

CHAPTER ONE

Trade Imbalances and the Global Financial Crisis

The source of the global crisis through which we are living can be found in the great trade and capital flow imbalances of the past decade or two. Unfortunately because balance of payments mechanisms are so poorly understood, much of the debate about the crisis is caught up in muddled analysis.

EVER SINCE THE U.S. SUBPRIME CRISIS began in 2007–8, caused in large part by an uncontrolled real estate boom and consumption binge, fueled in both cases by overly abundant capital and low interest rates, the world has been struggling with a series of deep and seemingly unrelated financial and economic crises. The most notable of these is the crisis affecting Europe, which deepened spectacularly in 2010–11.

For reasons we will see in chapter 6, Europe's crisis will probably lead to a partial breakup of the euro as well as to defaults or debt restructurings among one or more European sovereign borrowers. The only things likely to save the euro—fiscal union or, as I discuss in chapter 6, a major reversal of German trade imbalances—seem politically improbable as of the time of this writing.

But it is not just the United States and Europe that have been affected. The global crisis has also accelerated pressure on what was already going to be a very difficult transition for China from an extremely imbalanced growth model to something more sustainable over the long term. For political reasons the adjustment had to be postponed through 2012 because of the

leadership transition and the need to develop a consensus, but the longer the postponement the more difficult the transition will be.

The events surrounding the ouster from the Politburo in early 2012 of Bo Xilai, the former mayor of Chongqing, show just how difficult the impact of the transition is likely to be on the political elite, who have benefitted most from the existing growth model. But as difficult as it will undoubtedly be, one way or another, for reasons that will be explained in this book, China must make the transition. As a consensus about the need for a radical transformation of the growth model develops, and China begins adjusting over the next two or three years, the impact of the global crisis will probably manifest itself in the form of a “lost” decade or longer for China of much slower growth and soaring government debt.

What’s more, a Chinese adjustment will necessarily bring with it adverse and perhaps even destabilizing shocks to developing countries heavily reliant on the export of commodities, especially nonfood commodities. Countries as far apart as Brazil and Australia, that have bet heavily on continued growth in China and the developed world, will be sharply affected when Chinese investment growth, which was ramped up dramatically in 2009 and 2010 after the United States and Europe faltered (and so more than compensated for the initial impact on commodity prices of reduced American and European demand), itself begins to falter. The crisis that began in the United States, in other words, has or will adversely affect the whole world, although not at the same time.

But for all their complex global impact, it is worth pointing out that from a historical point of view there is nothing mysterious about the various crises and their interconnections. For almost any serious student of financial and economic history, what has happened in the past few years as the world adjusts to deep imbalances is neither unprecedented nor should have even been unexpected. The global crisis is a financial crisis driven primarily by global trade and capital imbalances, and it has unfolded in almost a text-book fashion.

There is nonetheless a tendency, especially among Continental European policymakers and the nonspecialized Western media, to see the crisis as

caused by either the systematic deregulation of the financial services industry or the use and abuse of derivatives. When this crisis is viewed, however, from a historical perspective it is almost impossible to agree with either of these claims. There have been after all many well-recorded financial crises in history, dating at least from the Roman real estate crisis of AD 33, which shared many if not most characteristics of the 2007 crisis.

Earlier crises occurred among financial systems under very different regulatory regimes, some less constrained and others more constrained, and in which the use of derivatives was extremely limited or even nonexistent. It is hard to see why we would explain the current crisis in a way that could not also serve as an explanation for earlier crises. Perhaps it is just easier to focus on easily understandable deficiencies. As Hyman Minsky explained,

Once the sharp financial reaction occurs, institutional deficiencies will be evident. Thus, after a crisis, it will always be possible to construct plausible arguments—by emphasizing the trigger events or institutional flaws—that accidents, mistakes, or easily correctible shortcomings were responsible for the disaster.¹

Minsky went on to argue that these “plausible” arguments miss the point. Financial instability has to do with underlying monetary and balance sheet conditions, and when these conditions exist, any financial system will tend toward instability—in fact periods of financial stability, Minsky argued, will themselves change financial behavior in ways that cause destabilizing shifts and that increase the subsequent risk of crisis.

Why do underlying monetary conditions become destabilizing? Charles Kindleberger suggested that there are many different sources of monetary shock, from gold discoveries, to financial innovation, to capital recycling, that can lead eventually to instability,² but the classic explanation of the origins of crises in capitalist systems, one followed by Marxist as well as many non-Marxist economists, points to imbalances between production and consumption in the major economies as the primary source of monetary instability.

Underconsumption

According to this view growing income inequality and wealth concentration leave household consumers unable to absorb all that is produced within the economy. One of the consequences is that as surplus savings (savings are simply the difference between total production and total consumption) grow to unsustainable levels, and because declining consumption undermines the rationale for investing in order to expand productive facilities, these excess savings are increasingly directed into speculative investments or are exported abroad.

Most economists, including Marxists, have tended to see these imbalances between production and consumption as occurring and getting resolved within a single country, but in fact imbalances in one country can force obverse imbalances in other countries through the trade account. In the late nineteenth century economists like the Englishman John Hobson and the American Charles Arthur Conant, both scandalously underrated by economists today, explained how the process works. Although neither was a Marxist, it is worth noticing that Hobson did heavily influence Lenin's theory of imperialism, and this influence was felt all the way to the Latin American *dependencia* theorists of the 1960s and 1970s.

Hobson and Conant argued that the leading capitalist economies turned to imperialism primarily in order to export surplus savings and import foreign demand as a way of addressing the domestic savings imbalances. This has become widely accepted among economic historians—Niall Ferguson wrote pithily in his biography of Siegmund Warburg, for example, that “late 19th Century imperialism rested above all on capital exports.”³ So, perhaps, does its modern equivalent. As Charles Arthur Conant put it in 1900,

For many years there was an outlet at a high rate of return for all the savings of all the frugal persons in the great civilized countries. Frightful miscalculations were made and great losses incurred, because experience had not gauged the value or the need of new works under all conditions, but there was room for the legitimate use of all savings without loss, and in the enterprises affording an adequate return.

The conditions of the early part of the century have changed. Capital is no longer needed in the excess of the supply, but it is becoming congested. The benefits of savings have been inculcated with such effect for many decades that savings accumulate beyond new demands for capital which are legitimate, and are becoming a menace to the economic future of the great industrial countries.⁴

Conant went on to say that as we consumed ever smaller shares of what we produced—perhaps because the wealthy captured an increasing share of income and their consumption did not rise with their wealth—domestic savings eventually exceeded the ability for domestic investment to serve “legitimate” needs, which was to expand domestic capacity and infrastructure to meet domestic consumption. This happened at least in part because the excess savings themselves reduced domestic consumption, and so reduced the need to expand domestic production facilities. When this happened the major industrialized nations had to turn abroad. In that case these countries exported their excess savings, thereby importing foreign demand for domestic production.

Like in the past two decades, this need to export savings was at the heart of trade and capital flow imbalances during the last few decades of the nineteenth century and the first few decades of the twentieth century. It was however the most industrialized countries that were the source of excess savings in Conant’s day, whereas today the major exporters of excess savings range from rich countries like Germany and Japan to very poor countries like China.

In a 2011 article Kenneth Austin, an international economist with the U.S. Treasury Department, made explicit the comparison between the two periods. He wrote, speaking of the earlier version,

The basic idea is that oversaving causes insufficient demand for economic output. In turn, that leads to recession and resource misallocation, including excessive investment in marketing and distribution. This was a direct challenge to a core thesis of the classical economists: “Savings are always beneficial because they allow greater accumulation of capital.”

. . . . Hobson took his excess savings theory in another direction in *Imperialism: A Study*, first published in 1902. In a closed economy,

excess savings cause recessions, but an open economy has another alternative: domestic savers can invest abroad. Hobson attributed the renewed enthusiasm for colonial conquest among the industrial powers of the day to a need to find new foreign markets and investment opportunities. He called this need to vent the excess savings abroad “The Economic Taproot of Imperialism.”

However, increasing foreign investment requires earning the necessary foreign exchange to invest abroad. This requires an increase in net exports. So foreign investment solves two problems at once. It reduces the excess supply of goods and drains the pool of excess saving. The two objectives are simultaneously fulfilled because they are, in fact and theory, logically equivalent.⁵

When domestic consumption has been insufficient to justify enough domestic investment to absorb the high savings that were themselves the result of low consumption—usually because the working and middle classes had too small a share of total income, and we will see in chapter 4 how this happened in China—countries have historically exported capital as a way of absorbing foreign consumption. With the exporting of these excess savings, and the concomitant importing of foreign demand, international trade and capital flows necessarily resulted in deep imbalances.

The Different Explanations of Trade Imbalance

This argument, which we can call the “underconsumptionist” argument, is of course not the only theory that explains trade imbalances. There are at least two other theories of trade imbalance that share a number of features but are fundamentally different.

The most common explanation for trade imbalances is “mercantilism.” Broadly speaking mercantilist countries put into place policies, including most commonly import restraints and export subsidies, aimed at generating a positive balance of trade in which the country exports more than it imports.

The defense of mercantilism is that it permits the practitioner to generate net inflows of assets that can be accumulated for a number of purposes.

It isn't always clear exactly what these purposes are, but the main justification, historically, seems to have been the ability to wage war. During the classic mercantilist age a positive balance of trade resulted in the accumulation of gold and silver, and this hoard of treasure assured the monarch of the ability to hire soldiers and sailors, pay for armaments, and afford costly foreign engagements.

Today, of course, countries are more likely to accumulate assets mainly in the form of foreign exchange reserves at the central bank or in the form of private ownership of foreign assets. The hoard of central bank reserves is driven not so much by military needs as by the need to defend the stability of the currency, maintain payments on foreign loans and obligations, and, most important, guarantee access to imported commodities in times of financial stress.

Although countries like China, Japan, Korea, and Germany have been accused of mercantilism for many years, this particular charge isn't really a satisfactory explanation of what they do and why. Clearly for a highly volatile developing country there are benefits to accumulating a certain amount of foreign reserves. This cannot be the whole explanation, however. Given how domestic monetary policies are distorted by the accumulation of reserves, it is hard to explain why rich countries employ mercantilist policies, or why poor countries like China accumulate levels of foreign exchange reserves that far exceed even the most generous estimate of what would be appropriate. In either case mercantilism simply does not make sense.

A better explanation of what they do, interestingly enough, may be found in what many consider to be one of the classic documents of mercantilism, Thomas Mun's *England's Treasure by Foreign Trade*, published posthumously in 1664. In his tract, rather than encourage trade intervention simply for the sake of state accumulation of specie, he proposed a much more sophisticated argument, based not so much on direct intervention to achieve a positive trade balance but rather on measures to "soberly refrain from excessive consumption." For Mun, the accumulation of specie would lead to greater

availability of capital domestically, and so would lower costs of capital for businesses. It was this lower cost of capital that would promote domestic economic growth.

With this argument we are back, it seems, to a version of John Hobson's underconsumptionist argument. Although Mun didn't state this explicitly, what we often think of as trade intervention, as I will show in chapters 2 and 3, is often just policies that effectively force up a country's savings rate by transferring income from household consumers to the tradable goods sector, thereby creating a gap between GDP growth and consumption growth. By forcing up the savings rate through consumption-constraining policies, these policies lower the domestic cost of capital and encourage investment.

We will come back to this several times over the next few chapters, but it is worth mentioning that countries like China, Japan before 1990, South Korea, and other Asian Tigers are, properly speaking, neither mercantilist nor export driven. They are, as we will see in chapter 4 in the case of China, investment-driven economies. Their large trade surpluses were or are simply a necessary residual of policies that consciously or not forced up the savings rate to fund domestic investment. As I will also show, the subsequent imbalances that are created by structural constraints to consumption can become seriously destabilizing, both for the world and for the countries that employ these policies.

For the sake of completion we should mention that the third theory that justifies trade intervention is the "infant industry" argument, whose most brilliant exponent, and who probably first came up with the phrase, is the first American treasury secretary Alexander Hamilton. In his *Report on the Manufacturers to the U.S. Congress* in December 1791, Hamilton argued that it was in the best interests of the United States that certain industries be encouraged to develop quickly because the externalities (although of course he did not use this word) associated with these industries were significant:

And if it may likewise be assumed as a fact that manufactures open a wider field to exertions of ingenuity than agriculture, it would not be a strained conjecture, that the labor employed in the former being at once more constant, more uniform and more ingenious, than that which is employed in the latter, will be found at the same time more productive.

The problem, according to Hamilton, was that because British and other European industrialists were so far advanced in terms of productivity and organization, Americans simply would not be able to compete for many years unless the government imposed tariffs on foreign-made goods. The goal of protection, in this case, was primarily to create enough space for American industrialists to catch up to Europeans. Once they did so, the tariffs could be removed.

Although the infant industry argument has been and still is used often to explain trade intervention, it is also an unsatisfactory explanation for current imbalances. Of the three largest surplus nations, two of them, Germany and Japan, can hardly be said to be technologically backward and in need of protection. The third, China, discourages the brutal domestic competition that is necessary to drive technological innovation and productivity growth behind protectionist barriers, so trade protection in China is unlikely to lead to rapid growth in innovation. It is at best an infant industry policy that strangles the infant by trying to create state-protected national champions.

Destabilizing Imbalances

We are left, as I will show, with underconsumption as the most likely cause of global trade distortions. Trade imbalances, of course, don't always lead to crisis. In any well-functioning global trading system there are always likely to be small and temporary imbalances in trade flows. In some cases, primarily in the case of countries in the midst of a long-term investment boom like the United States for much of the nineteenth century, trade imbalances can be sustainable and even persist for many years without necessarily leading to crisis. Even in the case of the United States in the nineteenth century, however, there were financial crises nearly every decade or so, some of which were linked to trade imbalances and others caused by the "frightful miscalculations" to which Charles Arthur Conant referred.

But even otherwise sustainable trade imbalances can lead to crisis when they create fragile national balance sheets. This can happen because trade flow imbalances, of course, require their obverse, capital flow imbalances,

and capital flows can be and often are structured in ways that are instable and lead to fragility in national balance sheets.

Still, certain kinds of trade imbalances, driven primarily by high levels of investment in the trade deficit countries, need not be destabilizing. They can persist for many years, but eventually the system automatically adjusts when many years of productive investment begin to generate the rising production of goods and services and there is a reversal in these imbalances.

The reversal of the trade imbalances occurs as either the cause or the consequence of a reversal in capital flows. As I will explain later in this chapter, countries that repay foreign investment must run current account surpluses, just as countries that run current account surpluses must be net exporters of capital. In other cases, a country that runs trade deficits for many years not driven by surging domestic investment necessarily sees anyway a rise in foreign capital inflows (trade deficits must always be funded by foreign investment). In this case, however, the liabilities generated by the inflows are not associated with an increase in domestic asset growth, and so foreign obligations rise at an unsustainable pace.

At some point, perhaps after several years, domestic prices or the value of the trade deficit country's currency should adjust downward to the point at which there is a reversal of the trade deficit. It is only by running a trade surplus that a country can return the capital inflow that it previously imported.

So although trade imbalances can exist naturally, they eventually rebalance in an orderly way. But not all trade imbalances are natural. When imbalances that are not associated with a large increase in productive investment in the deficit country become large and persist for many years, it is almost always because policy distortions, or distortions in the institutional framework constraining or governing these trade flows, have prevented the adjustment from taking place. Large and persistent trade imbalances, in other words, are almost always caused by distortions in financial, industrial, or trade policies.

These distortions can prevent adjustments for many years, but large imbalances ultimately are unsustainable because the capital flows that finance the trade imbalances can be reversed only with a reversal of the trade imbalances. Eventually these imbalances will adjust in spite of policy and institu-

tional constraints, but in this case the adjustment is often violent and can come in the form of a financial crisis. In that sense there is nothing unique, unexpected, or even surprising about the recent global crisis. It was simply the necessary and chaotic adjustment after many years of policy distortions that forced large and persistent capital imbalances.

The main imbalances of recent years were the very large trade surpluses during the past decade of China, Germany, and Japan and the very large trade deficits of the United States and peripheral Europe. There are many precedents to the global crisis through which we are living. In fact many, if not most, of the global and regional crises that preceded it during the past two hundred years were driven by the same kinds of imbalances, most famously the global crisis in the 1930s and the so-called LDC (less developed countries) crisis in the 1980s.

So none of what is happening today is new, but what is often forgotten is that policies in the country or countries that first suffered from the crises—usually the trade deficit countries—have not always, and perhaps not even usually, caused the distortions. It is important to recognize that these imbalances had their roots in policy distortions in both the countries that ran large trade deficits and those that ran large trade surpluses. For the former, the large deficits led to unsustainable increases in debt and, ultimately, to the deleveraging process necessary to restore balance. It is this deleveraging process that is at the heart of the global financial crisis.

We Have the Tools

The crisis will not be truly over until the policies and institutional framework that led to the large trade imbalances have been sufficiently modified. And yet it seems that few aspects of the political and economic debate surrounding the resolution of the various crises are as confused as our understanding of the balance of payments mechanisms that govern trade and capital flows. As a result, much of the debate on what to do and how to avoid similar crises in the future is muddled and usually misses the point.

This, however, is not because we do not have adequate tools with which to understand the functioning of the global balance of payments. On the contrary, the basic economic principles underlying international trade and capital flows are fairly well understood, but they are at times so counter-intuitive that even economists who should know better are seduced into saying things that make no sense.

We know for example the relationship among savings, investment, and current account imbalances in any particular country, but we fail to apply this knowledge logically to the full range of policies and institutions that affect the components of the global trade and capital balances. We fail to think in terms of the overall system. In this book, it turns out, we will not need to learn any new economic theory.

What is new about this book is that in it I extend our basic knowledge of open economies and apply it to the global economy as a single closed system in order to show the many surprising ways policies and conditions are related. Japanese interest rates, Spanish real estate bubbles, American mortgage derivatives, and copper mining in Chile are all part of a single system in which distortions in any one part must have automatic consequences for all the others. Financiers in São Paulo earn substantially higher compensation than their peers in London in part because Chinese households receive an artificially low return on their deposits. There are huge tracts of empty homes outside of Dublin in part because of the overvaluation of East Germany's currency after reunification.

The global system, in other words, is a system in which every part is affected by every other part through the capital and current accounts. For example, we often hear that the current account deficits of peripheral Europe and the United States have little to do with German or Chinese policies but are rather primarily the consequence of the very low savings rates in the deficit countries. It turns out that this widely repeated claim, which even has an attractive ring of old-fashioned morality about it, is nearly meaningless, as I will show in chapters 2 and 3 of this book. Current account deficits are by definition equal to the gap between savings and investment, but they are rarely "caused" by too little savings except as a tautology.

More important, the savings rate and savings level of any country are determined largely not by the thriftiness of its citizen but by policies at home and among trade partners. To say therefore that the crisis in Spain, for example, is caused by the spendthrift habits of Spanish citizens relative to the thriftiness and hard work of their German cousins is to misunderstand altogether the root causes of the European crisis and to replace an understanding of the formal working of the global trading system with cheap and empty moralizing. We will see why in chapter 6.

And yet these kinds of almost nonsensical claims appeal to many of us—especially, it seems, if we are wealthy financiers. Perhaps it is because they allow us to make easy distinctions between moral and immoral economic behavior, even if these distinctions are wrong. To the extent that they affect policy, unfortunately, they actually retard the global recovery.

If we misunderstand the root causes of the global imbalances that led to the global crisis, then it is unlikely that we will choose optimal policies that will allow us to work our way out of the imbalances in the least painful way possible. On the contrary, as John Maynard Keynes so urgently argued nearly eighty years ago, we are likely to choose policies that maximize global unemployment and lead directly to trade conflict. This is almost certainly happening again as surplus countries insist that the bulk of the global adjustment take place in the form of austerity in the deficit countries. Deficit country austerity may indeed be part of the correct prescription, but if it is not more than fully matched with surplus-country reflation, it cannot possibly succeed without a sharp rise in global unemployment.

We can see the consequences of our muddled thinking most strikingly in the European crisis. Thanks to a general inability to understand why the advent of the euro spelled trouble for much of peripheral Europe, the policies needed to save the euro are largely ignored. What is worse, only Germany can save the euro, but this will require a dramatic, and improbable, shift in Berlin's understanding of the root causes of the crisis.

Saving the euro will not require that Berlin make funding more easily available for peripheral Europe, as too many policymakers believe. Nor will the euro be helped if foreign central banks, including China's, buy more

European government debt. The euro can survive only if Berlin reverses policies that forced German savings to grow at the expense of households, thus forcing down savings rates in peripheral Europe to dangerous levels and dooming the euro. German policymakers refuse to take the necessary steps because they refuse to pay the cost of the adjustment.

It is not hard to understand why Germans are reluctant to take the necessary steps because these must lead to rising debt and slower growth in Germany, but it should also be clear that if Germany does not do so, there is no reason to expect a “solution” to the euro crisis. This is why the euro experiment will almost certainly fail and Germany will suffer anyway from rising debt and slowing growth. We will see why in chapter 6.

It is worth pointing out however that no matter how wrongheaded current policies are, Europe, like the rest of the world, will adjust from its trade imbalances one way or the other. It has no choice. But if Europe rebalances in a suboptimal way—that is, without a policy reversal in Germany—its rebalancing will ultimately become far more costly for Germany than a reversal of policies today, as I will explain in this book. We saw the same thing happen in the late 1920s, when the United States refused to reflate domestic demand sufficiently to rebalance global trade. When trade rebalanced anyway, as it always must, the United States was among those that suffered most.

Why the Confusion?

As I see it there are three very large areas of confusion and muddled thinking when it comes to discussing trade and global imbalances. The first area has to do with the causes of significant trade imbalances. Although in a well-managed global economy with few distortions and flexible financial systems there are always likely to be countries with current account surpluses and deficits, in fact it is worth repeating that very large persistent surpluses and deficits are almost always the result of distorted policies in one or more countries.

There are many ways in which these distortions can occur. It is easy to think of trade tariffs and currency manipulation as forms of trade intervention, but I will argue in chapters 2 and 3 that although they certainly do cause

distortions in trade, they do not do so for the reasons we generally assume. Their impact on trade is not directly through relative price changes but rather indirectly by changing the relationship between consumption and GDP.

By understanding how and why they actually cause trade distortions, we can understand more generally how a whole range of industrial, tax, and financial policies that seem unrelated to trade can, in fact, cause significant trade distortions. We will also see how these distortions have their counterpart in the fragility of national balances sheets that build up around these distortions.

The second large area of confusion and muddled thinking has to do with the relationship among trade, the savings rate, and international capital flows. The three are linked, of course, but the way they are linked is more complex and subtle than most analysts recognize. Policies that affect trade balances usually do so by affecting the savings and investment rates, both at home and abroad, and changes in the savings and investment rates automatically affect capital flows.

It is important to understand these relationships in order to understand how policies in one country can force corresponding changes in another country, and it is important to understand that the savings rate is not an independent variable that can be altered at will, or with the right moralistic exhortations. If it is to be altered in an orderly way, it can be done only with changes in the underlying policies both at home and abroad that led to excessively high or low savings rates in different countries. Otherwise the savings rate will ultimately adjust anyway, but it will do so in a disorderly way, with abrupt disruptions to international trade.

The third area of confusion has to do with the role of the U.S. dollar as the global reserve currency and with the role of central bank reserves more generally. There is a tendency to believe that global trade is denominated primarily in U.S. dollars because of sinister or not-so-sinister designs of the U.S. government, and that countries are forced to accumulate U.S. dollars if they want to accumulate foreign currency reserves.

It is also widely believed that the use of the U.S. dollar as the global reserve currency confers upon the United States enormous advantages. This has been referred to as the exorbitant privilege of the U.S. dollar.

In fact I will show in chapters 7 and 8 that reserve currency denomination has little to do with U.S. power or dominance and much more to do with trade policy in foreign countries and an accommodating financial and monetary system in the United States. The astonishing accumulation of dollar reserves in the past decade was the consequence—sometimes intended and sometimes unintended—of a wide range of policies aimed at generating growth in those countries, and these are inextricably linked to the causes of the global crisis.

And contrary to popular belief, it is not in the interest of the United States that countries continue to accumulate mostly dollars in their central bank reserves. In fact I will argue that excessive use of the U.S. dollar internationally actually forces up either American debt or American unemployment. It is more of a burden for the United States than a privilege.

For that reason it is actually in the best interest of the United States—although perhaps against the best short-term interest of China and other countries that seek to grow rapidly—that the U.S. government place restrictions on the ability of foreign countries to hold U.S. dollar reserves. This will both benefit the American economy and stabilize the global environment.

This book is broadly divided into three sections that mirror and address these three areas of confusion. In the second and third chapters of this book I discuss the issue of trade intervention—or more specifically what kinds of policies affect a country's trade balance—and how policies that may or may not have directly to do with trade intervention in one country may in fact affect that country's trade balance. In the fourth chapter I focus on the case of China as an illustrative example of the various policies aimed at generating growth but one of whose results is necessarily upward pressure on domestic savings and the trade surplus.

In the next three chapters I address the international links among trade, capital flows, and savings. Chapter 5 shows how domestic policies that affect the ratio between savings and investment in one country must automatically affect the ratio between savings and investment in the rest of the world. Chapter 6 applies the analysis to the European crisis, and chapter 7 discusses the relationship among trade, savings, and international capital flows, and how central bank reserves function within the global trading system.

In chapter 8 I address the role of the dollar as the global reserve currency. In it I argue that the U.S. dollar's role as the global reserve currency places more of an exorbitant burden on the United States than an exorbitant privilege. And finally in the last chapter I discuss how global imbalances may eventually adjust and what the consequences will be.

Some Accounting Identities

Before going on to a more detailed discussion, it is useful to remember that every country's current account surplus is by definition equal to the excess of domestic savings over domestic investment. If a country saves more than it invests domestically, these excess savings must be invested abroad, and one of the automatic consequences of net foreign investment is an excess of exports over imports. Every country that has net investment abroad (i.e., it invests abroad more than foreigners invest domestically) must generate more revenues from the export of goods and services and from foreign interest and royalty payments than it pays out.

This simple fact, known as an accounting identity, goes a long way toward illuminating trade imbalances. In fact just three accounting identities—which are true by definition and so never can be violated—are enough to make sense of what otherwise seems like an incredibly complex phenomena. These are the following:

1. For every country, the current account and the capital account must balance to zero.⁶ To put it another way, every dollar that enters a country, either in payment for that country's exports, in the form of royalty or services receipts, or in the form of foreign investment in domestic assets, must leave that country, either in payment for imports, in the form of royalty or services expenditures, or in the form of outward investment.

Why? Because if an economic entity in any country other than the United States is in possession of an American dollar, earned either by selling an asset to an American or exporting goods to an American,

either it will use that dollar to purchase something from abroad or to make a foreign payment, or it will save the dollar by purchasing a U.S. asset. There is nothing else it can do with the dollar (even burning the dollar bill or leaving it forgotten in some drawer, it turns out, does not violate this rule). One way or the other the dollar must leave the country through the current or capital account, so the sum of dollars entering the country and dollars leaving the country is always equal to zero. Of course we use the U.S. dollar here for simplification, but it is true of any currency other than that of the referent county.

2. For every country, the difference between total domestic savings and total domestic investment is equal to the net amount of capital imported or exported, and so is also equal to the current account surplus or deficit. This follows from the above. If in any country domestic savings exceed domestic investment, for example, the excess must be invested abroad.

This means the excess savings must be exported. By exporting capital abroad, that country must “import” it back in the form of a current account surplus. This is a very important point to which we will return again and again—there is effectively no difference between exporting capital and importing demand given that a country that exports capital abroad on a net basis must run a current account surplus.

3. Everything that a country produces must be either consumed or saved (and “consumption” includes even assets or resources that are thrown away or otherwise wasted). Because the total of goods and services that a country produces is generally defined as its gross domestic product, or GDP, then a country’s savings can be defined simply as its GDP less total household and other consumption.

These accounting identities have interesting and important implications. For one, if everything a country produces it either consumes or it saves, and if the excess of domestic savings over domestic investment is equal to a country’s current account surplus, then it also follows that everything a

country produces it must consume domestically, invest domestically, or export.

This is reinforced by the commonsense notion that there are three sources of demand for domestic producers—domestic consumption, domestic investment, and net consumption and investment from abroad, that is, the current account surplus. These three sources of demand are what generate domestic growth. They are inextricably linked.

Another implication is that the savings rates of different countries are linked through the trade account. If any country takes steps to change the gap between its total domestic savings and its total domestic investment, then those steps must also affect its trade balance. Because a change in one country's trade balance must be matched with an opposite change in the trade balance of all other countries, there must also be an opposite and equal change in the gap between the total domestic savings of the rest of the world and the total domestic investment of the rest of the world.

To put it in an easier way to understand, if Japan forces up its total savings relative to its total investment, either the total savings of the rest of the world must decline or the total investment of the rest of the world must rise (or, of course, some combination of the two). This is because under these conditions Japan's current account surplus must rise, and so the current account deficit of the rest of the world must rise by exactly the same amount.

The Inanity of Moralizing

The fact that a change in the relationship between savings and investment in one country must force an obverse change in the relationship between savings and investment in another country is a very important point. A country whose policies cause a change in its savings or its investment will automatically force a change in its current account. Because a change in its current account must mirror the change in the current account of the rest of the world, this means that those policies must force a change in the total savings or total investment of the rest of the world.

In a globalized world, in other words, savings and investment rates are not set wholly or in some cases even primarily by domestic cultural preferences or by domestic policies. They are heavily affected by foreign policies through the trade account.

When moralizers laud the thrifty habits of Germans and criticize the spendthrift ways of Spaniards, in other words, they may be wholly missing the point. It is very possible that both German and Spanish savings rates are determined not by cultural preferences but by government policies in either Germany or Spain that have altered the domestic relationship between investment and savings. We discuss how this happens later in this book, mainly in the fifth, sixth, and seventh chapters, in order to understand how policies in one country can affect savings in another.

It is worth pointing out that this understanding may come with an unpleasant cost. It is often hard for analysts to look abroad for conditions that positively or negatively affect their home economy because they may be far more confident of their knowledge about local conditions than about foreign conditions. What's more, it is much easier and perhaps more enjoyable to analyze the imbalances facing the world by moralizing about the virtues of thrift and hard work and by making grand statements about the cultural determinants of success.

For example, if the European crisis was caused because Greeks and Italians aren't as thrifty and hardworking as Germans, then the solution to the crisis is simply an exhortation that Greek and Italians act more like Germans. Take away from the Italians and Greeks their good food, their sense of fashion, and their smiles, according to this way of thinking, and they, Europe, and the rest of the world will be much better off.

Similarly, how do we explain China's high trade surplus? China runs a trade surplus because, as nearly everyone knows, Chinese households value thrift and hard work more than their trade competitors. In fact more generally we are told, as Kishore Mahbubani, a Singaporean academic and one of the more excited proponents of Confucian values, put it in his book *Can Asians Think?*, countries with "Confucian" value systems include "attach-

ment to the family as an institution, deference to societal interests, thrift, conservatism in social mores, respect for authority.”⁷

Leave aside that these values are typical of many rural societies, Confucian or not, the reality is much more complicated. High Chinese savings, as we will show, are largely a consequence of domestic policies that constrain consumption, and have little to do with cultural values. Understanding this requires that we understand how domestic policies and the institutional framework that governs the economy affects savings and investment imbalances. Culture and individual preferences, unfortunately, matter a lot less than we think, even if they are much easier to understand and discuss.

In fact the very Confucian culture that is widely credited for having created the rapid growth and high trade surpluses of the East Asian countries, for example, was also credited, only fifty years ago, with Asia’s persistent and seemingly intractable poverty. Confucians, as everybody knew in the 1950s and 1960s, and as more than two thousand years of Chinese legalist criticism confirmed, were unalterably lazy and incapable of thrift. As far back as the fifth century BC, critics bewailed the laziness and spendthrift ways of the Confucians. Philosopher Mozi, writing during the Warring States period, complained that the Confucian

turns his back on what is basic by refusing to work, and contents himself with laziness and arrogance. . . . In the summer he begs for grain, but once the harvest is in, he goes chasing after big funerals. All his children follow him to eat and drink their fill. If he can manage a few of these funerals, it will be enough to get by.

Even Singapore’s former prime minister, Lee Kuan Yew, widely seen in recent years as the most vocal proponent of the impact of Confucian values in explaining high savings and rapid growth in Asia, did not at first disagree with Mozi. In an April 28, 1974, article in Singapore’s *Strait Times*, he complained that Singapore’s Chinese “spend freely and save less,” which, he claimed, justified his policies to force them to save out of current income.

But how things have changed since then. After Asia started to grow rapidly in the 1970s, our understanding of the impact of Confucian culture on growth seems to have reversed itself quite astonishingly. Now Confucianism, with its supposed propensities toward thrift and hard work, is enough to explain Asian growth fully.

It is at best strange that only a few decades after we “knew” that Confucian culture condemned Asians to poverty, so many commentators can now point to Confucian culture as one of the primary factors that explain the Asian growth miracle. This makes no sense. Clearly Confucian values cannot explain either the tendency toward thrift or the love of consumption.

So what really explains the high German and Chinese savings rates and the low savings rates in the United States and peripheral Europe? In this book I argue that they are both necessarily caused by institutions and policy, whether these are policies and institutional frameworks in the deficit countries, policies and institutional frameworks in the surplus countries, or both.

What’s more, exhortations that deficit countries become thriftier are not only useless in resolving the imbalances, but to the extent that they are acted upon, they are likely to worsen the impact of the crisis. Perhaps more surprising, as I show, if deficit countries do indeed become as thrifty as surplus countries, it will ultimately place the brunt of the adjustment on the surplus countries, whose virtues the deficit countries are supposed to imitate.

The New Economic Writing

In his 1868 paper to the Manchester Statistical Society, “On Credit Cycles and the Origin of Commercial Panics,” the British economist John Mills (1821–96), no relation to his more famous namesake, wrote,

It is scarcely a matter for surprise, and still less for regret, that every commercial crisis occurring in this country is promptly followed by a literature of pamphlets, discussing the phenomena and their supposed