export development that took place at the same time as the China "shock" and by the absorption of labor and capital in other areas of industrial and services activity within the

US economy. In addition, in coming to a judgment about the impact of foreign trade on income equality, one must take account of the positive, real income effects of imported goods on the choice and cost of consumer goods which have been unambiguously positive.

The integration of the United States in global finance also has had mixed effects. Initially, the expansion of the US financial industry associated with financial globalization was a positive factor in terms of the promotion of new business development and a broadening of new investment opportunities. However, with the increased financialization of the economy, international financial trading became less useful in terms of promoting sound economic development and more speculative, especially in the period leading up to the global financial crisis. During this period, the financial industry clearly contributed to income inequality and wage polarization in terms of the rents it generated and the pay awards it offered. The financial crisis and the economic disruption that followed caused a further significant deterioration in income inequality. Nevertheless, during this period leading up to and since the financial crisis, foreign direct investment has been an unambiguously favorable development for employment and wages.

Immigration has been a largely positive force for income equality in the United States. Foreign workers have filled a growing share of the labor force and are likely to continue to do so with the retirement of the baby boom generation and aging of the labor force. Little negative effect of migrant workers on the wages of native workers has been identified, except at the very lowest skill level. At the same time, immigrant labor has increased the flexibility of the US labor force and has filled in gaps where native workers are unavailable or seasonal labor demand is very high.

The sharp expansion in income inequality during the era of rapid globalization makes it imperative that corrective actions be introduced, regardless of whether or not there are strong links between these two phenomena, in order to deal with populist concerns and maintain a cohesive social fabric. There are a variety of actions in different areas of public policy that should be considered in tackling this issue that call for an expansion of the government's tax and transfer policies. In addition, a strengthening of financial regulation is essential in order to eliminate unsound banking practices and lower the risk of financial crises. This effort should be supplemented by changes in corporate governance in order to lower incentives for the creation of excessive rents and protect financial solvency.

Notes

1. Deaton (2013) explains the Gini coefficient as "the average difference in income of all pairs of people divided by twice the average income. If there are two of us, and you have everything, the difference between us is twice the mean and the Gini is one. If we both have the same, the difference between us is zero, and the Gini is zero (p. 187)."
2. The data series of Gini coefficients for the United States and other countries can be found at the Chartbook of Economic Inequality (www.chartbookofeconomicinequality.com). One of the founders of this website was a leading analyst of income inequality, Anthony Atkinson; his last book, Atkinson (2015), provides an excellent summary of his many years of study of the causes and remedies for income inequality.
3. These data on inequality are drawn from Kirkegaard (2017).
4. These data appear in the Chartbook of Economic Inequality cited in note 2.
5. The World Inequality Lab which maintains the World Wealth and Income Database (www.wid.world) has recently started publishing an annual World Inequality Yearbook. The first yearbook was published in 2018 (https://wir2018.wid.world).
6. These data were assembled by Mishel et al. (2015).
7. These data are drawn from Jason Furman, "Inequality: Facts, Explanation and Policies", a talk given at the City College of New York City (October 17, 2016), page 9.
8. The role of this factor in accounting for the declining share of labor income is examined in Autor et al. (2017a).
9. This relationship has been examined and shown to be statistically significant by Autor et al. (2017b).
10. These data have been taken from the 2018 OECD *Employment Outlook*, Table O.
11. These results are discussed in Krugman (2008).
12. The authors of this study were Fajgelbaum and Khandelwal (2016).
13. This relationship is examined in a paper by Cecchetti and Kharoubi (2015).
14. This estimate is derived in Philippon (2012).
15. These data are taken from Stiglitz (2015).
16. These results are presented in Peri (2017).
17. Natasha Sarin and Larry Summers have provided an excellent summary of the many options that can be considered for closing loopholes, broadening the tax base and increasing the progressivity of the tax code in a commentary they published in *The Boston Globe* on March 28, 2019 ("A Broader Tax Base That Closes Loopholes Would Raise More Money Than Plans by Ocasio-Cortez and Warren").

18. Two prominent contributors to the World Inequality Database (WID.world), Emmanuel Saez and Gabriel Zucman, made this point in an op-ed piece of *New York Times'* "Alexandria Ocasio-Cortez's Tax Hike Is Not About Soaking the Rich: It's About Curtailing Inequality and Saving Democracy" on January 22, 2019.
19. The proposal to establish a global financial register is laid out in Part V of the 2018 World Inequality Report (www.wir.world).
20. These shares for the OECD countries were reported in *The Economist* magazine of January 26, 2019, p. 23.

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CHAPTER 7

Current US Economic Policy and the Outlook for Globalization

Since January 2017, the US government has been introducing a number of changes in the economic policy affecting foreign trade, finance and immigration that signal a sharp break from previous trends. These changes raise basic questions about the role of the United States within the liberal international economic order, as well as the future course of economic and financial globalization. These issues are examined in this chapter. The first section attempts to define the changed role that the United States has identified for itself in the global system. This section is followed by a discussion of specific actions the US government has taken in each of the three areas mentioned above that reflect this change and their implications for the stability of the global economy. In many instances, these implications are negative.

1 The Role of the United States in the International Economic Order

Many early actions taken by the current government of the United States signal a withdrawal from multilateralism and a more suspicious attitude toward international commitments that previous governments had made. The cancellation of US participation in the Trans-Pacific Partnership (TPP) in January 2017 and the government's withdrawal from the Paris Climate Accord in June 2017 are good examples of this new approach. In

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addition, the government has made a number of threats to withdraw from the WTO and has refused to agree to the appointment of new Appellate judges which are necessary for its dispute settlement system to function, even though the United States has been a significant beneficiary of this system. In respect of other international organizations, US withdrawal has been announced, for example, in the case of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and multilateral negotiations on the Global Compact on Migration, while it has reduced substantially its financial support for the UN Relief and Works Agency (UNRWA). In general, a claim has been made that these organizations or arrangements have not adequately served US national interests or have imposed too much of an economic or financial burden on the United States. While these may be legitimate concerns, it also depends on how those national interests are defined and what the United States, as a major stakeholder in these agreements, is doing to ensure that their basic objectives are being achieved.

One document that gives some definition to the current government's vision of the international order is the "America First National Security Strategy" (NSS) of December 2017.[1] This document is required by law of each new administration and lays out a broad agenda of actions and policy objectives across a range of sectors that are needed to meet the national security interests of the United States, both globally and with respect to different regions of the world. This document is notable for the degree to which it emphasizes the multiple threats that the United States faces in the international arena from both state and non-state actors, without acknowledging the sustained peace, prosperity and stability that the country and the global system have enjoyed since the breakdown of the Soviet Union in 1989. It also advances in many places the theme that the United States has been a victim of other countries' unfair economic practices, especially in the area of trade policy. In this regard, the Strategy gives primary emphasis in a number of places to the need for "fair and reciprocal economic relationships to address trade imbalances (p. 4)", although it is not clear from the document what is to be understood by "reciprocal economic relationships". Reciprocal trade agreements have usually been understood to mean mutual reduction in tariff and other trade barriers to promote bilateral or multilateral trade. However, rarely, if ever, have these measures been invoked to address trade imbalances between two or more countries.

The concern raised about the economic practices of other countries is also reflected in the document's limited references to the main multilateral economic organizations (IMF, World Bank and WTO): "We stood by while other countries exploited the international institutions we helped to build. They subsidized their industries, forced technology transfers and distorted markets (p. 2)." The document includes specific references to the need for reform of the institutions noted above, but the purpose or objective of reform is not defined. In the case of the IMF and World Bank, the Strategy only specifies that reforms should "include encouraging multilateral development banks to invest in high-quality infrastructure projects that promote economic growth (p. 41)". In the case of the WTO, it recommends that reform efforts should be focused on making it a more effective forum for adjudicating unfair trade practices. While this is one of the core functions of the WTO, it should be recognized that this reform objective is now being frustrated by the US government's refusal to approve new appointments to its Appellate Body (AB), as noted earlier. In general, the NSS document portrays an attitude of suspicion and withdrawal on the part of the United States from multilateral commitments and institutions that represents a sharp break from the international orientation of previous administrations.[2]

Immigration policy is another area where the Strategy gives significant emphasis, primarily from the perspective of illegal immigration and the need for tighter border security and control, consistent with a major theme of the 2016 presidential election campaign. Even though the document calls for immigration reform, it does not provide much guidance for achieving this objective, except to call for higher priority to be given in visa and citizenship applications to the work and technical skills of applicants, as distinct from randomized entry or extended family connections as is the case now; such a change would be appropriate.

The Strategy largely overlooks the financial arena. Foreign direct investment is not discussed, except indirectly in reference to bilateral investment treaties. Nor is there any follow-up to the global financial crisis, except in terms of a call for lower regulation of banks; a tightening of bank regulation following the crisis, it claims, has frustrated new bank formation and limited the availability of credit for consumers. It also should be noted that there is no discussion in the Strategy of the need for measures to strengthen anti-money laundering and combat the financing of terrorism (AML/CFT), even though there are many references to the problem of terrorism.

2 Recent Changes in US Foreign Trade Policy

As suggested by the NSS paper, trade policy has been given a high priority by the current government of the United States, and a number of important actions have been taken that represent a clear departure from the practice of previous administrations. These actions represent the adoption of a more protectionist attitude regarding foreign trade and the widespread use of tariffs to advance international economic objectives. These policy changes, if sustained, could threaten the rules of the global trading system that have been in place for most of the post-WW2 era and represent one of the main underpinnings of the liberal international economic order. Of particular concern are the imposition of a 10 percent tariff on aluminum imports and one of 25 percent on steel; the adoption of tariffs on a wide range of imports from China; and the threat of tariffs on auto imports from the European Union.

One of the key objectives of these actions is to reduce the size of the overall trade deficit for the United States and its bilateral trade deficit, in particular, with China. At the outset, it needs to be recognized that on both conceptual and empirical grounds the use of tariffs will not be an effective tool for achieving these objectives. As explained in Chap. 2, the overall trade (or current account) deficit represents the difference between national saving and investment and, therefore, it reflects the thrust of the country's macroeconomic policies, in particular its monetary and fiscal policies, that affect overall spending, employment and prices for the aggregate economy. For a number of years, the United States has maintained a trade and current account deficit because its expenditure for consumption and investment has exceeded its production, with the difference resulting in an excess of imports over exports. In the period since the global financial crisis, this excess domestic spending was sustained by expansionary monetary and fiscal policies, albeit on a declining trend as this stimulus was gradually being withdrawn. Accordingly, the only way to reduce the overall trade deficit would be to continue this trend or increase further the pace of withdrawal of this stimulus. Under the new government, the gradual tightening of monetary policy was initially maintained, but the trend of fiscal policy has been sharply reversed. As a result of the Tax and Jobs Act that was approved in December 2017, the overall deficit of the federal government has been projected by the Congressional Budget Office to rise by 2 percent of GDP over the next three years to reach 5 percent of GDP in 2021 and to grow by a further 3 percentage points by 2025 when some of the tax reduction measures in the Act will be reversed.

On this basis, it can be expected that the overall trade deficit will increase, notwithstanding the imposition of tariffs on imports. In the face of this fiscal expansion, the Federal Reserve will most likely over time tighten further monetary policy consistent with its mandate to maintain low inflation. Such action by the Fed will undoubtedly lead to an increase in domestic interest rates, which will lead to an appreciation of the exchange rate as foreign investors take advantage of higher yields on financial investments in the United States. The exchange rate appreciation, in turn, will augment the expansionary impact of fiscal policy on the trade deficit. The foreign trade results for 2018 indicate that an anticipated increase in the trade deficit is in fact taking place, with an increase in the overall trade deficit of 10 percent to a level of US$891 billion or the equivalent of 4.3 percent of GDP.

In the context of these macroeconomic prospects, it needs to be recognized that the main effect of tariff increases is to reallocate resources from the export to the import-competing goods sectors of the economy. An increase in tariffs on imports will change the relative prices of these two sectors in favor of the latter which will induce a shift in resources from the production of exports to the production of import-competing goods. This reallocation effect is exactly what we have been observing in the case of the new steel tariffs. Steel prices and production have increased, but the higher prices of steel products have raised the input costs for many producers in the rest of the economy, including exporters. Producers of exports have limited power to raise prices for their exports, which are set in international markets, with the result that these goods will become less competitive. Over time, this will lead to lower production and a shift in labor and other resources to the non-tradable goods sector of the economy. This effect will be reinforced by the factors leading to an appreciation of the exchange rate as discussed earlier. As a result, imports will be reduced, but exports will be reduced as well, with the result that there will be little or no change in the overall trade deficit. This basic lesson of international economics seems to have been lost in the trade policy discussions in the White House.

The case under discussion illustrates one of the classic results of trade theory, namely the so-called Lerner symmetry theorem, which postulates that a tax on imports is equivalent to a tax on exports. With the simplified assumptions underlying the theorem, an increase in import duties will raise the price of the imported good in relation to that of non-traded goods (and lower the level of imports), which will be equivalent to an appreciation of the exchange rate. This change in the exchange rate lowers

the relative price for exports, thus reducing the incentive for export production with the result that exports will decline. Accordingly, resources will shift from the production of exports to the production of import-competing goods, and both exports and imports will be reduced with no change in the balance of trade, exactly as explained above in the actual case of aluminum and steel tariffs. The lower volume of trade will be compensated by an increase in the production of import-competing or non-tradable goods with a loss of efficiency and real income for the economy, as it absorbs the higher cost of intermediate and final goods imported from abroad or produced at home.

Another concern with the application of tariffs on aluminum and steel imports is that it was justified by the US government on the grounds of "protecting national security" in accordance with Section 232 of the Trade Expansion Act of 1962. This justification for trade action has not been invoked in more than 40 years, and in any event, it is not convincing when one realizes that most of US imports of aluminum and steel come from Canada, one of the country's closest allies. There is also the concern that this action on the part of the United States may create problems for the WTO. Import protection for national security reasons is allowed under WTO rules, but it has rarely been invoked. Following the example of the United States, other countries could decide to take similar action for some of their domestic products. Challenges to the recent trade decision of the United States could be raised within the WTO's Trade Dispute Settlement Body (DSB), but such a case has not been taken up before. A decision in favor of the United States would likely encourage other countries to take similar action, whereas a negative decision would probably be ignored by the US government, given recent threats it has made about its membership. Either outcome would represent a severe blow to the global trading system. Unfortunately, this concern is magnified by the threat that the government is considering the use of the same justification for tariffs on auto imports that it applied to aluminum and steel tariffs.

The increase in tariffs on bilateral trade with China reveals another fundamental misunderstanding of basic economic principles on the part of the current administration. The US government has not been clear about its reasons for this action or what it hopes to achieve as a result of this action. But one concern it has raised is the size of the bilateral trade imbalance with China. Since the time when China entered the WTO (2001), US trade with China has expanded sharply, while the bilateral trade deficit of the United States with China has also increased. In 2017,

imports from China exceeded exports by around US$350 billion. This number undoubtedly exaggerates the true size of the deficit between these two countries, as a large portion of China's exports to the United States include imports of intermediate goods that have been used in the processing of final export goods in China ("processing trade"). Thus, the value-added component of China's final export goods is likely to be much lower than the gross export value. For example, in the case of the iPhone, which is assembled in China and imported by Apple for sale in the United States, each unit is recorded in US trade statistics at an import value of US$225 (using data for 2016), of which only US$5 represents work or value added in China for testing and assembly. The remainder of the import value represents the cost of components, most of which are produced outside of China and exported to China for the final stage of assembly.[3]

More generally, the VAX measure of exports that was introduced in Chap. 2 shows that the foreign-imported component of China's exports has increased substantially during the period of China's rapid export growth since 2001. As of 2008, the VAX ratio, or the ratio of the total value of exports to its domestic value-added component, amounted to 2.1 for China's manufactured goods exports.[4] A large share of foreign inputs in China's exports of manufactured goods is also suggested by the fact that more than 60 percent of China's exports of machinery, computers and electrical equipment originate in foreign-invested enterprises that rely mainly on foreign inputs and intermediate goods.[5] On this basis, it should be recognized that the current measure of the trade deficit between the United States and China, which is based on the gross value of exports and imports, significantly overstates the underlying trade imbalance between the two countries.

A more important concern with the use of tariffs to reduce the trade deficit with China is that such action will do nothing to lower the size of the US aggregate trade deficit, as long as there is not any change in its overall saving-investment gap. If imports from China are reduced as a result of an increase in tariffs, some of the excess demand for goods by the United States that was satisfied by imports from China will simply be shifted to another country that can supply those goods. However, to the extent that the United States imports critical intermediate goods from China or goods processed by domestic manufacturers in China (such as Apple) that cannot be shifted to other countries (at least in the short run), the application of tariffs will raise the retail prices for these goods and disrupt supply chains for these manufacturers to the detriment of production, employment and consumer welfare in the United States.

More generally, the objective of reducing bilateral trade deficits with other countries reflects a mercantilist view of trade that reflects a basic misunderstanding of the purpose of trade. The basic purpose of trade is to have access to consumer goods that can be produced more cheaply than at home or to acquire inputs that are needed for domestic production. According to the principle of comparative advantage, other countries will find goods in the importing country that it can provide at a lower cost than what those countries can produce, so that there are mutual benefits or gains from trade.

In July–August 2018, the US government imposed a tariff of 25 percent on US$50 billion worth of imports from China, which it followed with a tariff of 10 percent on an additional US$200 billion in late September, thus covering roughly half of US imports from China, with the threat that this rate could be raised to 25 percent during 2019. The government has also threatened that it is prepared to raise tariffs on the remaining US$267 billion worth of import trade, if China does not agree to its demands on China's trade practices. Thus far, China has retaliated with an equivalent tariff on US$50 billion worth of its imports from the United States, which it increased to US$110 billion in late September 2018, thus covering around 90 percent of US exports to that country. Since the value of China's imports from the United States is much lower than its exports, it cannot match each of the tariff extensions announced by the United States; however, this limitation does not prevent it from taking other (non-trade) measures against the interests of the United States as long as this trade war continues. A recent study has shown that the trade war initiated by the US government has had predictably negative consequences for consumers and producers in the United States with a full pass-through of tariff increases to domestic prices, reductions in the availability of imported varieties and disruptions to supply chain networks of domestic manufacturers.[6]

A major problem with the actions taken thus far by the United States in the case of China is that the government has not been clear as to what it expects to achieve by its trade measures. At certain times, it seems that the size of the bilateral deficit is the main concern for which the government wants China to impose voluntary export restraints or make commitments to import larger quantities of goods through its state enterprises. At other times, the United States has announced concerns about the Chinese practice of imposing requirements for technology transfers via joint ventures for any US business seeking access to China's domestic market.[7] Finally, at other times, the government has declared that it wants China to abandon

its *Made in China 2025* initiative, by which it has established goals and targets over the medium term for upgrading its technological capabilities to be able to compete with the United States. There is no reason to believe that China would agree to any change in its technological development plans; instead, pressure from the United States in this area is likely to reinforce China's plans in this area and accelerate its development.

The concern of the United States with China's practice of forced technology transfer is a legitimate one, but it is not clear that trade policy is the best means for dealing with this problem. Since this is an area of concern for other advanced countries, the United States is likely to be more effective if it were to act collectively with these other countries in confronting China on this issue and using sanctions, if needed, as a form of pressure to bring about change rather than the use of bilateral tariffs that are likely to impose significant costs on American consumers and producers. It should be noted that in late March 2018, shortly after the Office of the US Trade Representative completed an analysis of China's policies on technology transfer under Section 301 of the Trade Act of 1974, the US government submitted a limited complaint to the WTO on the grounds that some of China's practices represented violations of WTO rules. However, rather than wait for a decision from that body, the government decided to proceed with direct tariff action against China in May, suggesting that it had various motives for its tariff increases on imports from China.

More generally, it must be recognized that the recent trade actions of the United States represented a fundamental threat to the rules-based system of trade that has been in existence throughout the post-WW2 era and stands as one of the key elements of the liberal international economic order. Today, the WTO is the guardian of that system for the 164 countries that constitute its membership, based on the rules and procedures that they have agreed upon. The fundamental principles embodied in the WTO agreements are those of reciprocity, transparency and non-discrimination in trade policy. According to these principles, WTO rules establish that international trading firms are subject to the same national regulations as domestic firms and that they have the same rights as domestic firms in trading partners' courts. Members must also adhere to a norm of non-discrimination in tariff reductions such that a tariff reduction or other trade benefit extended by one country to another must be extended to all members. This rule establishes that all members are granted most-favored status (MFN). Under the WTO agreement, the imposition of tariffs is only allowed under certain circumstances.

In addition to these basic principles of free trade, the WTO maintains a Dispute Settlement Body to adjudicate claims of rule violations by one member against another, which all members have agreed to support. This is a unique supranational authority for an international organization. When one WTO member believes that another member is violating mutually agreed rules, such a complaint can be referred to the WTO Dispute Settlement Body. This Body will refer the complaint to an arbitration panel that will consider the arguments presented by both sides and determine penalties when appropriate. If one of the disputants is dissatisfied with the panel's decision, it can then refer the case to an Appellate Body. The United States has received favorable decisions in more than 90 percent of the cases that it has referred to the Appellate Body.[8] The Dispute Settlement Body of the WTO is discussed in more detail in Chap. 8.

The United States has recently threatened this system in a number of respects. First, it has imposed tariffs on certain imported goods and against certain countries on grounds that they do not conform to WTO rules. Second, it has been arbitrary in the selection of those countries that will be subject to its new tariffs, thus violating their MFN status. Third, the application of retaliatory measures against China under Section 301 violates WTO rules, as they are not based on decisions or procedures of its Dispute Settlement Body. Finally, as noted earlier, the United States has refused to approve any replacement for those Appellate judges whose terms have expired, with the result that the Appellate Body may run the risk of lacking a quorum for its panels to operate. This inaction by the US government represents a fundamental attack on the integrity of the WTO system, especially in view of its stated aim of wanting to see reforms in its dispute settlement operation. This posture is also hard to understand in view of the overwhelmingly favorable decisions the United States has received in the complaints that it has presented to the WTO.

3 Prospects for United States' Role in Financial Globalization

The government has been less overt in the recent actions it has taken to influence the role of the United States in financial globalization than it has been in the case of trade policy, but developments in two policy domains nonetheless represent significant changes from the recent past with possibly negative outcomes in the future. One of these is in the area of financial regulatory policy where changes have been made to the requirements for

banks that were introduced under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. These changes relax the regulatory burden on banks, consistent with the intent of the NSS Strategy paper, and raise the risk of financial distress in the future. The other development relates to a significant relaxation of fiscal discipline associated with recent tax reform legislation and the likely impact this change will have on the external current account position of the United States over the medium term. A rising current account deficit of the United States associated with its growing fiscal deficit will exacerbate the problem of global imbalances and raise basic concerns about the long-term debt sustainability of the government, which has not been questioned up until now. Both of these developments are examined in the remainder of this section.

The Dodd-Frank Reform Act introduced a number of changes to the regulatory framework for banks in response to the global financial crisis, the most important of which were in the area of capital requirements. One of the problems leading up to the crisis was that banks in the United States had a very weak capital position which limited their ability to absorb losses on mortgage credits or other risky investments at a time when there was a significant downturn in the cycle of housing prices. As a result of the Dodd-Frank Act, capital requirements for banks were significantly strengthened, along with the introduction of new liquidity and funding requirements that will enable them to withstand significant stress in the financial system without the risk of insolvency. As part of this reform, the Federal Reserve in its capacity as a bank regulator introduced a regime of enhanced supervision for individual banks with total assets of more than US$50 billion that included, in addition to the requirements noted above, reviews of their credit exposure, risk management and resolution planning. They were also required to participate in annual "stress tests" administered by the Fed as a means of gauging the adequacy of their capital position under different scenarios of financial distress in the economy that could have an adverse effect on their asset position, such as a deep recession, a sharp downturn in the stock and bond markets or a significant decline in home prices. These scenarios were first introduced in the immediate wake of the crisis in early 2009 to determine which banks needed to strengthen their capital position, and they have been used on a regular basis ever since for the same purpose. The banks that do not perform satisfactorily under the "stress tests" are then prohibited from issuing dividends to their stockholders and are placed under special supervision until their capital position is strengthened, and they are able to pass the tests successfully.

As a result of the Economic Growth Act of May 24, 2018, the regime of enhanced supervision described above was relaxed by requiring it only for banks with total assets of US$250 billion or more. This reduced the scope of the supervision from a group of around 200 banks to one of only 8. This change represents a major reduction in the coverage of this intensified supervisory framework and will over time reduce the resilience of the banking system. At the same time, the Economic Growth Act weakened the so-called "Volcker Rule" of the Dodd-Frank Act that limited banks from engaging in financial market trading with their own funds (including FDIC-guaranteed customer deposits) or dealing with hedge funds or private equity firms ("proprietary trading") that were important risk factors leading up to the global financial crisis. The effect of these two changes is likely to be an increase in risk-taking on the part of banks with assets of less than US$250 billion and a rise in their financial vulnerability over time. Some of these risks will undoubtedly spill over into the international arena as US banks have traditionally been very active in foreign credit operations and derivative transactions, just as they were in the build-up to the financial crisis. Following the crisis, there was a sharp curtailment in international banking activity, but this is likely to increase once again, with consequent risks for the global financial system.

These risks are compounded by the medium-term budgetary and external outlook for the United States associated with the expansionary fiscal stance that was introduced with the Tax Cut and Jobs Act of December 2017. That bill introduced a substantial reduction in the corporate tax rate along with changes in the individual income tax regime that has eroded significantly the medium-term outlook for the federal budget deficit. As noted earlier, prior to that legislation, the size of the federal budget deficit in relation to GDP was on a gradual downward trend, but that trend has now been reversed. Over the next few years, the budget deficit is projected to rise from 3.5 percent of GDP in 2017 to around 5.5 percent of GDP in 2021, with further increases likely in future years. In line with past trends, this development will have two important results: one is that the external current account deficit will increase significantly and the other is that the size of the federal debt will rise to levels unseen since WW2.[9] Federal government debt held by the public is currently at its highest level in relation to GDP in the post-WW2 era (i.e., 78 percent) and is now projected by the US Congressional Budget Office to rise to around 100 percent of GDP over the next ten years and much higher in the years beyond. The combination of continuing large budget deficits, in the absence of any fis-

cal adjustment plan, and the likelihood that interest rates on the public debt will exceed the growth rate for the economy make it inevitable that the government debt ratio will reach unsustainable levels.

These projections will have an important effect on the course of financial globalization as reflected in the problem of global imbalances. As discussed in Chap. 4, these imbalances measure the aggregate sum of external current account deficits and surpluses of major countries and regions in the global economy which, depending on their size, can pose significant risks for the stability of the global financial system. In the period preceding the global financial crisis, these imbalances rose very sharply, in part because of a growing external current account deficit of the United States, but then they receded in the aftermath of the crisis as corrective policy actions were adopted by the United States and other major countries.[10] However, in recent years, these imbalances have expanded again and can now be expected to expand further as a result of the changes described above in the macroeconomic outlook for the United States. As a result of the deterioration of the trade deficit over the next few years, as discussed previously, the external current account deficit of the United States is projected to rise sharply to a range of 4–5 percent of GDP, at which levels it would be close to those experienced in the build-up to the global financial crisis.

Imbalances in a country's external current account are not necessarily a negative economic indicator. Developing countries that are making efforts to expand their domestic investment to promote economic growth can be expected to incur current account deficits as they temporarily borrow abroad to pay for some of that investment. Conversely, advanced economies may incur current account surpluses as a reflection of their growth in domestic saving to take account of an aging population and the anticipated costs of retirements. However, sustained current account deficits in an advanced country such as the United States because of high consumption and a low saving rate associated with sustained government budget deficits can be a threat to the stability of the global financial system. This threat arises from its continued dependence on foreign borrowing and the risk of a "sudden stop" in that financing, if other countries begin to doubt its ability to sustain an increase in its external debt and the debt-service requirements associated with that debt.

As discussed in Chap. 4, what makes the situation of the United States unique is its global reserve currency status and the strong demand for dollar-denominated assets as global "safe" assets. This demand was unusually strong in the period preceding the global financial crisis because of the

strong national saving of countries in East Asia (especially China) and the trade surpluses generated by major oil exporters, such as Saudi Arabia. These inflows created the conditions in the United States for a rapid growth in financial sector activity, which sustained the housing bubble that led to the crisis. In future years, as the public debt of the United States continues to grow in the absence of any fiscal adjustment plan, concerns will rise among other countries about its debt sustainability. In these circumstances, the United States will lose the favorable yield it has been receiving for placements of its government debt. Such a change in and of itself will contribute to a further weakening in the fiscal outlook for the country, over and beyond what has been already built into the medium-term projections discussed earlier, as it begins to pay a higher cost for its debt placements than other advanced countries. At some point, doubts will rise about the credit worthiness of the United States and a messy and disruptive adjustment will be forced upon the United States as these inflows are interrupted or reduced.

One early indication of concerns by international investors about US debt sustainability is that, since the global financial crisis, the unique premium (or "convenience yield") that US medium-term bonds have enjoyed vis-à-vis other sovereign debt in terms of a lower yield has disappeared. Prior to the crisis, the difference between the yield on five-year US government bonds and that of similar debt for a basket of ten countries (Australia, Canada, Denmark, Germany, Japan, New Zealand, Norway, Sweden, Switzerland and the UK) was, on average, 21 basis points in favor of the United States and as high as 50 basis points at the beginning of the last decade. This premium (or lower yield) reflected the perceived safety of US government debt and the high liquidity it provided for investors. Since the crisis, this premium has disappeared and has even reversed sign in recent years. By contrast, short-term US treasury bills have continued to maintain a premium of around 20 basis points that they enjoyed prior to the crisis. The one exception to this pattern of rates was at the peak of the financial crisis (2007–09) when, because of a global search for safe assets, the premium for US treasury bills rose to 280 basis points, while that of medium-term government bonds rose to 90 basis points.[11]

Given the collective nature of the problem of global imbalances, it is clear that the United States is not the only country that should be making policy adjustments to reduce the size of its current account imbalance. Countries like Germany, Japan, China and Saudi Arabia, which have large current account surpluses, should be shifting to a more expansionary fiscal

and monetary stance in order to lower their imbalances. The process of reaching a consensus on the policy elements that should define this multilateral effort ideally should be handled through the International Monetary Fund. Since the financial crisis, it has established an analytical framework for understanding the problem of global imbalances that it uses in its annual External Sector Report to determine any excess in the imbalances of the major countries with respect to a norm established for each of those countries. The Fund then examines the policy options for those countries to deal with these imbalances, which are carried over into its annual macroeconomic surveillance exercise with these countries. While analytically sound, the discussion of the External Sector Report is not focused or sustained enough within the Executive Board of the Fund or its Ministerial Committee to develop any consensus on a collective response on the part of the major countries. What is lacking on the part of the IMF is a capability, beyond the persuasiveness of its arguments, for ensuring that the international adjustment mechanism for dealing with the problem of global imbalances can function more effectively. This issue is taken up in Chap. 8.

4 Recent Changes in US Immigration Policy

As in the case of trade policy, immigration has become the focus of much attention by the US government since 2017, and significant changes have been made to the policy direction of previous administrations. Prior to the current administration, there was a generally bipartisan consensus within the US Congress and a widely held view among US nationals that immigration made a net positive contribution to American society and the economy. The new administration that took office in early 2017 has shifted away from that view with its almost exclusive focus through its policy and rhetoric on the notion that immigration is a threat to American economic and national security. Probably no administration in the last 50 years has placed such a high priority on immigration policy.

Generally, the thrust of actions taken by the current government of the United States has been to restrict the flow of migrants to the United States, consistent with a major theme of the 2016 presidential election campaign and the NSS document discussed earlier. Given what is known about the economic effects of immigration, it can be predicted that these changes will almost certainly reduce the potential output of the United States over the medium-to-long term. It is also significant that the US government in early December 2017 announced that it was withdrawing

its participation in the negotiations of the UN Global Compact on Migration, consistent with its resistance to multilateralism, on the grounds that it conflicted with US national sovereignty and immigration policy. The UN Compact, which the United States had endorsed at an earlier stage in its development, is discussed in more detail in Chap. 8.

Beginning in early 2017, the government has taken a variety of actions mainly by means of executive decrees to restrict the flow of immigrants now and in the future. Perhaps the most well-known case has been the proposed construction of a wall along the US-Mexican border and greater enforcement of border controls. Both of these proposals require budgetary resources that in turn require Congressional approval. Only limited funding has been approved for the wall thus far, mainly because of doubts about its merits, especially in view of the reduced numbers of illegal border crossings, as noted in Chap. 5. In the case of border controls, emphasis has been placed on hiring more border patrol agents for the Customs and Border Protection (CBP) service and staff for the Immigration and Customs Enforcement (ICE) agency (lawyers, judges and prosecutors) to handle the backlog of cases of illegal cross-overs apprehended at the border. Similar efforts have been made to increase the arrest and deportation of illegal immigrants living within the United States. This program of deportation has met with only limited success because of the time involved in locating illegal immigrants and the need for cooperation with state and local authorities, which in many cases has been constrained by the existence of "sanctuary cities". Nevertheless, the search and questioning of foreigners living in the United States, especially from Mexico and Central America, has increased significantly.[12]

A number of direct actions have been taken to reduce the inflows of immigrants through reductions in visa authorizations, the elimination of certain visa programs and outright bans on travelers from certain countries. Refugee admissions have also been reduced to their lowest level since the program was started in 1980. In addition, the processing of visa applications has been significantly slowed, in particular for the skilled-worker H-1B program for certain occupations. Obstacles to this visa program have also been increased by eliminating the authorization for spouses of H-1B visa holders to work. This change represents a significant limitation on spouses, who are often skilled workers themselves, as the delay for H-1B visa holders in obtaining "green" cards for regular employment, when their spouses would also be allowed to work, can run for a decade or two, if not longer. This limitation on spousal employment was instituted under the government's "Buy American, Hire American" Executive Order of April 2017.

Perhaps the decision that could have the most enduring effect is the elimination of visas for extended family connections and the diversity visa lottery program in January 2018. With this decision, the number of legal immigrants would be reduced by 27 percent in 2019 and by 40 percent over the next two decades, for a cumulative reduction of 7.5 million immigrants with respect to the authorized level for 2018 and one of 22 million over the next five decades. At a time of demographic change in the US native population and an increase in the dependency ratio because of an aging population, restrictions on immigration will represent a constraint on economic growth and government finances. Immigrants, in general, have accounted for half of the population growth in recent years and a sizeable share of labor force growth. These effects are particularly relevant for immigrants under the two visa programs noted above, as they have tended to be better educated than the average immigrant and native Americans.[13]

Given the current emphasis of the US government on immigration policy, it is disappointing that there has not been any progress in advancing immigration reform through joint collaboration of the executive branch of government and Congress, even though both branches were under the control of the same political party during 2017–18. There has not been any significant legislative reform of immigration policy since 1990. Undoubtedly, some of the cause for this lack of action must be attributed to conflicts with Congress caused by the major shift in immigration programs introduced by the current administration and differences in views as to how to provide a path to citizenship for many illegal immigrants who came to the United States as children (so-called "dreamers" under the Deferred Action for Childhood Arrivals—DACA—program). The increasing polarization of the political system also seems to be playing a role.

5 What Is the Outlook for Globalization?

The recent policy changes of the US government in trade, finance and immigration have clearly sent a signal of dissatisfaction with the impact of globalization on the US economy and society and a desire to redefine the terms of US engagement with other countries. To a large extent, this posture is not grounded on a sound understanding of the effects of globalization as discussed in previous chapters. It also ignores the costs to the United States and risks for the global system of many of the administrative measures and policy actions introduced thus far.

In the case of trade policy, actions by the United States have impaired previously good relations with close allies, increased production costs for domestic industries dependent upon imported intermediate goods and have threatened the rules-based system underlying international trade since the end of WW2. In the near-to-medium term, there will be some disruption of global supply chains managed by US multinational companies, as they adjust some of their production links by shifting certain manufacturing processes, say, from China to Vietnam. However, the curtailment of those supply chains and the return of production that was shifted overseas back to the United States (as may be desired by the current US administration) do not seem likely, given the large wage differentials that domestic manufacturers have taken advantage of through off-shoring and the continuing advance of technological change. As long as there remain large wage differentials between workers in the United States and those overseas and US producers can arbitrage those differences through improvements in information and communication technology and low-cost transportation, these supply chains will continue to function, unless tariffs in the United States were to be raised to such a level as to eliminate much of that cost advantage. With future technological advances in the computerization and automation of manufacturing by means of artificial intelligence and robotics and improvements in the face-to-face interaction of workers in one country with those in another via high-quality electronic audio and video systems, there will continue to be advantages in managing manufacturing on a global rather than national basis.[14]

In the financial arena, the US government has made changes in fiscal and regulatory policies that pose risks to the global financial system over the medium term. The relaxation of important regulatory controls that were introduced as a result of the global financial crisis will increase risk-taking on the part of many banking institutions, whereas for many non-banking or “shadow” banks significant changes in regulatory procedures have not been made since the crisis. These adverse changes have been compounded by a major relaxation of fiscal policy that will lead to a widening of the overall trade deficit, notwithstanding the government’s efforts to reduce the trade deficit by means of tariff increases, and an increase in the external current account deficit. These outcomes will expand the reliance of the United States on foreign borrowing that will support a growth in the operations of banks and nonbanks in a somewhat similar fashion to financial developments prior to the financial crisis.

The problem of growing global imbalances poses a medium-term risk to the international financial system, but also a threat to the dominant role of the US dollar in that system over the long term as long as the United States maintains an external current account deficit that requires a rising public debt-to-GDP ratio. During the Bretton Woods era, as the United States increased its dollar liabilities abroad because of its balance of payments deficits, other countries began to lose confidence in its ability to convert those liabilities into gold as required under the Bretton Woods Agreement and began to increase their demands for conversion. As those pressures mounted, the US government realized that it could not meet those demands and suspended its conversions, thus initiating a difficult period of transition to a new global currency system. A somewhat similar crisis of confidence could arise in the future if countries begin to be concerned about the debt sustainability of the US government and its ability to redeem outstanding debt or pay for new indebtedness at increasingly higher interest rates.

In its immigration policy, the US government has been sending a very clear signal since the end of 2016 that refugees and immigrants from certain countries are unwelcome, that the processing of visa applications has been significantly slowed while some visa categories have been eliminated and that undocumented immigrants regardless of their length of stay face a much higher risk of repatriation. The government's major focus on reducing the flow of immigrants ignores the clear benefits that the United States has received from its multi-ethnic heritage and the contributions immigrants have made to all segments of American social and economic life. The current backlash against this feature of globalization is reminiscent of a similar phenomenon in the first couple of decades of the last century following a wave of immigration when native, anti-immigrant fervor increased sharply. Over the medium term, the sharp change in US immigration policy will discourage talented students and professionals of other countries from coming to the United States and seeking permanent residence here, while employers will have more difficulty in finding seasonal workers for farming and construction to fill in gaps in the native workforce. These constraints are important as the economy is beginning to enter into a new phase when labor force growth is expected to decline because of an aging population, with negative implications for the potential growth rate of the economy. A rationalization of immigration policy is indeed required to bring about a reduction in the flow of illegal entrants and an increase in work-related visas, for which a bipartisan political effort will be needed.

Unfortunately, these actions in the immigration policy of the United States have taken place at a time when anti-immigrant sentiment has risen in a number of other advanced countries. As a result, the prospects for international cooperation on immigration are not good, notwithstanding the recent agreement on a UN Global Compact on Migration. Compared with trade and finance, this is one area where a system of governance at the global level has been virtually absent. This issue is taken up in Chap. 8.

Notes

1. This document can be accessed at www.whitehouse.gov/wp-content/uploads/NSS-Final-12-18-2017-0905
2. This new approach to international relations on the part of the US government was reinforced by the speech that President Trump made to the General Assembly of the United Nations on September 26, 2018.
3. These data have been drawn from Melitz and Klein (2017).
4. The VAX ratio for China has been drawn from Johnson (2014).
5. This reference to the role of foreign-invested enterprises in China's export trade is drawn from Lovely and Liang (2018).
6. These results were reported in Amiti et al. (2019).
7. The concerns and complaints of the US government about China's technology transfer practices were laid out in a report of the Office of the US Trade Representative, "Findings of the Investigation into China's Acts, Policies and Practices Related to Technology Transfer, Intellectual Property and Innovation Under Section 301 of the Trade Act of 1974" (March 24, 2018), which can be accessed at ustr.gov/sites/default/files/Section%20301%20FINAL.PDF
8. Many of the points made in this and the preceding paragraphs were discussed by Anne Krueger in an article published by Project Syndicate, "The Global Trading System Could Break Down" (Project-Syndicate.org, September 17, 2018).
9. These projections are based on the analysis of the Congressional Budget Office and can be found in "The 2018 Long-Term Budget Outlook" Publication #53919 (June 26, 2018) and "An Update to the Economic Outlook: 2018–28" Publication #54318 (August 13, 2018).
10. A good discussion of the evolution and determinants of global imbalances can be found in Obstfeld (2018).
11. The research behind the data on the premium or "convenience yield" of US government debt is discussed in "Long-Term US Treasury Bonds Have Lost Their Specialness" *The NBER Digest* (October 2017) pp. 2–3.

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CHAPTER 8

The Governance of Globalization: National and International Dimensions

Given the challenges for globalization going forward and the resistance it is facing in the United States and elsewhere, it is imperative that changes and improvements be made in the governance arrangements at the domestic and international levels in order to support its continued expansion and ensure that its benefits are more widely distributed. At the national level, it is essential that the relevant interest groups (workers, employers and government officials) have lines of communication in which their concerns about the impact of globalization and technological change can be expressed and discussed with a view to facilitating the adjustment of business and labor to a changing economic environment and improvements in their economic well-being can be envisioned. This governance arrangement is indispensable for globalization to have legitimacy at the local and national levels. At the international level, changes need to be made in the main multilateral institutions with responsibility for the oversight of international trade, global finance and international migration in order to improve intergovernmental cooperation in these fields and establish standards and codes to guide national actions and policies and minimize their negative externalities. As global economic and financial integration intensifies, these governance arrangements will need to adapt and be strengthened. In the remainder of this chapter, the issues affecting these governance arrangements for globalization at the national and international levels are examined in more detail. As in the past, the United States is a critical player at the national level in setting an example for other countries and at the international level in bringing about successful reform.

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1 Making Globalization Work Better at the Local and National Level

At the national level, it is essential that a governance structure exists that promotes acceptance and recognition of the potential benefits that globalization can bring. This structure requires at least two components: one is an arrangement by which workers can count on temporary assistance to ease the adjustment burden that globalization and technological change may bring, predominantly in the form of active labor market policies (see below), and the other is a consultative mechanism among government, business and labor that facilitates discussion of policies having a bearing on employment and business development.

In the area of social welfare, Western Europe has a much more elaborate structure of active and passive labor market policies to ease the burden on workers of shifts due to international trade, or technological and structural change more generally, in the economy. Passive labor market policies encompass social welfare arrangements such as social security and unemployment insurance that respond automatically to downturns in the business cycle that give rise to worker lay-offs and business closures. As noted in Chap. 3, active labor market policies (ALMP) cover programs that promote re-employment in conditions where the resumption of a job previously held by a worker is no longer possible. These policies are critical in terms of dealing with the structural economic adjustment brought about by globalization or technological change. In terms of GDP or GDP per capita, the United States spends much less on ALMP (i.e., employment services, retraining, relocation) than any other OECD country, except Mexico. In 2016, US government outlays on ALMP amounted to around 0.1 percent of GDP, compared with 0.6 percent in Germany and more than 1 percent in France and Sweden. Notably, US government outlays on ALMP were considerably higher as a share of GDP in 1985 (0.25 percent) than they are currently.[1] In addition, the ALMP programs that do exist are very limited in scope and fragmented across different agencies; currently there are as many as 40 such programs spread across 14 agencies of the federal government included in the 0.1 percent of the GDP figure cited above.

As noted in Chap. 3, one of the main programs of the US government dealing with the disruptive effects on workers from import competition is the trade adjustment assistance (TAA) program of the US Department of Labor. This program has been in effect in one form or another since 1962. It currently has a budget of only around US$790 million for assistance in

job training, job search and relocation to workers who have been adversely impacted by import competition, as was the case with the China trade "shock" of the mid-2000s. Most studies of TAA effectiveness, however, have shown that it has reached a relatively small share of the workers laid off by import competition and that those workers who have taken advantage of its assistance have not had a different wage and employment pattern than other workers in a similar situation who did not.[2]

What would be useful in terms of government assistance would be to consolidate the TAA and similar programs that now exist into a larger program of assistance for workers adversely affected by structural adjustment arising from a variety of economic shocks including not only import competition, but also technological change and government contracting, for example. Instead of 0.1 percent of GDP, this new program should rise over time to around 0.5 percent, closer to the current OECD average. Such a program in the future would be a particularly important support for the US labor market, given the prospect of major changes in workplace routines with the advance of artificial intelligence, robotics and communications technology.

In terms of business-labor cooperation in dealing with the impact of structural adjustment, Western Europe may also present some useful examples for the United States both in terms of the "flexicurity" programs that are common in Scandinavian countries and in terms of the flexible worker ("kurzarbeit") program in Germany. These programs are designed to achieve both employment flexibility for businesses as regards hiring and firing and employment protection for workers by means of active labor market policies, which have generally been very successful in reducing unemployment in these countries.[3] For such programs to work, both business and labor must have associations that can represent their interests. Unions, trade associations and business councils are typical in European countries. These groups are decentralized to the firm level, so that worker representatives are consulted by firm leaders through joint work councils in determining appropriate responses to technological and structural change in their industry in terms of retraining, job changes and wage policy.

By contrast, in the United States only businesses have been well organized. Union density (the share of the workforce that belongs to a labor union) is extremely low in the United States in comparison with most of Western Europe and has been in steady decline since the end of WW2. Also, work councils in businesses are not common as a means of facilitating industrial relations and meeting worker needs in the face of technological

and structural changes affecting business. It is also the case that, except for a brief period of time during the Roosevelt administration, the organization of unions has been discouraged and resisted in both recent law and practice in the United States. As noted in Chap. 6, the latest example of this tendency was the Supreme Court decision of June 2018 in the case of Janus v. AFSCME Council 31 that is expected to weaken the power of public sector unions to organize, as it prohibited state and local government unions from collecting fair share fees to cover the costs of representing those government workers who chose not to join these unions.[4]

In an economic environment where union membership is so widely constrained, it is important to find some alternative institutional arrangement to foster collaboration between business and labor. Work councils, which are less adversarial than unions, could be actively encouraged to fill this role in promoting improved working conditions and higher productivity to the benefit of both groups. In Germany, for example, most companies with at least 500 employees have work councils. They have played a critically important role in promoting high productivity and high real wages in German businesses, while allowing these firms to be internationally competitive. Unfortunately, in the United States work councils have been prohibited by the National Labor Relations Act of 1935 unless a business also had a union. This linkage was established to encourage the maintenance of union power. Given the weakening in union strength that has occurred, this law should be revised to remove this restriction.[5]

Changes are also needed at the national level. Following WW2, notwithstanding the decline in union density, there was an implicit compact among business, government and labor that supported a period of rapid growth, low unemployment and the launching of the liberal international economic order (LIEO). This compact was encapsulated in the term "embedded liberalism". This term was intended to capture the idea of free markets, trade liberalization and controls on capital movements supported by business and labor in exchange for a robust social safety net on the part of government to assist those who were disadvantaged by the structural changes induced by the LIEO.[6] This compact among business, labor and government for the first period of the LIEO was also reinforced by a sense of solidarity stemming from the conflict between Western capitalism and Soviet communism.

With the breakdown of the Bretton Woods System, the ascendancy of neo-conservative forces in American political life in the early 1980s and the fall of the Soviet Union, the compact of the early post-war period

disappeared. During a heightened period of globalization since the early 1980s, there have been fewer safeguards in place in the United States to facilitate adjustment for workers and communities bypassed by structural adjustment, while income inequality has increased sharply. More generally, the implicit compact between business and labor based on employee loyalty to a company in exchange for a predictable career of well-paying jobs with training, health insurance and pension benefits has been rendered largely obsolete by the shift to a service-based economy and the rise of contingent labor arrangements in the so-called "gig economy", in which workers are given contracts for part-time, temporary work with no benefits. These work arrangements have taken hold in an economy with low union density and the off-shoring of non-skilled labor activity that has dampened wage increases and labor costs, while shifting income to business owners and shareholders and exacerbating income inequality. In the absence of major government efforts to deal with these developments, they have sowed the seeds of discontent among white, lower-class, less-educated working families that have supported over time the rise of populist political forces challenging globalization in all its three manifestations. These forces became particularly visible with the results of the US presidential election of 2016.

In the face of this popular discontent, it will be important that political leaders work to define the elements of a new social compact among business, labor and government to address issues of worker displacement, long-term structural unemployment and income inequality. These issues are only likely to grow more severe with the effects of automation, innovation and artificial intelligence, together with the impact of globalization, on the future economic development of the United States. In this context, as discussed in Chap. 6, the government has a vital role to play through its fiscal policy in terms of creating a fair, efficient and broad-based tax system, improving its programs of social assistance and expanding infrastructural investment to support new business development. The government also needs to expand its active labor market policy programs in coordination with business and labor groups as a means of facilitating the adjustment of low-skilled workers to continued structural change in the economy resulting from the effects of globalization or technological change. These efforts need to be complemented by programs to promote new business investment in the redevelopment of communities that have been adversely affected by the relocation of established business operations as a result of significant structural change. As one possible example, the idea of "opportunity zones" to

cover depressed areas in the Southeastern and industrial Mid-west regions of the US economy was created in the 2017 Tax and Jobs Act with tax incentives to attract large investor groups and venture capitalists. Perhaps this initiative, which has met with bipartisan political support, may serve as a prototype for business and community redevelopment. However, to be successful, this initiative needs to be complemented by federal outlays on infrastructure to improve local housing, schooling, transportation and basic public services (water, electric power and telecommunication) in targeted communities. Without these broad features of a new social compact, globalization will lack the elements of a governance structure at the national level that will generate popular support for its continuation.

2 The Governance of Globalization at the International Level

Since the end of WW2, a host of regional and international organizations have been formed to promote cooperation and consultation among countries both to support the expansion of globalization and to establish rules or guidelines for countries for responding to its effects. The two most important international organizations in the fields of international trade and finance are the World Trade Organization and the International Monetary Fund. Each of these is discussed below with a view to identifying weaknesses or limitations in their operations that should be remedied in order for the gains of globalization to be maximized and its adverse effects minimized. In the case of migration, as noted earlier, institutional oversight has been disbursed across a number of organizations, such as the UN High Commissioner for Refugees, the International Labor Organization, the UN Relief and Works Agency and the International Organization for Migration (IOM). The recent formal identification of the IOM as a specialized agency of the UN system in 2016 (UN Migration Agency), even though it has been in existence since 1951, and its central role in the Global Compact on Migration (see below), suggest that it should be the primary agency with oversight responsibility for global migration, at least for purposes of this discussion. Accordingly, it is the third agency discussed in this chapter with a view to improve global collaboration on migration in the future.

The challenges of global governance raise an important issue initially presented in Chap. 1 regarding the "inescapable trilemma" of the global economy. This trilemma, which was first formulated by Dani Rodrik,

posits that national sovereignty, democracy and global integration are not mutually compatible. Only two of these elements can exist at the same time. Accordingly, as global integration intensifies, there will be a natural tension between the preservation of national sovereignty and local democratic decision-making and the expansion of federal or multilateral surveillance and decision-making that impinges on the first two legs of the trilemma. National governments in a regional or global grouping need to establish the extent to which over time multilateral institutions are given the authority and responsibility for the oversight and control of global economic integration. As globalization expands, national sovereignty will be diminished as the scope and authority of supranational bodies increase, while the forces of democracy may operate at a local level within nations and at a regional or global level through institutions that approve decision-making by the actions and votes of national representatives from all the member countries of the organization.

As noted in Chap. 1, the European Union represents at the regional level an example of this trilemma in action. The idea of a regional European economic and political unit was born initially with the creation of the European Coal and Steel Union in 1951 and evolved over time into a fully fleshed-out European economic and monetary union. At each stage of this evolution, there has been a clear tension between national decision-making and federal decision-making structures. The existing vision of a political union envisages that at some point in the future national decision-making will become less and less important as the power and influence of regional institutions grow further and a truly unified federal structure of government is ultimately established. At the global level, one could envisage a similar phenomenon taking place over a period of many decades, especially as the problems of managing the effects of climate change intensify. From that perspective, the WTO and IMF are only very incipient examples of global sovereign institutions with limited, independent decision-making authority. Nevertheless, they have the potential for proposing and coordinating important collective actions to deal with current problems of globalization that should be resolved in order to make the global economic and financial system operate more effectively with less disruption and crisis and a greater distribution of benefits. These issues are touched on in the paragraphs that follow.

The United States has traditionally taken the view that the major international organizations such as the IMF and WTO have promoted its foreign economic policy interests, as they have supported a stable international

monetary and trade system that would foster the growth of US foreign trade and economic prosperity. They did this by establishing common standards for financial and trading practices that would support the existence of a rules-based international economic order. These institutions also established a multilateral framework of collective responsibility for the monitoring of these standards and burden-sharing of the cost of dealing with financial crises. Unfortunately, as noted in Chap. 7, the current government of the United States has adopted a more nationalistic, anti-globalist approach to its foreign economic policy in which it wants to withdraw from many of the multilateral commitments the United States has accepted in the past. This behavior represents a fundamental threat to the existence of a rules-based international economic order.

2.1 The World Trade Organization

The *World Trade Organization* (WTO) is a relative newcomer to the community of international organizations but has a long history in effect as it took over the functions and responsibilities of the GATT that was created in 1947. The WTO fulfilled the expectation of having a triad of multilateral institutions established at the time of the Bretton Woods Conference in 1944 (alongside the IMF and World Bank) with the creation of an International Trade Organization (ITO). Even though a treaty to establish the ITO was concluded, it was not formally established because its founding treaty was not approved by the US Congress as a result of congressional concerns about possible intrusions of ITO activities into national sovereignty. Nonetheless, the GATT, as a substitute arrangement, had a very successful operation as it provided the framework and forum for eight rounds of tariff reductions on a global basis from 1947 to 1994 among an increasing number of countries. At first, 19 countries were involved and by the Uruguay round of negotiations from 1990 to 1994, 161 countries were engaged. That round also created the WTO as an improved forum for continuing tariff negotiations, with a permanent dispute settlement arrangement for resolving complaints among member countries for trade practices that were alleged to violate WTO trade rules. These rules were updated and approved at each of the eight successful rounds of tariff negotiations.[7]

The WTO promulgates and monitors these trade rules and fulfills a unique supranational function in the global system with its dispute settle-

ment mechanism. It also monitors member countries' changes in trade practices through its periodic trade policy reviews with each member country. The WTO inherited its dispute settlement arrangement from the GATT but endowed it with clearer rules and more independence from the political process. Under the GATT system, a country could object not only to the formation of a panel to consider a trade dispute raised by another country, but also to the decision of a dispute panel if it considered that decision to be incorrect. In this way, the United States was free, in effect, from any constraints on its trade practices. With the WTO, the United States accepted a more independent dispute settlement mechanism in exchange for an understanding that it would operate as a limited, contract arbitration arrangement. As such, it would determine how the facts of a particular case conformed with existing trade rules, rather than as an independent court of public international law that would define rules where there may have been gaps in international trade law or give specific interpretation to rules where there may have been ambiguities.

The General Council of the WTO which comprises representatives of all member countries convenes as the Dispute Settlement Body (DSB) when a trade dispute is presented. Within the DSB, each representative has the same vote regardless of its size, and decisions are taken on a consensus basis (i.e., by unanimity). After an initial period of 60 days for consultations between the member countries involved in the dispute, a panel of experts is formed to take up the dispute, as in a court proceeding, if the consultation process does not lead to any resolution of the dispute. Once a decision is issued by a DSB panel, the countries involved in the dispute have a right to appeal that decision to an Appellate Body (AB) for further review. For the AB, seven outside trade experts drawn from among the member countries for fixed four-year terms are chosen. It is this group that has been the focus of attacks by the United States, as noted in Chap. 7. Since 1995, 500 disputes have been considered by the DSB and 350 decisions have been rendered by its panels or those of the AB. The United States has been the most frequent party in disputes taken up by these panels, in which it has received favorable judgments in most of these cases.

Notwithstanding the central role that the WTO occupies in the global trading system, two sets of problems have plagued its effectiveness and legitimacy in recent years: one is its inability to promote the conclusion of further rounds of multilateral tariff negotiations since the Uruguay round in 1994 and the other is restrictions on the scope of its dispute settlement mechanism and complaints by a number of advanced countries about the

basis for a number of judgments by its AB. Each of these problems is examined in the paragraphs that follow.

In 2001, members of the WTO initiated a ninth round of multilateral tariff negotiations in Doha, Qatar, that were intended to be concluded in 2005. This round was unique in that it focused primarily on the needs of the developing countries and embraced tariffs on agricultural goods that were of primary concern to these members. Previous rounds of tariff negotiations had focused primarily on reductions in tariffs on manufactured goods among the advanced countries. The Doha round of tariff negotiations was never concluded, despite various attempts to do so, and has now been suspended indefinitely. One of the main points of contention in the Doha round was the extent to which developing countries would be granted differential treatment on the lowering of their tariffs on agricultural goods with respect to the commitments of the advanced countries. The developing countries also resisted the kind of reduction in their tariffs on manufactured goods that the advanced countries were seeking.

Given the complexity of the trading issues taken up in the Doha round and the large number of countries in the negotiations (164) that were needed to approve any agreement in its entirety, it was perhaps inevitable that difficulties would arise. Nevertheless, one important negative result of the failure to conclude the Doha round has been that multilateral tariff negotiations have moved outside the WTO with the conclusion of many bilateral or regional trade agreements. The number of regional trade agreements has increased from 44 in 1995 to close to 300 today, and yet they cover only around 50 percent of global trade. This development implies that rules for international trade since 1995 have mainly been developed outside the framework of the WTO on a very fragmented basis. These agreements have tended to reflect the dominant interests of major trading countries such as the United States, the EU and Japan in their relationships with groups of developing and emerging market economies. Many of these agreements have also tended to exclude major emerging market economies, such as Brazil, China, India and Russia. As a result of these developments, the WTO has not been able to update its rulebook for international trade as it has on each previous round of tariff negotiations, thus limiting its role in the global trading system and restricting the scope of its dispute settlement mechanism. As noted in Chap. 7, the rules on global trade have been established to give expression to three fundamental principles of international trade embodied in the WTO agreement,

namely non-discrimination, reciprocity and transparency, that have provided the basis for the major expansion in global trade over the past 70 years.

The difficulties in finalizing the Doha round have also highlighted a particular problem with the status of member countries and their obligations vis-à-vis WTO agreements. Under existing practice, countries have the right to declare their special status as a developing country, which qualifies them for "special and differential treatment" (SDT) under WTO rules and thereby exemptions from many of those rules. Currently, around two-thirds of the membership falls into this category, which means that the burden of rule-keeping has fallen mainly on the advanced countries. Many of the main emerging market economies such as Brazil, China, India and Russia, as well as Korea and Singapore, all of which are major participants in global trade, currently qualify for SDT status. In view of this situation, a major effort needs to be made to establish objective criteria for the designation of SDT status in the WTO and for stages in the graduation of a country to the full acceptance of its obligations.

As a result of the breakdown of the Doha round, many experts have recommended that countries working through the WTO need to abandon the traditional "single undertaking" approach to multilateral trade negotiations based on the principle of unanimity of the membership on all details of an agreement. Alternatively, countries representing a "critical mass" of the membership could negotiate the terms of new agreements that would then be extended to all the membership on a most-favored nation (MFN) basis. Such an agreement because of its non-discriminatory nature could become part of the WTO. Another form of decision-making that has been used on a limited basis for very specific trade-related issues within the WTO is a plurilateral one, in which a group of countries not necessarily representing a majority of the membership reach agreement on an issue of interest to WTO members that would then be open to the agreement of other members that did not participate in the negotiations. Since the benefits of such an agreement would only be extended to those members that signed the agreement, this kind of agreement could only become part of WTO law by a consensus decision of all the membership.[8] Some form of experimentation in voting procedures within the WTO along these lines is needed in view of the large agenda of trade issues that need to be addressed, such as the reduction of trade restraints on agricultural and services trade, rules for digital trade and intellectual property rights.[9]

The failure to update the rulebook for global trade within the WTO has placed some constraint on the scope of its dispute settlement mechanism in terms of the range of trade disputes that it can consider. In addition, the United States has raised a number of particular concerns about the functioning of the AB within the dispute settlement mechanism.[10] In order to focus the attention of the WTO membership on these concerns, the United States has decided to object to the appointment of new terms or replacements for current AB positions, as noted earlier, which could soon lead to a paralysis of its operations. These appointments are approved under the consensus method of decision-making in the WTO, which means that they can be blocked by the objection of any single member. In September 2018, the United States objected to the appointment of a new member of the AB to fill a vacancy which reduced the number of AB panelists to three members, the minimum number required to hear an appeal of any dispute settlement decision by the Dispute Settlement Body. Two of these three positions will terminate at the end of 2019, and if the United States objects to their replacement or renewal, then the work of the AB will come to a halt.[11]

Some of the objections of the United States about the work of the AB are fairly technical in nature, such as the disposition of pending appeals that have not been adjudicated within the normal deadline of 90 days set under WTO rules and the conclusion of appeals in cases when the term of one of the AB panelists has expired.[12] It would seem that some resolution of these issues could be achieved through discussions with other WTO members, if the United States were fully committed to doing so. Other objections that the United States has raised concern the nature of AB decisions, namely that they have included findings that went beyond what was necessary to resolve a dispute and that the AB has declared that its findings should be considered as precedent for future cases. With these objections, the United States claims that the AB has not limited itself to operate as a form of contract arbitration mechanism, as intended when the WTO was established.[13] Dealing with these concerns may involve a review with other WTO members of the founding document for its dispute settlement mechanism, the Dispute Settlement Understanding.[14]

What is not clear in the actions of the United States is to what extent its complaints about the AB are part of a larger concern regarding the status of China within the WTO as a developing country and the unfair trade advantages the United States believes that China has received under its existing rules. These relate to its use of subsidies in international trade, the activities

of its state-owned enterprises in foreign trade and its practice of forced technology transfer, which are not adequately addressed in existing WTO rules.[15] The US government has clearly focused on these issues outside the WTO in its current tariff practices. It may be the case, then, that resolution of many of the problems impeding the functioning of the WTO will require a prior agreement between the United States and China on the main points of conflict in their trade relations. Nevertheless, in November 2018, at the G20 Leaders' Summit in Buenos Aires, it was agreed to include in the final communique a call for WTO reform that was supported by the United States. The United States has had informal consultations with the EU and Japan on WTO reform, but it is not clear what the timeframe of these discussions is, nor how any common understanding at that level would translate into WTO reform.[16] Notwithstanding the importance of WTO reform, it should be recognized that the risk of failure is not insignificant, given the range of issues that require change and the unanimous consent rule that binds WTO decisions.

2.2 The International Monetary Fund

The *International Monetary Fund* (IMF) represents a very different set of problems than those of the WTO, as it is a fully functioning organization. The issues that arise in its case deal with how the institution can improve its economic surveillance and financial operations in order to help promote the stability of the international financial system. Again, the United States is a major player in the organization, as it is the largest shareholder in terms of financial quotas and maintains an effective veto power on important decisions that require an 85 percent majority vote of the membership (the quota or equity share of the United States is currently 17 percent).[17]

As a result of the global financial crisis of 2008–09, three sets of issues relating to Fund operations have been the subject of active debate. One is its role within the global financial safety net and its effectiveness as an international lender of last resort; a second is its formal authority to address capital account issues in its surveillance operations with member countries; and third is its power to influence changes in a member's macroeconomic policy program in cases where there are significant negative spillover effects on other countries or the size of global imbalances has increased.

Throughout its history, the IMF has played a unique role in providing exceptional financing to its member countries in times of a financial crisis

when foreign investors and creditors are withdrawing their funding or are refusing to provide additional financial support in the absence of a major adjustment program. In these cases, at the request of a member country, the IMF will establish a line of credit for the country in crisis in return for which the country must agree on a number of macroeconomic policy changes that are expected to resolve the crisis and restore financial stability. A recent example involved the case of Argentina which in mid-2018 began to face substantial downward pressure on the value of its exchange rate because of major capital outflows related to a rise in interest rates abroad and domestic and foreign uncertainties about the credibility of the government's macroeconomic policy program. A sharp rise in domestic interest rates and the sale of foreign exchange reserves by the Central Bank of Argentina were unable to suspend the depreciation in the value of the peso. In these circumstances, Argentina approached the IMF for a loan of US$50 billion in order to gain its institutional support and the international stamp of approval that comes with its credits. As a condition for this loan, Argentina was required to agree with the IMF on adjustments to its macroeconomic policy program that were expected to stabilize the foreign exchange market and restore macroeconomic stability so that Argentina could be expected to repay the IMF within the normal 3–5-year period for such lending.

In addition to these traditional lines of credit, the IMF has experimented with the creation of special liquidity facilities that would allow member countries to obtain quick-disbursing financing from the IMF, if they were already judged to have a sound macroeconomic policy program in place and were facing balance of payments pressures because of the volatility of international capital flows. These operations could be considered to be somewhat analogous to the swap lines that the Federal Reserve created for foreign central banks at the time of the global financial crisis or the special lines of credit that it established for domestic financial institutions that were facing sudden withdrawals of deposits or other short-term financing of their credit operations. In this regard, the IMF was attempting to operate as an international lender of last resort (ILOLR). Unfortunately, there have been few requests for such lending. In its most recent experiment with the creation of the Flexible Credit Line (FCL) and the Precautionary and Liquidity Line (PLL) in 2009, the IMF approved access to large loans under the FCL for Colombia, Mexico and Poland and for Macedonia and Morocco under the PLL on a contingent basis (none of the five countries actually requested disbursements). The difference between these facilities is that for the FCL

potential access is significantly higher than for the PLL and a country must be judged by the IMF to have "very strong" macroeconomic fundamentals and policy frameworks, while for the PLL, the requirement specifies "sound" fundamentals, a somewhat less-stringent policy requirement. These are still high bars for many countries, especially in the case of the FCL. In addition, some countries have been reluctant to make use of these facilities because of the difficulties they might face if the IMF changed its judgment about their policy stance and access to the facilities was suspended. Even for the FCL, eligible countries might not be interested in making a request as their policies would suggest less of a need than for other countries, while if they did make a request, this action might be interpreted as signaling a potential problem markets were not aware of.

Because of the strict policy conditionality attached to IMF credits, many countries, especially the emerging market economies, have adopted a different approach to the creation of emergency financing, which is one of self-financing through the accumulation of foreign reserves. As a result, gross official foreign reserves on a global basis increased from around US$2 trillion in 2000 to US$7 trillion in 2007 and a peak of US$12 trillion in 2015, two-thirds of which were held by emerging market economies (in particular China). By comparison, the total financial resources of the IMF, including both the quota or financial subscriptions of its members and special lines of credit established by some of its largest member countries, reached a peak of US$1.4 trillion at the end of 2015. In addition, there has been a sharp expansion in central bank swap networks, such as the one of the Federal Reserve that was so important at the outbreak of the global financial crisis, and in regional financing arrangements, such as the Chiang Mai Initiative Multilateralization involving the ASEAN countries plus China, Japan and Korea. Combining all these different components, the global financial safety net (GSFN), as it is now called, has expanded greatly since the beginning of the current century from around US$3 trillion to around US$15.5 trillion at the end of 2016. Prior to the global financial crisis, the IMF was the second largest component of the GFSN after member countries' own reserves. Since the crisis, however, its share of the GFSN has fallen below that of central bank swap networks and regional financing arrangements.[18] As a result, the GFSN has become very fragmented and very unevenly distributed, as many countries are excluded from central bank swap networks and regional financing arrangements. In addition, foreign reserve accumulation is a very inefficient and costly means of emergency financing, given the large amount of resources

involved. Given its central role in the international monetary system, the IMF should be playing a more important role within the GFSN, both as a coordinator of its various components and as a financing instrument.

In order to improve the ILOLR function of the Fund and its central role within the GFSN, a number of reforms in its operations should be considered. One would be for the IMF to establish formal cooperating arrangements with the seven regional financing arrangements that now exist in order to allow for parallel financial operations in the event of a financial crisis affecting one or more of the members of that arrangement.[19] It would be understood that the IMF would be the leading player in terms of negotiating conditions for this parallel assistance. Some precedent for this kind of operation was created with coordination among the IMF, the European Central Bank and the Economic Commission (the so-called Troika) in providing financial assistance to Greece following the outbreak of the European debt crisis in 2010. Such arrangements would provide a means for augmenting the resources of the Fund, especially at a time when major financial assistance was required from the IMF.[20]

A second reform would be to have the IMF establish a quick-disbursing liquidity line, or Short-term Liquidity Facility (or SLF), for countries facing balance of payments pressures arising from volatility in capital flows linked to the spillover effects of policy changes in the systemically important countries. Such a facility would be similar in purpose and function to the central bank swap lines that were established during the global financial crisis and would move the Fund closer to fulfilling its role as a true ILOLR. At the same time, the FCL and PLL should be combined into a single facility given the low interest and demand for access to these facilities to date. Access to the SLF would be determined on the basis of prequalification and thus would be reserved for countries with strong macroeconomic and financial conditions. In principle, such a determination would be based on the Fund's annual surveillance exercise that it conducts with each member country to assess the adequacy of its macroeconomic policy framework and near-to-medium-term prospects. In order to mobilize additional resources in the event of heavy demand for access to the SLF, the IMF could explore the possibility of linking such demands to the activation of its special borrowing arrangement (the "New Agreements to Borrow") with a number of its larger member countries, which it used on an exceptional basis during the global financial crisis. Alternatively, it has been suggested that the IMF could approve a special allocation of its Special Drawing Rights (SDRs) (see below) that countries

would donate to a special pool or trust that would be used to finance access to an SLF.[21] During the second half of 2017, the Executive Board of the Fund discussed the possible modalities of a facility (or short-term liquidity swap) similar to the SLF proposed here but failed to mobilize enough support for its establishment.[22] The management of the Fund should continue to press for the establishment of this kind of facility.

A third change that would enhance the Fund's role as an ILOLR would be to establish a practice that, subject to the approval of 85 percent of the membership, the Fund could expand the size of Special Drawing Rights (SDRs) in times of global financial market stress, upon the recommendation of its managing director. SDRs are an international reserve asset that were created by the Fund in 1967 as a supplement to the US dollar that countries can use to convert into one of the main official foreign reserve currencies (i.e., dollars, euros, pounds, renminbi and yen) with another member country for balance of payments transactions. SDRs are allocated to all member countries in relation to the size of their quota share in the Fund. In August 2009, the Fund membership decided to distribute US$250 billion worth of SDRs to all member countries, which was the first time that they had been issued at a time of global financial stress to assist countries that had an immediate need for additional international liquidity. To further enhance the role of the IMF within the global financial safety net, consideration should be given to establishing a formal link between the allocation of SDRs at a time of global financial market stress and the activation of central bank swap networks.

As a complement to the strengthened role of the IMF as an ILOLR, it would be important to endow the Fund with formal authority to deal with capital account issues and international capital flows in its bilateral and multilateral surveillance operations. When the IMF was created, its principal focus was on the exchange market operations and current account transactions of its members. As an obligation of membership, countries made a commitment under Article VIII of the Fund Agreement to establish a realistic value for their exchange rate free of any restrictions on their current account transactions. As noted in Chap. 2, this requirement was in effect a pre-condition for the expansion of global trade under the GATT/WTO system. For example, even if there are no tariffs or other restrictions on foreign trade between two countries, such trade still cannot take place if one or both countries maintains restrictions on the transfer of foreign exchange in order to settle the payments associated with trade between those countries. Today, the overwhelming number of Fund

member countries have accepted the obligations of Article VIII. However, each country maintains full authority under Article VI to maintain restrictions on its capital account transactions.

With the enormous growth in financial globalization since the mid-1980s, no international organization has been endowed with formal authority to oversee the global financial system and promote global financial stability, including through the monitoring of the capital flow management policies of individual countries. By default, many of these responsibilities have been assumed by the Fund through its multilateral and bilateral surveillance operations. For example, for a number of years, the IMF has prepared a semi-annual Global Financial Stability Report for its membership and for the deliberations of its International Monetary and Financial Committee, which is a ministerial-level committee of oversight that represents the full membership of the organization. It also issues for these meetings an “early warning” assessment of risks to the global financial system that it develops in conjunction with the Financial Stability Board, which coordinates international regulatory policies among the 25 advanced and emerging market economies with the largest international banking operations.

In 1997, the IMF had proposed to its oversight committee that capital account liberalization be established as a formal objective for each member country, in the same way that current account convertibility was conceived in the original Articles of Agreement. However, with the emergence of the Asian financial crisis and other emerging market financial crises, this proposal was withdrawn. More recently, the Fund has adopted the view that it can be appropriate for member countries to use capital account restrictions or capital flow management policies on a temporary basis in situations where they are facing difficulties in maintaining economic and financial stability because of capital flow volatility or “sudden stops” in capital inflows.

In the light of these developments, it would make sense to amend the Articles of Agreement to endow the Fund with formal responsibility for overseeing the international monetary *and* financial system, instead of only the international monetary system as now specified in Article IV. In addition, a section should be added to Article VI indicating that members will consult with the Fund on the appropriateness of the capital account restrictions that they have in place with a view toward moving over time to a position of capital account liberalization. It is now well established from a practical economic point of view that there are clear pre-conditions that

need to be met before a country adopts capital account convertibility in terms of the strength of its financial regulatory and supervisory framework, the credibility of its monetary policy management and the sustainability of its public debt position. These factors would have to be carefully assessed by the Fund and a member country in coming to a decision about when it would be appropriate for that country to liberalize its capital account transactions.[23]

A final issue that needs to be considered in terms of strengthening the role of the IMF in the global financial system is how it can be given more influence in bringing about changes in a member's macroeconomic policy framework, if deemed appropriate as a result of the Fund's bilateral and multilateral surveillance operations. As noted earlier, each member country is required to consult on an annual basis with the Fund for the purpose of assessing the adequacy of its macroeconomic policy framework and outlook, which is conducted by the IMF staff and then discussed in a report to its Executive Board. If there are any deficiencies in the macroeconomic policy program of the country authorities, these are highlighted in the staff's report along with recommendations for policy adjustments. The assessment and recommendations of the staff are usually endorsed by members of the Board, except possibly in the case of the director representing the country under discussion, who may express disagreement on particular points. A brief summary of the Board discussion is then issued for public dissemination in which the views and recommendations of the Fund staff are usually reflected in the Board's judgment about the country's macroeconomic position. This process represents a form of peer pressure at the international level for purposes of bringing about changes in a country's economic policies. However, member countries are not required to follow the advice of the IMF in its surveillance operations. By contrast, when a country is seeking financial assistance from the Fund, then it can insist on policy changes as a condition for approving such assistance (as in the case of Argentina) and suspend that assistance, if policy commitments made when the loan was approved are not being fulfilled.

As a means of promoting global financial stability, it would be important to strengthen the Fund's influence on member countries' macroeconomic policies in its bilateral surveillance activities when these are judged to have negative spillover effects on other countries or contribute to the problem of global imbalances as discussed in Chaps. 4 and 7. Both of these conditions may lead to currency speculation or volatility in international capital flows which can become a threat to global financial stability. Since the

global financial crisis, the Fund has adopted a more multilateral perspective in its bilateral surveillance exercises, as defined in its Integrated Surveillance Decision of 2012, which called for a new multilateral consultation exercise of selected countries, if warranted by the managing director, to discuss a potential threat to global financial stability arising from policies of one or more of those countries. Thus far, however, no such exercise has been initiated. As noted in Chap. 4, the significant increase in the size of global imbalances during the 2003–07 period was one factor that contributed to the financial crisis as a number of countries with large current account surpluses and others with large current account deficits did not make policy adjustments to reduce these imbalances and stem the flow of capital between them that contributed to the financing of housing bubbles on both sides of the Atlantic Ocean.

Since the crisis, the overall size of global imbalances has declined, although they are still large for certain countries. In recent years, the Fund has prepared an annual External Sector Report where the sources and factors giving rise to these imbalances are examined for all of the major countries involved. In each country case, an underlying appropriate imbalance is calculated consistent with certain macroeconomic objectives and an excess imbalance is measured that should be addressed through policy adjustment. Alternative policy actions are then advanced for these countries to consider in addressing these imbalances. However, the IMF does not have a procedure for ensuring that countries make policy adjustments to reduce these imbalances, except the pursuit of dialogue by means of its annual surveillance exercises.[24]

At the country level, the Surveillance Decision noted above also specified that in the bilateral surveillance exercises with systemically important countries the spillover effects of their policy adjustments should be explicitly taken into account and reflected in the Fund's assessment. In cases where these are seen as significantly negative for other countries, it would be appropriate for the Fund to identify these policies explicitly and work with the country concerned in making appropriate policy adjustments. This kind of procedure was recommended by Raghuram Rajan, the former Governor of the Reserve Bank of India, in his call for new "rules of the monetary game" under which the spillover effects of a country's monetary policy actions would be evaluated by the IMF for their negative, neutral or positive impact on other countries, building in effect on its Integrated Surveillance Decision. If these actions violated certain pre-established norms or codes for appropriate policy conduct, the Fund

would identify these effects and work with the country to make policy adjustments, subject to review by its Executive Board representing its full membership.[25]

Over time, the Fund has worked hard to establish itself as a neutral policy advisor and independent assessor of member countries' macroeconomic and financial policies. These roles have essentially been recognized by the G20 in its requests to the Fund to issue surveillance notes for its annual summit meetings. In a more integrated global economy, it is important that countries establish a clearer commitment to work with the Fund in addressing any shortcomings in their overall policy framework and macro-financial conditions that are identified in its annual surveillance exercises. Such a change would represent an important enhancement of the Fund's authority and a necessary step in the inevitable evolution of multilateral institutions as guardians of the global system and protectors of global economic and financial stability.

2.3 The International Organization for Migration

The *International Organization for Migration* (IOM) is not as prominent or well-known an institution as the IMF and WTO. In part, this reflects the fact that international migration or transfers of labor are a far less prominent feature of the global economy than financial flows or trade. Migrants also have a much less powerful voice than business or finance in defending their interests. If anything, in the last several years, the voices opposing migration in the advanced countries have become much more vocal than those supporting it. Nevertheless, there are strong grounds for establishing cooperating agreements among recipient and sending countries in order to balance the interests of both groups of countries and to promote "safe, orderly and regular migration via well-managed migration policies", as specified in Goal #10 of the UN Sustainable Development Goals. If not, there is likely to be an increase in unregulated migration solely for welfare purposes, which will become an increasing threat with the predicted, damaging effects of climate change, in particular on tropical countries. The IOM, while sharing some of its responsibilities with other international organizations, such as the International Labor Organization, the UN Relief and Works Agency and the UN High Commissioner for Refugees (UNHCR), is now recognized as the main international institution overseeing migration. Initially, the IOM was founded in 1951 along with the UNHCR to deal with European refugees following WW2, but since then

it has gradually expanded its focus to a global basis. In 2016, it became a formal body of the UN family and was known also as the UN Migration Agency. The IOM is a very decentralized agency with most of its staff located in national offices in many of its member countries, liaising with member government agencies, other UN agencies and private sector groups. Unlike the IMF and WTO, there are no formal obligations on membership; it was not established by a formal treaty process, as in the case of the IMF and WTO, that imposed certain obligations on its members. Instead, the IOM exists to promote cooperation on migration-related policies among its member states, to promote information exchange based on its own research and data collection efforts and to provide assistance to both sending and recipient states for the management of immigration.

Recently, the most important cooperative agreement on migration, the Global Compact for Safe, Orderly and Regular Migration, was concluded and formally approved by 164 UN member countries in early December 2018.[26] This document represents the first international effort at establishing a framework for the global governance of migration. Discussions were initiated by the UN General Assembly in September 2016 with the New York Declaration and continued in further meetings after that. Initially, the United States was a participant in these discussions, but then in late 2017, it became the first member of the UN to withdraw. No announcement was made at the time, but given recent actions by the United States to focus on the domestic aspects of its immigration policy, it is not surprising that it withdrew from an international cooperative effort to improve its management and conduct.

The Compact is an attempt to identify the rights of immigrants through all stages of the migration process as a means of optimizing the benefits of migration and to establish goals, standards and programs for international cooperation. It sets out an ambitious agenda of objectives and commitments for the management of migration covering, for example, the provision of information about immigration policies and programs in recipient countries; the preparation of migrants; assistance and protection during passage; border treatment; and the absorption of migrants in destination countries. The IOM will serve as the coordinator of various UN agencies with overlapping responsibility for various components of the Compact and will encourage member countries to develop national plans addressing many of the goals laid out in the document. Every four years, the UN will convene an International Migration Review Forum to examine and discuss the results of national programs.

While the Compact is a non-binding agreement, it nonetheless represents an important multilateral effort to focus attention on the plight of many workers and families (and refugees) in the migration process. More certainty and predictability in this process, which the Compact is promoting, would be an important improvement. In this connection, a further useful, complementary step in implementing the Compact would be for the Council of the IOM (its main governing body) to establish among its members three-to-five-year quantitative targets for the absorption of migrants in recipient countries. These would be notional guidelines and would not indicate the origin countries for these migrants, nor the criteria to be used in their selection. These two aspects of the migration process would be strictly determined by national decision-making, as indeed would be the medium-term goals for the receipt of migrants. Over time, as more experience is gained in implementing the Compact, more specificity in this complementary aspect of it could be attempted in the spirit of promoting more certainty and predictability for migrants. Given the fact that there cannot be free and open transit of workers and their families across countries (except within an economic union) because of the economic, social and political disruption such a policy would entail for both sending and receiving countries, some form of managed and controlled process is going to be necessary. If that process can be organized with clear national and multilateral dimensions, such an arrangement should be a clear gain for the governance of globalization.

3 Governance Frameworks for Globalization: An Assessment of the Issues

The global economy has experienced a particularly rapid period of integration within the last couple of decades, which has disrupted the economic and social bases for certain groups within the United States and other advanced countries and raised doubts about the benefits of globalization. It is unlikely that the process of globalization can be suspended or even reversed given the pace of technological change. Accordingly, it is imperative that the governance for globalization at both the national and international levels be improved in order to maximize its benefits and minimize its costs as the structural economic changes it entails continue to take effect.

At the national level, a governance structure needs to be put in place that gives workers and businesses outside of the major urban centers of

multinational companies with their internationally mobile high-skilled workers the confidence in knowing that there is a social safety net to provide assistance in the event of adverse effects arising from globalization, as well as technological change and other major structural changes in national economies. Such a safety net is essential for globalization to have legitimacy at the national level. Ideally, this arrangement should come about as a result of a compact among business, labor and government at the local and national level dealing with the minimum terms of decent employment, a program of worker training and skills upgrading, and incentives for businesses to become internationally competitive. For such a program to be possible, there needs to be in place tri-partite councils in which the details and coordination of these programs can be discussed. Putting in place such an arrangement would re-create the elements of a tri-partite social compact that existed in effect in the United States for a period of roughly three decades during the first phase of the post-WW2 globalization era but which has largely disappeared in the current phase. Action on this front needs to be complemented by public policy initiatives to improve educational opportunities and vocational/technical training for children of low-income families and reduce the substantial income disparities between the highest and lowest ranks of the income scale. Without improvements in these areas, popular resistance to globalization will continue to grow and expand its influence in the political arena.

At the international level, improvements in the governance and effectiveness of the main international organizations dealing with trade, finance and immigration are essential in order to promote intergovernmental cooperation in the management of economic globalization and establish common rules for its continued expansion. The liberal international economic order was grounded in these two principles and the commitment and leadership of the United States and its major allies. Notwithstanding the recent ascendancy of anti-globalist forces in national political life in the United States, this development is likely to be a temporary phenomenon if continued integration of the global economy is seen as bringing benefits to a broad spectrum of social groups and economic classes. In this regard, international institutions such as the WTO, the IMF and the IOM can play an indispensable role in promoting an orderly expansion of the global economy with sustained improvements in the per capita income of lagging economies and disadvantaged groups in the more advanced economies.

The WTO is the guardian of the global trading system and exists to promote further liberalization in the trade of goods and services and for-

eign direct investment, while maintaining a mechanism to resolve trade disputes. Unfortunately, it has become difficult, if not impossible from a practical point of view, to reach unanimous agreement among all WTO members on further rounds of tariff reductions as in the past because of the major expansion of the membership and current rules of decision-making. Accordingly, practical ways must be found to agree on trade initiatives among smaller groups of countries that could then be extended to other members on an MFN basis. As the scope of such agreements increases, it should be possible then to have them become part of WTO law by a consensus of the membership, as is required for WTO agreements. In the case of trade disputes, the Appellate Body of the WTO's dispute settlement mechanism is close to becoming non-functional because of the refusal of the United States to approve the replacement of retiring Body members. This posture of the United States reflects its dissatisfaction with the way in which the Body operates and conceives its role in public international law. The United States has raised its objections with other major countries to try to reach some accommodation of its views, but it is not clear whether changes can be agreed within the WTO itself before the end of 2019 when the Body will become inoperable, if two of its three remaining members are not replaced upon their retirement. The United States has also expressed misgivings about how China has taken advantage of certain loopholes in WTO law to favor its state trading system to the detriment of US economic interests. While it is significant that the communique of the G20 Leaders' Summit in December 2018 included for the first time a call for WTO reform, it is not clear what the scope of that reform would be and what timetable will be needed for it to be completed. Effective consultations among the United States, the EU, Japan and China will be critical for progress to be made in this area.

The IMF is not facing similar roadblocks as the WTO in fulfilling its institutional mandate, but it should be strengthened in order for it to play a central role in the global financial system. Since the global financial crisis, the global financial safety net has expanded greatly with a diminished role for the IMF, while becoming highly decentralized without a clear coordinating mechanism. The IMF should ideally play this role given its mandate to oversee the international monetary system and intended role as an international lender of last resort. In addition to its regular credit facilities to assist countries facing balance of payments difficulties, the Fund needs to have in place a quick-disbursing, emergency liquidity facility for countries with sound macroeconomic fundamentals facing sudden changes in capital

flows as a result of unexpected developments in the global economy. The members of the Fund should also formalize its growing involvement in capital account issues by extending its surveillance mandate beyond the current account developments of its members with the establishment of a goal of capital account liberalization. Finally, in the Fund's surveillance activities, which are critically important for the stability of the global economic and financial system, member countries should agree to cooperate fully with the Fund in the exercise of its multilateral surveillance function by which it attempts to coordinate policy adjustments among a group of countries contributing to a problem affecting global economic or financial stability, such as global imbalances.

The UN Migration Agency, a relatively new agency of the United Nations, has much more limited powers and influence in the area of global migration than do the WTO and IMF in their domains. However, it is now the guardian of the first charter, or Global Compact on Migration, that has been established to protect the rights of migrants and promote a more orderly flow of migrants in the global economy. In addition to its work in monitoring migration patterns and problems, the IOM should now begin to work with its membership in establishing notional, medium-term targets for the intake of migrants by individual countries and work with those countries in ensuring that those migratory flows can be managed in accordance with the objectives and terms of the Global Compact. The accomplishment of this goal would represent a major improvement in international labor movements within the global economy.

Notes

1. These data can be found in Atkinson (2018).
2. The effectiveness of the TAA program is reviewed in Muro and Parilla (2017).
3. The flexible worker ("kurzarbeit") program in Germany is analyzed in Kirkegaard (2014).
4. The official opinion of the Supreme Court in this case can be found at www.supremecourt.gov/opinions/17pdf/16-1466_2b3j.pdf
5. A strong case for work councils is presented in a recent joint study of the American Enterprise Institute and the Brookings Institution, "Work, Skills, Community: Restoring Opportunity for the Working Class" Working Class Study Group Report (November 2018), which can be accessed at www.aei.org and www.brookings.edu
6. The concept of "embedded liberalism" was presented in Ruggie (1982).

7. An examination of the role of the GATT/WTO in multilateral tariff negotiations and a good summary of the main issues currently confronting the WTO can be found in Baldwin and Nakatomi (2015).
8. Issues related to voting decisions inside the WTO are discussed in WTO (2018).
9. Current trade issues that need to be resolved through the WTO are examined in IMF, World Bank and WTO (2018).
10. The concerns that have been raised by WTO members about the operations of its dispute settlement mechanism are examined in McDougal (2018).
11. The concerns of the United States about the dispute settlement mechanism of the WTO have been spelled out in the US 2018 Trade Policy Agenda and 2017 Annual Report of the Office of the US Trade Representative (March 2018), which can be accessed at www.ustr.gov
12. Payosova et al. (2018) provide a good summary and analysis of the concerns of the US government about the Appellate Body of the WTO, with possible solutions.
13. This concern has in fact been raised by previous US administrations but not as strongly as the current one.
14. In an effort to resolve some of the concerns raised by the United States, the EU has formulated proposals for WTO reform that were released in "Concept Paper on WTO Modernization" in September 2018, which can be accessed at www.trade.ec.europa.eu
15. China's practice of forced technology transfer imposes a significant cost on US multinational companies operating in China and is analyzed in Branstetter (2018).
16. A good summary of the issues of WTO reform from a trans-Atlantic perspective is presented in Duesterberg (2019).
17. The operations of the IMF are explained in more detail in Elson (2011).
18. The components and size of the global financial safety net are examined in more detail in Denbee et al. (2016) and in IMF (2016).
19. The seven regional financial arrangements that now exist include the Arab Monetary Fund (22), the BRICS Contingent Reserve Arrangement (5), the Chiang Mai Initiative Multilateralization (15), the Eurasian Fund for Stabilization and Development (6), the European Balance of Payments Facility (8), the European Stability Mechanism (19) and the Latin American Reserve Fund (8). The numbers in parentheses refer to the number of countries that participate in the arrangement.
20. Some of the operating issues involved in cooperating agreements between the IMF and regional financing arrangements are examined in IMF (2017a).
21. This form of funding has been proposed for a quick-disbursing liquidity facility in De Gregorio et al. (2018).

22. The short-term liquidity swap was discussed in IMF (2017b).
23. The IMF's approach to capital account convertibility and the use of capital flow management policies is described in IMF (2018).
24. The difficult position in which the Fund finds itself as regards the reduction of global imbalances was signaled by its former chief economist in a blog he wrote on July 24, 2018 ("Addressing Global Imbalances Requires Cooperation"), which can be accessed at www.imf.org
25. This proposal is laid out in Mishra and Rajan (2016).
26. The Global Compact for Migration can be found on the website of the International Organization for Migration (www.iom.int).

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CHAPTER 9

The United States and Globalization: Where Do Things Stand?

In recent years, the role of the United States in a globalized economy has been questioned and challenged by many national political leaders as detrimental to its interests because of the significant costs and meager benefits it has created and the advantages other countries have gained on it. In this context, the current US governmental administration has been pursuing an anti-globalist agenda that has begun to weaken its cooperative arrangements with other advanced economies and long-standing commitments to key international organizations operating in the global economic and financial arena. One purpose of this book has been to controvert this approach and demonstrate the clear benefits in net terms that the United States has derived from its leadership and engagement in a globalized economy through trade, finance and immigration. Parts of the book have also focused on domestic policy adjustments that are needed for the United States to maximize its gains from globalization, while ensuring that they are more widely shared than in the past. The purpose of this final chapter is to draw these different strands together and identify certain issues that could pose particular difficulties for the United States in the future.

The United States has been living through what can be called the second era of globalization from a long historical perspective. The first era emerged out of the industrial revolution in the United Kingdom and reached its peak during 1880–1910. It was built on the inventions of the steamship, railroads and telegraph and was centered in the economies of

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Western Europe and North America, while embracing the major trading partners and colonies of those regions. The gold standard was the main unifying element for trade and financial flows during this first era of globalization and Great Britain was the dominant economic power within the system, as the United States has been in our own time. This first era of globalization was destroyed with the effects of two world wars and the Great Depression.

A second globalization era began at the Bretton Woods Conference of 1944 that led to the creation of the IMF, World Bank and GATT to provide institutional support for its re-generation. The first phase of this globalization era ran through the 1970s and roughly coincided with the so-called Bretton Woods era, during which the US dollar was tied to gold at a fixed price and all other currencies were linked to the dollar at fixed exchange rates. This arrangement recognized the United States as the dominant economic power and the US dollar as the main global currency, although it shared special reserve currency status initially with the UK pound and French franc and later on with the German mark and Japanese yen. With its massive military umbrella as a bulwark against potential aggression of the Soviet Union and foreign assistance programs to support post-WW2 economic recovery, the United States took the lead in establishing the ground rules for the liberal international economic order that has survived up until the present day. This first phase was highly successful in promoting recovery and development of today's advanced economies and in restoring the broad contours of the globalized economy of the late nineteenth and early twentieth centuries. In the mid-1970s, however, this phase came to an end as a result of a substantial build-up of dollar reserve liabilities abroad and the failure of the United States to maintain its commitment to other countries to convert those liabilities into gold at a fixed parity of US$35 per ounce, as called for in the Bretton Woods Agreement.

With the revision of that Agreement in 1973, a new, mixed regime of fixed and flexible exchange rates began, with most advanced countries moving toward the latter system and most other countries adopting fixed exchange rates. The US dollar continued to be the dominant currency within the international monetary system, but without any formal link to gold. At the same time, the United States, together with its main allies in the G7, continued to promote trade liberalization, and now capital account liberalization, in a transition to our current phase of this second era of globalization. This current phase, which began in the late 1970s–early 1980s, has been marked by a much more rapid expansion of

international trade and financial flows than in the earlier era. To a great extent, this change can be linked to important technological developments that have promoted greater integration of the global economy according to these measures. One was the invention of containerships that have standardized shipping methods and allowed for a major expansion of shipping traffic. The other was the information and communications technology (ICT) revolution that allowed the physical separation across borders of G7 factories by means of off-shoring and the electronic processing of financial transactions. In this current phase of globalization, indicators of economic integration have far exceeded any that had been registered in the two previous periods of globalization.

Throughout the current era of globalization described above, the United States has been the dominant economy and has played a major role in defining the rules for international commerce and finance and in leading the international organizations that have been created to monitor their observance. The central role of the US economy within the international economic order reflects its high degree of efficiency, productivity and innovative capacity and is epitomized by the special and unique role of the US dollar in the conduct of international trade and financial transactions. US government debt has also been recognized as the dominant safe asset for international investors. By these descriptions, it is natural to assume that the United States has benefitted in important ways from its engagement with the global economy, even though international transactions are a relatively small share of its total economic activity, compared with other advanced countries. Nevertheless, this process of engagement has entailed structural change for the US economy that has created adjustment costs for certain workers, businesses and communities, while contributing to some degree to a growing problem of income inequality. The US government has not been effective in dealing with these problems and, as a result, populist pressures against the process and pace of US engagement with the global economy have arisen that threaten the benefits that have been gained. This book has tried to assess the costs and benefits of globalization for the United States as reflected in three of its dimensions (trade, finance and immigration) and, at the same time, identify a number of policy adjustments that can be made to minimize its costs and ensure that its benefits are more widely distributed.

In international trade, the United States has been the largest trading nation for most of the post-WW2 globalization era, except for recent years when it has ceded that position to China because of that country's major

export drive. What has been unusual about the United States is that foreign trade has represented a relatively small share of its total domestic production (currently around 27 percent for goods and services), compared with other OECD countries and China, as well. This fact reflects the wide geographical differences within the United States, its very diversified economy and historically, the relatively high transportation costs of trade across two large oceans with major trading countries of Western Europe and Asia. Nevertheless, the United States has been a significant beneficiary in net terms from its trade relations. Exports have been based on the output of an innovative, technologically advanced economy across a variety of activities within the agricultural, manufacturing and services sectors, where high degrees of efficiency and productivity have contributed to their competitiveness and have supported their expansion. In manufacturing, the development of global value chains whereby certain labor-intensive activities within the production process have been shifted overseas has contributed to this export-related growth. At the same time, rising imports of labor-intensive manufactures from emerging market exporters such as China have posed a competitive threat to domestic manufacturers of some of these same goods with the result that they have ceased production and laid off workers.

These developments represent part of the structural change that is an inevitable result of trade liberalization, as economic resources for an advanced economy such as the United States are shifted from import-competing activities in which it does not have a comparative advantage due to relatively high labor costs to those in which it does, because of its high-skilled labor force and technologically advanced manufacturing processes. In the case of the trade opening of the United States with China after its entry into the WTO in 2001, for example, US employment in certain manufacturing activities declined significantly as a result of import competition from China, but these job losses were offset by gains in export-related activities, fueled in part by cheaper inputs from China, and rising output in the services sector. Unfortunately, some of those locations where job losses were registered did not recover economically, as existing businesses closed operations and new investment did not bring in new business activity. These conditions called for government intervention in the form of active labor market policies to support labor retraining or relocation and incentives for new business development, but the actual response was inadequate. Experience has shown that the trade adjustment assistance of the US government offered to workers and firms adversely affected by import competition has been very minimal and largely ineffective.

The preceding discussion provides an illustration of the gains and losses that are associated with the process of trade liberalization as structural change and resource reallocation occur in response to the relative price adjustments induced by tariff changes. Throughout the period of trade globalization for the United States, what is clear is that the gains for trade have exceeded the losses, as resources have shifted away from relatively labor-intensive economic activities where productivity has been low to relatively capital-intensive, high-technology activities where labor productivity and wage levels have been higher. During the post-WW2 globalization era, it has been estimated that the gains from trade for the United States have exceeded its costs by a factor of 50 to 1. Textbook discussions of trade theory always make the point that it should be possible for those who gain from trade to compensate those who lose from trade, so that everyone is better off. However, in practice this transfer has rarely occurred or on a scale that would be sufficient to ensure that those who lost their jobs from the effects of trade could receive adequate government benefits to enable them to find new employment at a wage level similar to or better than the one they had with their former job.

One area of trade where everyone does gain relates to the positive effect of imports on increasing the range of intermediate and final goods for businesses and consumers and the reduction in the cost of these goods and associated products. These gains for the United States over the long term have been quite significant, as the cost of imports has been lowered with tariff reductions and the range and value of imports has increased in relation to domestic production. For example, it has been estimated that increased imports of manufactured goods from China during 2000–06 were equivalent to a real decline of 7.5 percent in the US price index for manufactured goods, reflecting both their lower cost and an expanded basket of available goods.

As a result of growing populist complaints about the negative effects of trade liberalization on the job security and wage levels for low-skilled workers, since early 2017, the US government has been adopting a much more protectionist stance in its foreign trade policy than in the past. This stance has been reflected in the imposition of tariffs on steel and aluminum, allegedly on national security grounds, new tariffs on imports from China and tariff threats against the European Union. The government has also withdrawn from the Trans-Pacific Partnership (TPP) for trade that it had previously agreed to and has made threats about withdrawing from the WTO, while restricting its dispute settlement mechanism. These

actions represent a major departure from the trade policy of the United States that has underpinned its commitment to the liberal international economic order established in the wake of WW2.

The trade policy changes described above raise a number of concerns. First, they are very likely inconsistent with WTO rules and may encourage similar actions or retaliatory responses from other countries (as has been done by China). In this respect, they represent a basic attack on the rules-based, global trading system that has over time been a powerful force for the enhancement of prosperity of all its participants. Second, many of these changes have been motivated by a desire to reduce trade imbalances of the United States and in particular those with China. On this basis, they reflect a basic misunderstanding of trade policy and the broad macroeconomic context that determines a country's trade balance. Also, the tariff increases imposed on imports from China will only increase domestic prices for those goods and/or shift some of that import demand to other countries. Third, the rationale for tariff increases against China has not been made clear. Apart from concern about the size of the trade imbalance, government officials have cited concerns about China's forced technology transfer with American companies doing business in China, which is a legitimate concern, its subsidization of exports by state-owned enterprises and even the technology goals in its 2025 state plan. Some of these concerns (export subsidies and technology transfer) are shared by other advanced countries, and a joint negotiating effort with some of them, either through the dispute settlement mechanism of the WTO or in a separate forum, would probably prove to be more effective than the US government's solo approach.

In addition to trade with China, the US government has adopted an aggressive approach in its trade relations with Canada and Mexico as a basis for renegotiating the NAFTA agreement, again for reasons that have not been made clear. Given that this trade agreement was more than 20 years old, there were justifications for updating and expanding some of its provisions to take account of new developments in trade practice. In fact, this objective would have been accomplished had the government proceeded with the TPP, as Canada, Mexico and United States were participants in its negotiation. Many of the provisions of the TPP, as regards, for example, digital trade, labor and environmental standards, and dispute settlement procedures were incorporated in the renegotiation of the NAFTA agreement that was concluded in 2018. However, at the insistence of the United States, the United States-Mexico-Canada trade agreement (or USMCA, as it is now called) includes some provisions that make

it more protectionist than NAFTA, as regards the share of domestic inputs that must be included in regional production before imported inputs from outside the region can be used. In addition, the agreement specifies that a certain share of automobile production in the region must be produced in factories that pay wages of at least US$16 an hour, which effectively exclude those in Mexico. These provisions are likely to distort the cross-border supply chains for automobile production that now exist within the region and increase the cost of auto production. The TPP has proceeded without the participation of the United States, but the government should reconsider its decision not to join and seek entry as it intended to do when the arrangement was first developed.

As in the case of international trade, international finance is a second dimension of globalization where the United States played a dominant role in the global economy. This result reflects not only the breadth and depth of its financial markets, but also the special and unique roles that the US dollar has performed in the global financial system. Being the currency of the largest economy in the international system, the dollar has fulfilled a number of different functions in global trade and finance that make it on a de facto basis the primary currency for the global economic and financial system. The dollar is the main anchor currency to which other currencies are linked in terms of their exchange rates and is the major currency that is traded in foreign exchange transactions. More than half of international trade is invoiced in US dollars, while most international bank credits and foreign debt placements are denominated in US dollars. Finally, around two-thirds of official international reserves are denominated in US dollars and are held in the form of US government securities. Because of their high degree of liquidity and dollar base, US government securities are the pre-eminent global safe assets for international investors. Most of these characteristics of the US dollar reflect the positive network effect and convenience for traders and investors that have developed in using the dollar and dollar-denominated assets in their transactions. They also confer a number of special benefits for US-based individuals and businesses in terms of lower costs and risk for their international currency and debt transactions. Similarly, the US government derives a significant amount of seigniorage revenue from the foreign demand for use of its currency, as well as interest savings in the placement of its debt instruments.

The ease with which the US government can issue and place its debt instruments with foreign agents has conferred what has been called an "exorbitant privilege" on the United States, in that it has been relieved of

the basic constraint that limits other governments in their budgetary operations. This privilege is not without limit, however, and ultimately depends upon the confidence that domestic and foreign agents have in the ability and willingness of the US government to pursue a generally sound fiscal policy and maintain a sustainable debt position in which the servicing of its debt outstanding is not subject to doubt or question. From the globalization era to date, this condition has been maintained, as the share of US public debt held by foreigners rose from around 5 percent in 1970 to nearly 50 percent in 2007.

One manifestation of the unique position of the United States in the global financial system is the special role it has played as a global financial intermediary. Over time as the foreign demand for US government securities has increased, foreign liabilities of the United States have expanded. At the same time, because of the expansion of US business and bank activity in other countries as part of financial globalization, the United States has increased its foreign asset accumulation. Since around 1980, the foreign liabilities of the United States have exceeded its foreign assets, and its net foreign liability position has increased over time. Nevertheless, the interest paid on the country's international debt placements has been far less than the interest earned on its foreign investments with the result that the United States has generated a significant surplus on the service component of its external current account, offsetting to some extent the size of its trade imbalance. In an overall balance of payments context, the counterpart of this growing net foreign liability position (or financial account surplus) has been a growing current account deficit of the United States, as the size of the current account and financial account balances must be equal but with opposite signs. From a macroeconomic perspective, a growing current account deficit also reflects a growing gap between domestic saving and investment, which for the United States has been caused by a weakening in domestic saving, and government saving in particular, as domestic investment as a share of GDP has remained relatively unchanged over time. To some extent, the growing foreign demand for safe assets of the US government has been a factor in the long-term appreciation of the US dollar, which has also contributed to the persistence of a current account deficit. With these facts, one can see the potential risks that the United States faces in maintaining the "exorbitant privilege" that it has been given in the global financial system.

The greatest challenge and cost of financial globalization for the United States has been the global financial crisis of 2008–09. This crisis reflected not so much inherent defects in the global financial system, as much as the

problems associated with speculative financial activity, a lack of transparency in financial relationships, fraud and abuse in financial transactions and a weak regulatory framework. An important context for the crisis was the persistence and growth of the US current account deficit in the half decade preceding the crisis and the problem of global imbalances associated with it. While the United States was the largest contributor to global imbalances on the deficit side, on the surplus side, oil exporters, China and other emerging market economies in Asia generated large savings to finance that deficit, in particular through large purchases of safe assets of the US government.

The transfer of these funds from excess saving countries to the United States in effect created a large inflow of liquidity to finance domestic financial activity, some of which was channeled to speculative activity in the housing finance market. A temporary boom in housing in the years preceding the crisis was spurred by low-mortgage interest rates, an increase in the purchase of low-income mortgage credits by the government-sponsored housing agency (Fannie Mae) and wide investor interest in new, high-yielding financial derivatives based on these mortgage credits (MBS and CDOs). Even though the design and composition of many of these derivatives were not well understood, they were guaranteed by other derivatives (CDS or credit default swaps) and granted AAA ratings by rating agencies under pressure from the investment banks that designed them. Most of this speculative activity took place in the "shadow" banking system comprising investment banks, finance houses, broker-dealers and money-market funds, in which financing for the purchase of these long-term mortgage-related derivatives was provided by means of overnight repurchase agreements (REPOs), thus creating an extreme mismatch in the terms of the asset-liability structure of these investments.

Commercial banks were also participants in these investments through off-balance sheet entities they were allowed to create for this purpose, which exposed them to very high risks of insolvency if this short-term financing was withdrawn, and they were forced to transfer these investments to their regular balance sheet. European banks faced this risk directly as they were allowed to borrow directly in the US-based REPO market and purchase mortgage-backed derivatives as credits on their balance sheet.

The regulatory environment that preceded the financial crisis was relaxed in a number of different respects. First, there was minimal supervision of the "shadow" banks by the relevant regulatory agencies that essentially left their safety and soundness to be determined by their own

market-based monitoring and counter-party risk assessments, which required a much higher degree of transparency and information-sharing than existed at the time. In addition, under recent reforms in international capital standards, large investment and commercial banks were essentially allowed to determine their own capital requirements on the basis of internal financial models, which in the event assigned extremely low probabilities to the kinds of developments that gave rise to the crisis. This regulatory change led to very high levels of leverage among shadow and commercial banks at a time when the quantity and quality of their loss-absorbing capital were significantly reduced. Finally, there was little or no transparency in the origination, purchase and sale of mortgage-related derivatives as these were transacted on an over-the-counter basis without the protection of central counter-parties and supervision by the same agency (CFTC) that oversees transactions in standardized derivatives for commodities, interest rate and exchange rate futures.

With a tightening of monetary policy in 2005–06, long-term interest rates began to rise and the speculative bubble that had surrounded the housing market began to deflate. Many homebuyers began to default on mortgage credits they could not afford and the value of mortgage-related derivatives declined. As short-term funding for these credits was withdrawn, many financial institutions experienced losses on their investments and increased their risk of insolvency. During 2007–08, various financial institutions in the United States and Europe either failed or required substantial liquidity support by their respective central banks. The failure of Lehman Brothers and near collapse of AIG, the largest seller of CDS, in late 2008, triggered wide-scale panic in financial markets and the beginning of the crisis. Without the substantial liquidity support by the Federal Reserve, both domestically and overseas in Europe, and major interventions by the US Treasury Department, what began to look like a repeat of the Great Depression was limited to the Great Recession, and a gradual economic recovery began in mid-2009. The link between the financial crisis and a decline in economic activity can mainly be explained by the wealth effects of a decline in the value of housing and financial assets on consumer spending and the curtailment of lending by commercial banks faced with declining asset values and capital losses.

Since the crisis, much has been done to strengthen the regulatory environment for banks by raising their capital requirements, introducing new liquidity and funding requirements and creating new bankruptcy and insolvency procedures to eliminate the need for bail-outs for banks that in

the past had been deemed “too big to fail”. In addition, banks with an asset value of US$50 billion or more have been subjected to regular “stress tests” to ensure that their capital position was robust enough to deal with different scenarios of financial stress or economic turmoil without risking insolvency.

More recently, however, the US government has made some policy adjustments that raise concerns about the financial outlook for the United States in coming years. On the regulatory side, it was decided in mid-2018 that the periodic stress tests would only be required for banks with an asset value of US$250 billion or more. This change eliminates these tests for all but a handful of the largest banks. In the area of fiscal policy, a major tax reform was introduced at the end of 2017 that will increase significantly the overall government deficit over the next five years, thus reversing the trend of the past several years. Apart from the timing of this fiscal expansion, which was inappropriate in view of the strong pace of economic activity and the low rate of unemployment, the prospective rise in government deficit will widen the country’s trade and current account deficits (contrary to the government’s trade policy objectives) and raise substantially the required placement of government debt for its financing. This change in the government’s funding requirements comes at a time when there has been some reduction in the share of government debt held by foreigners, while the Federal Reserve has embarked on a program to reduce its large portfolio of government debt that it acquired during its expansionary phase in the wake of the financial crisis. In these conditions, the government will clearly be testing the limits of the “exorbitant privilege” that it has enjoyed up until now, with pronounced risks for global financial stability. A strengthening of the government’s medium-term fiscal outlook is essential for that stability to be maintained.

Immigration is the third area of globalization where the United States has once again played a dominant role in the global economy. It is the country with the largest number of immigrants, measured in terms of both the number of immigrants and those residents of a later generation who have at least one parent who was an immigrant, even though the share of immigrants in the total US population is significantly less than in many other OECD countries. Until recently, the United States has had the largest number of immigrant arrivals on an annual basis. It also has the largest stock of illegal immigrants among major recipient countries, in part because of its long border with Mexico, a country whose per capita income is one-fourth that of the United States. Over the past several decades, the

number of immigrants has been growing faster than the overall population, with the result that the current stock as a share of the total population is almost as high as its peak of close to 15 percent at the beginning of the twentieth century, following a long period of development during which immigrant arrivals played an important role. As of then, however, resistance among many native white citizens to the change in the racial composition of the domestic population has become a source of populist political pressure and a factor in the outcome of the last general elections, even though a significant majority of Americans consider that immigrants have had a positive influence on economic life in the United States.

From an economic point of view, the costs and benefits of immigration have usually been assessed from two perspectives. One is in terms of their effect on the employment and wage levels of native workers and the other is in terms of their net fiscal impact, combining their contributions to tax revenues and demand for public services. As regards their impact on the domestic labor market, the consensus among experts and scholars is that immigrant labor has generally been complementary to native workers, rather than a substitute, so they have not had an adverse effect on native employment and wage levels, except perhaps at the very lowest skill segment of the labor market. But even at this level, the impact has been relatively small and somewhat ambiguous, with studies showing both positive and negative effects. The working group that has been most clearly affected by new immigrant labor is that of previous immigrants. This result reflects the fact that low-skilled immigrant workers (both legal and illegal) have tended to take jobs that domestic workers are not interested in (e.g., seasonal farm work). Their presence in the low-skill segment of the labor market (i.e., high school education or less) has meant that native co-workers have often moved into higher-paying jobs related to team or sales management, where native language skills would be important. Immigrant workers in day care activities have often had the effect of increasing the labor force participation of educated women who had stopped working because of young children at home.

Immigrant workers are also concentrated in the high-skill segment of the labor market (college degree or higher) where they have also played a complementary role because of the specialized technical training and experience that they bring. Notably, immigrants with scientific expertise have been highly represented within the faculties of leading graduate schools of engineering, science and medicine, among the recipients of Nobel prizes and MacArthur genius awards, and as entrepreneurs and

innovators in high-tech industries. Clearly the presence of immigrant workers (both low skilled and high skilled) has made an important contribution to the growth of the US economy and the flexibility of its labor force.

The net fiscal impact of immigrants is somewhat more ambiguous, in part because many have come to the United States not primarily for work purposes. They may be the dependents or relatives of immigrants already settled in this country or refugees fleeing violence in their home country. As such, they are likely to be more dependent on public services at the local community level than supporters through tax payments. At the federal level, the result has been the reverse for immigrants that are registered workers and contributors to social security and Medicare. On balance, the net fiscal cost of immigrants and their families at the state and local levels has been about offset in quantitative terms by the "immigration surplus" or the initial positive economic impact their work has had on the profit of domestic business and the income of native workers.

Against the background of the above facts about immigration, it is highly regrettable that immigration policy has been the focus of such bitter controversy in US political life, especially in the period preceding and since the last general elections. The current government of the United States has made the issue of illegal immigration along the US-Mexican border a major issue of concern, when in fact during the last 10 years the problem has greatly diminished as the number of foreigners entering into the United States has now been about offset by foreign-born nationals returning to Mexico. In addition, the government has been threatening to deport thousands of "dreamers" or illegal immigrants who came to the United States as children and have been living and working in the United States for 15–20 years, rather than agree on a process of regularizing their status so that they can begin a pathway to citizenship. Finally, limits on foreign entries have been introduced, first by means of outright bans on immigrants from a number of specific countries (mainly in the Middle East) and also by reductions in the number of visa authorizations under existing programs. On the issue of illegal immigration, border security should be reinforced, but at the same time, visa requirements for temporary workers should be simplified in order to reduce illegal immigration and possibly delegated to the border states that deal with these workers directly. In other visa categories, allocations for employment-based entry should be increased and those for family unification should be tightened.

Concerns about the impact of globalization on the United States have been strongly intertwined with concerns about income inequality. During the last three decades, measures of income and wealth inequality have shown a substantial increase, with current levels higher than for any other advanced country member of the OECD. Since this was a period of major integration of the United States with the global economy, the obvious question that arises is to what extent are globalization and income inequality interconnected. The increase in off-shoring and import-competing imports, the growth of the finance industry and the entry of low-skilled immigrants have all been cited as factors contributing to a rise in income inequality in the United States. However, the empirical reality associated with these claims is somewhat different. While international trade potentially has the effect of lowering the wage level of low-skilled workers with respect to high-skilled workers, in fact to the extent that this phenomenon has occurred, it has been shown to be more a result of domestic skill-biased technological change than one of international trade. The strong growth of ICT-related industries and the rapid development of Silicon-based companies provide clear examples of economic activity where the effect of this kind of technological change has been in full display. As this kind of technological change has resulted in new businesses replacing existing companies or existing companies becoming uncompetitive in the face of new imports, what has been lacking is an effective public program to facilitate job retraining or job search to enable affected workers to move into new jobs offering wages equivalent to what they earned before or better. From the perspective of consumer welfare, it also needs to be remembered that international trade has provided important positive income effects in terms of both lower prices for consumer goods and a wider variety of such goods that are significantly biased in favor of low-income groups.

The impact of financial globalization on income inequality is more ambiguous. The rapid expansion of the finance industry in the last two decades and the rent accumulation associated with it in the form of major financial rewards for leaders in the industry provide prima facie evidence of its significant contribution to income inequality in the United States. The global financial crisis that developed in 2008–09 in connection with this expansion provides the clearest example of the potential risks associated with financial globalization and the high economic costs of financial disruption. Nevertheless, it needs to be recognized that the crisis was not an inevitable result of financial globalization, as much as it was the result of lax lending procedures, fraud in the design and rating of new financial

instruments and failures in financial regulation and supervision. On the positive side, inflows of foreign direct investment as a result of financial globalization have provided important benefits in terms of new business and employment development, higher-than-average wage levels and technological transfers associated in part with job upgrading. The expansion of the finance industry and banking services has also provided important benefits for households and consumers in terms of the availability of credit for the purchase of homes and durable goods that have improved their welfare and the wealth of lower- and middle-income groups. Over the long term, it should be possible to maintain these positive benefits of financial globalization on a sustained basis, while limiting the possibility of financial crises to a once-in-a-life-time event.

Immigration does not appear to have had any noticeable effect on income inequality. This conclusion is largely based on the fact that immigrants to the United States have mainly been concentrated in the two extremes of the labor market related to low-skilled and high-skilled labor without altering the relative supply of these two groups of workers. In addition, immigrant workers have largely played a complementary role to the employment of native workers that has allowed the latter group to improve their wage and job levels over time. Immigrant workers have also tended to improve the flexibility of the labor market because of their willingness to undertake part-time work and move from one location to another for job purposes that have helped to improve employment prospects for the native labor force. Finally, the availability of immigrant workers in day care and cleaning services has improved the labor force participation rate of native female workers, thus boosting their income level.

Even though globalization does not appear to have been a major contributor to income inequality, it is nonetheless important that the government adopt stronger policies and programs to reverse its rise because of its threat to social cohesion and popular support for the capitalist system of the United States. It is also remarkable that the US government has achieved less by way of income redistribution than all the other OECD countries, except Chile and Mexico. Over the short term, the tax and transfer policies of the government are one of the most effective means of reversing income inequality. Notably, however, tax policies over the past three decades have contributed to an exacerbation of income inequality, so this is a trend that needs to be reversed through actions to increase the breadth and progressivity of the tax system. On the side of government expenditure, pre-school education programs and social services for the

poor are essential tools over the long term for reducing poverty and improving their opportunities for raising their income status. Expanding the government's active labor market policy programs is also important in order to provide job retraining, upgrading and relocation for low-skilled workers who have been the most vulnerable to job disruption associated with technological change or import competition. Finally, it is important that changes in corporate governance be introduced and regulations strengthened to reduce some of the rent-seeking behavior within the finance industry.

Beyond policies to lower income inequality, it is vitally important that efforts be made at the political level to build a new social compact in order to maintain widespread popular support for continued US participation in economic and financial globalization. On balance, globalization has been a force for improvement of the average real income of US residents, but certain labor groups, businesses and communities have been disadvantaged by the structural change that has accompanied it. To date, government policy programs have been inadequate to deal with the structural adjustment problems associated with both globalization and technological change. A social compact involving the coordinated efforts of government, business and labor is essential for establishing effective programs, both public and private, for addressing these adjustment problems and facilitating, more generally, the reallocation of labor and capital resources in response to dynamic change in the economy. An effective social compact thus provides a governance framework for maximizing the benefits of globalization and technological change and ensuring that they are distributed in as fair a manner as possible.

During the first phase of the current globalization era, an effective social compact existed, but it was largely dismantled during the transition to the second or existing phase of that era. The early post-WW2 social compact was characterized by strong labor and business groups in support of the long-term commitment and loyalty of workers to manufacturing firms in exchange for good-paying jobs with adequate health and pension benefits. The government, for its part, promoted full employment policies and unemployment benefits with tight regulation and restrictions on banking and finance, including controls on capital inflows and outflows. High marginal income tax rates were introduced in order to discourage high salaries and promote greater equality in after-tax individual incomes. This was also a period of the gradual dismantlement of trade barriers and reliance on free markets as an inducement to productivity growth and

greater efficiency of the agricultural and industrial sectors. In the transition to the existing phase of the current globalization era, many of these features of the social compact were dismantled. The power of labor unions was sharply curtailed, income tax rates were reduced and financial deregulation was introduced along with capital account liberalization. A chronic trade and current account deficit also emerged, in part the result of an erosion of fiscal discipline and in part the result of capital inflows as foreign agents began to invest in safe assets in the form of US government securities.

A new social compact that contains a number of specific elements needs to be developed. The government for its part must strengthen and expand its active labor market policies and introduce measures to address the problem of rising income inequality. Incentives should also be created to mobilize private investment for the promotion of new business development in regions or communities that have been adversely affected by structural or sectoral change in the economy. These various initiatives should be based on the inputs of business and labor groups in order to maximize their effectiveness. Business and labor must find new ways to collaborate, for example, through the formation of councils at the firm level that can discuss programs and policies to achieve their mutual interest in maintaining remunerative work activity with sound benefits, while protecting the competitiveness and profitability of the firm. These features of a tri-partite social compact for the United States will be indispensable in a world in which robotics and artificial intelligence play a greater role in economic life.

The counterpart of a strong social compact at the national level is a framework for effective collaboration at the international level. As economic and financial integration expands at the global level, it is essential that the United States collaborate with other major economies in strengthening international organizations so that they may establish and maintain a sound governance framework for the global economy. The IMF and WTO are the most important international organizations in the fields of international finance and trade and the United States has traditionally played a key role in ensuring that they fulfill their respective mandates and undergo reform as required. The present time in the evolution of globalization may be a point at which further institutional reform is needed.

As regards the IMF, efforts should be made to formalize its role in global finance beyond the international monetary system, recognizing the many different functions it has been filling in regard to the monitoring of

global financial stability and capital flow management by member countries. In addition, the Fund's role as an international lender of last resort and status within the global financial safety net should be enhanced. Finally, the Fund should be endowed with greater authority within its surveillance function to influence member countries' macroeconomic policies to deal with the problem of global imbalances or limit the adverse spillover effects of major policy adjustments. In the case of the WTO, new forms of decision-making are required to enable it to deal with a number of pending issues in international trade reform, such as the reduction of trade barriers for agriculture, services and e-commerce, while its dispute settlement system needs to be revitalized. A set of criteria should also be established to determine when a country loses its access to preferential treatment and assumes the full burden of membership. Unfortunately, the prospects for needed WTO reforms are not clear at this stage and will require the focused attention of the G20 and the major trading countries, if progress is to be made.

In the field of immigration, a lead agency has only recently been established with the creation of the UN Migration Agency. For a number of years, as the International Organization for Migration (IOM), it monitored developments in international migration and prepared investigative reports, while providing some limited technical and financial assistance to national agencies dealing with migrants in both sending and receiving countries, in particular in crisis situations. Now with the recent formalization of the Global Compact on Migration, the IOM has an agreed international framework to oversee for the management of immigration among UN member countries. One effort that should be made by the IOM is to seek agreement on informal medium-term targets for the transfer of migrants among its members that would be managed in accordance with the guidelines specified in the Compact. Such an effort would introduce much greater discipline and order into what has been traditionally a very chaotic phenomenon.

* * *

As economic globalization continues to intensify among the United States and most other capitalist-intensive countries, it is essential that domestic and international governance frameworks be strengthened in order to adapt and maintain safeguards to accommodate the structural change associated with the expansion of globalization. These safeguards will

ensure that gains from globalization are maximized and distributed as widely as possible, while costs are minimized. Within the United States, however, such safeguards have been weak and the economic gains from globalization have not been well understood, with the result that checks and limits on foreign economic policy commitments have been introduced that will increase economic costs for many workers and businesses. These policy changes have also been motivated by a false sense of nationalism and a perception that the existing global commitments of the United States are a threat to its sovereignty. In fact, the institutional arrangements for the governance of the global economy are a means of ensuring that the national interests of the United States are protected, as they require continued agreement with other countries on the conditions under which globalization will continue. Hopefully over time, with more enlightened public debate, for which this book is intended to be a useful contribution, the recent retreat of the United States from globalism can be reversed, so that the benefits of globalization for the US economy can be expanded and more evenly distributed.

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