Peace Economics: A Macroeconomic Primer for Violence-Afflicted States

by Jurgen Brauer and J. Paul Dunne for the United States Institute of Peace*

Draft (v7) June 2011

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> "The economic problem of reconstruction is that of rebuilding the capital of society ... Reconstruction is merely a special case of economic progress. If we are to understand its problems thoroughly, we must examine what is meant by economic progress and try to discover how it comes about" (Kenneth E. Boulding, *The Economics of Peace*, 1945, pp. 4, 73).

Overview: Increasingly, peace agreements and economic development programs reference the centrality of sound economic policy and a stable macroeconomic framework in state-building efforts. Yet few practitioners have the background to know what this means and to understand the relationship between their areas of responsibility and the policies needed to attain macroeconomic stability and secure long-term growth and development. Even fewer feel able to contribute meaningfully to designing and implementing strategies to first attain and then maintain this fundamental end state. This primer is an introductory guide and reference document on macroeconomic fundamentals as they pertain to violence-afflicted states, intended for noneconomists who may be involved in peace negotiations or other types of national reconstitution and who would benefit from a clearer understanding of the underlying macroeconomic issues.

Purpose and scope of this primer

Without economics there is neither war nor peace. Economics is entangled front, back, and center with violence as well as with its prevention or, at least, its mitigation. Before war, economic grievances such as severe maldistribution of wealth or of income-earning opportunities can give rise to political upheaval. During war, economics both provides and destroys resources. And after war, well-functioning production and exchange mechanisms need to be put back together again—or else relapse into war is likely.

As aggressors or as victims, even robustly performing economies can fall prey to armed violence and its devastating economic consequences. Japan and Germany and the eventually victorious powers in the second world war (1939-1945) serve as but one set of examples. Economic aspects related to labor, capital, trade, and finance can motivate, drive, prolong, and terminate violence. This was as true of the U.S. American civil war (1861-1865) as of that in Mozambique (1976-1992). Interestingly, in the Mozambican peace agreements the word "economic" appears solely in conjunction with the phrase "economic and social reintegration of demobilized soldiers." No other reference to economics is made.[1] Yet economics is crucial, if only because without economic resources one can neither fight nor live in peace.

To prosecute war, warriors need to volunteer, be hired, or conscripted, and bullets need to be manufactured, bought, and sold. Withdraw the material fuel of war, and the guns must fall silent. Economics can be among the causes that motivate armed violence in the first place, for instance over access to valuable natural resources. And when the guns do fall silent, economics is important because postwar—when communities and livelihoods need to be rebuilt—economics co-determines the prospects for the success or failure of peace. It is widely acknowledged, for example, that the economic terms and execution of the post-World War I peace treaty helped lay the foundations upon which World War II was motivated and fought. In contrast, the post-World War II peace arrangements helped create the economic "miracles" of both Germany and Japan. The same, we now know, is true of armed violence in much of the developing world in Africa, Asia, and Latin America: The design and execution of postwar economic policies help determine the success or failure of peace. Not merely preventing relapse into war, the proper design and implementation of economic policies and its supporting institutions can be among the primary instruments for preventing armed violence in the first place—including criminal violence that may follow a peacemaking accord in a state with a broken social contract.

PURPOSE OF THE PRIMER. This is a primer on macroeconomic fundamentals as they touch on violence-afflicted states. High rates of violent interpersonal and collective conflict today primarily affect emerging and developing economies, and the primer therefore focuses on these even as it includes lessons learned from the cases of advanced economies.[2] As

to economics, we indeed stick to fundamentals although economists sometimes are hard put to define, let alone agree, just what these are. The finance-driven world economic crisis of the late 2000s has illustrated, after all, that economic theories, policies, and regulations are less firmly set in place than it was once thought they were. In this regard, it is important to appreciate that the word "primer" as used here is akin to a guide on how to understand the mechanics and operation of an engine rather than on how to fix a specific engine. Engines can sputter and break in many ways (as can economies and entire states), and when restored they all need to perform the same general function, in a certain sequence, and such that the various elements of the engine are balanced against each other. It serves no purpose for instance to build an engine and run it without lubricants. Thus, this primer is a general purpose overview of important economic principles to keep in mind, not a specific "how-to" guide. For that, something far more context-specific would be needed.

Another simile is that of "missing the forest for the trees." A danger posed by focusing on the trees is that they may not amount to a well-functioning forest and the services that the forest, in turn, delivers to each tree. While practitioners are keen to learn answers to the "what do I do now?" question that arises in the field, answers to "which tree do I plant now?" depend in part on what the desired healthy forest is to look like. Peace is an "ecosystem," and fixing one's gaze on design principles, rather than context-specifics, not only assists postwar reconstruction but also violence prevention, mitigation, and how to build immunity and resilience to violence. Thus, the purpose of the primer extends beyond pure economics into the wider realm of social (re)constitution, social contract, and social capital.

Each of the primer's five chapters explains key concepts and relationships in lay-person's terms, presents important topics, issues, data, and metrics, outlines roles and responsibilities of key institutions, and provides lessons for violence prevention, mediation, peace agreements, and post-violence management. Each concludes with two illustrative case studies to highlight missteps as well as good practice. This organization—theory, practice, lessons, cases—should assist different kinds of practitioners in different ways.

OUTLINE OF THE PRIMER. This primer is no substitute for an economics textbook. Instead, we select some topics that are germane to the issue of violence, especially large-scale interpersonal and collective violence as in the cases of war, civil war, and criminalized (postwar) economies. Chapter 1 provides illustrative information on **violence and economic performance**, discusses the purpose of economics and the many facets of economic policy and politics, and looks at some of the links between violence and economic development. Chapter 2 provides an overview of **economic growth** theory and policy. Policymakers sometimes fail to appreciate that growth is a means to an end—the betterment of life—not an end in itself.[3] The chapter discusses how economic performance may be measured, and what are some important economic institutions and their purposes and policies. Chapter 3 moves from long-term to short-term considerations or, in the jargon of the profession, to **macroeconomic stabilization** theory and policy. In practice this means fiscal and monetary policy, concerned for example with taxation and the setting of interest rates and spill-over effects of these on other policy and development goals. Chapter 4 turns from "closed" to "open" economics, that is, **international trade and finance** theory and policy. Chapter 5 concludes the primer, providing rules of thumb that peace negotiators and economic policymakers and decisionmakers should find useful. It brings the preceding chapters together and discusses them in regard to issues pertaining to **the design of peace**. These include considerations of social contract. The primer concludes with endnotes, references, and appendices, including a glossary.

Lesson 0.1: Without economics there is neither war nor peace.

Lesson 0.2: The design and execution of postwar economic policy helps determine the success or failure of peace.

Lesson 0.3: The proper design and implementation of economic policy can be among the primary instruments for preventing violence in the first place.

Lesson 0.4: The primer focuses on explaining the basic mechanics of economic engines in general rather than on the "how-to" of fixing specific broken engines. Focusing on purpose and design generally assists with post-violence reconstruction and also with building long-term immunity and resilience to violence.

Chapter 1: Violence and economic development

1.1 The economic cost of violence: A first impression

According to the World Health Organization, self-harm refers to self-directed violence, including suicide. Interpersonal violence includes intimate partner and other family violence, assault and homicide, and violence committed in institutional settings. Collective violence includes armed conflict between, among, and within states, communal-level violence, violent acts of terror, and organized crime.

The World Health Organization groups forms of violence into the rubrics of **self-harm** (including suicide), **interpersonal violence** (e.g., violence between intimate partners and other forms of family violence, rape and sexual assault by strangers, violence committed in institutional settings such as schools, prisons, and work places), and **collective violence** (e.g., armed conflict between, among, and within states, violent political repression and genocide, violent acts of terror, and organized crime). Together, these form an ecology of violence progressing from individual and relationship-related violence to communal and large-scale, collective levels of violence (WHO, 2002).[4]

Gross domestic product is the monetary value (and hence income) of all goods and services legally produced by residents of a country within one calendar year. Gross world product is the sum of gross domestic product across all countries.

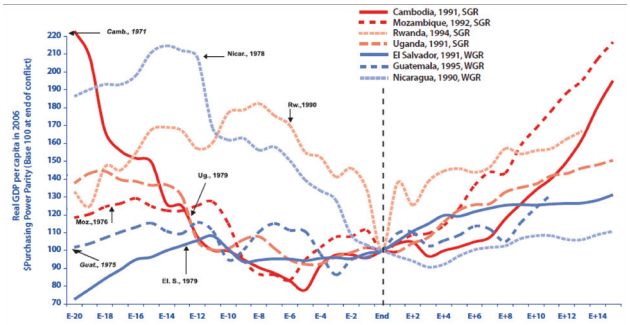

Figure 1.1: Per capita GDP, selected countries, pre- and postconflict.
Note: Arrows point to starting year of violent conflict.
Source: UNDP (2008, p. 111, Figure 4.2).

The economics of health and crime are well-established fields of study. Other economists and quantitative political scientists concentrate on collective forms of violence such as intrastate and interstate war. In 2008, the United Nations Development Programme's Bureau for Crisis Prevention and Recovery (BCPR) released a study from which Figure 1.1 is taken. For a selection of seven states, data on the pre- and postwar per capita values of economic production, called **gross domestic product** or GDP, adjusted for inflation and purchasing power differences, were collected. (For an explanation of these terms, see chapter 2 or the glossary.) For ease of comparison, for the year in which the respective wars ended, indicated by the vertical dashed line in the figure, GDP is set equal to an index of 100.[5] Start dates of war are indicated with an arrow for each state. As may be seen, prior to the start of war, per capita GDP had grown in most of the cases. With the start of war, GDP collapsed. And with peace, GDP started to grow once more.

The three countries with blueish lines (El Salvador, Guatemala, and Nicaragua) experienced weak postwar growth and hence are designated as weak-growth recovery (WGR) states, whereas the others (Cambodia, Mozambique, Rwanda, Uganda), indicated with reddish lines, are strong-growth recovery (SGR) states. The UNDP study discusses why some states appear to recover more strongly than others. But even though both Mozambique and Rwanda, for example, appear to have done relatively well postwar, the macroeconomic policies underlying their economic recovery experiences were in fact rather different. Rwanda bounced back strongly right after 1994 but since then its growth has been modest. In contrast, Mozambique floundered for the initial postwar years before starting to grow more strongly.

Note, in Figure 1.1, that Cambodia's per capita income index equaled about 220 at the start of the war and that, 35 years later, the country still had not recovered to its former per capita income levels. Nicaragua's high-point in per capita GDP came 14 years before the end of the war, and 14 years after the end of the war, its income-level still is only one-half of what it once was! For El Salvador, average income-levels have improved slightly, but the peace after the war ended

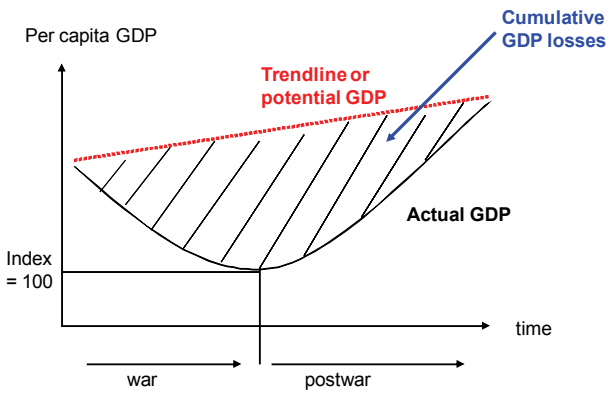

Figure 1.2: Cumulative per capita GDP losses.

was worse than the war itself—it is said that more people were killed there in the 10 years after the war than during the 12-year war.[6]

The United Nations Development Programme (UNDP) report, from which Figure 1.1 is taken, summarizes recent studies on the economic cost of civil war, much of which is echoed in the World Bank's 2011 *World Development Report* as well. UNDP reports that this cost lies somewhere between 1.7 and 3.3 percent of GDP per country per conflict year prior to 1990 and averaging 12.3 percent of GDP post-1990, that is, in the post-Cold War era (UNDP, 2008, p. 35). To show the cumulative effects of these losses, Figure 1.1 can be redrawn in stylized fashion—as in Figure 1.2—where the curved, solid black line represents the fall and rise of average per capita GDP during and after war and the dotted red line represents the potential GDP growth path had war not interfered. Consequently, the area in-between the black and red lines indicate the cumulative GDP losses. In light of the number of years covered—35-years in the case of the UNDP study—these losses are substantial (see section 1.4 for details).

The current cost of violence is the direct and indirect cost in a given time period across a given geographic space. The legacy cost is the cost of past violence that carries over to the present. The spill-over cost is a cost imposed on bystanders (e.g., refugees from state A that flee to and impose a cost on state B).

As yet, there is no agreement among economists on how to fully enumerate, let alone compute, the global cost of war, or even the cost of all violence, war-related or not. What is required is a computation of **current cost**, **legacy cost**, and **spill-over cost** that is comprehensive and consistent.[7] The current cost is the direct and indirect cost of violence incurred in a given time period (a calendar year, say) and a given geographic space (e.g., within the borders of a country); the legacy cost would include the cost of past violence that carries into the present (e.g., reduced productivity on account of permanent injury; continuous health care for the injured); and the spill-over cost would account for costs imposed on bystanders (e.g., refugees from state A that impose a cost on state B). A complete survey of the various estimates found in the literature does not exist. A partial survey of the economic cost of self-harm, interpersonal, and collective violence, including civil wars and terrorism, was carried out by Brauer and Tepper-Marlin (2009). They conservatively conclude that, if all violence had ceased, the 2007 value of world economic production, called **gross world product**—GWP, the sum of GDP across all states—could have been 8.7 percent larger than it actually was. They distinguish between **static effects** and **dynamic effects**. The former recognizes that cessation of violence makes some security services superfluous, thus freeing expenditure to be shifted to other goods and services. This substitution effect does not increase GDP; it merely reallocates spending from one sector of the economy to another: The economic pie does not grow. However, being more secure about one's person, family, and property liberates energies to undertake productive investment that, in turn, increase GDP, and it is this effect of nonviolence that—they suggest—would have amounted to an 8.7 percent gain in GWP in 2007. For example, a study on Colombia found that farmers in regions under active civil war threat invested less in irrigation, thereby reducing potential farm output and income derived therefrom.[8]

Static peace dividend refers to a redistribution of economic activity from violence-related to nonviolence-related spending (e.g., from criminal to civil law for lawyers' activities). A dynamic peace dividend results when, e.g., security spending can be cut and be applied to productivity-enhancing physical, human, institutional, and social capital.

Because violence is a continuous phenomenon, this cost of about 9 percent of GWP represents annually forfeited economic output. In contrast, the International Monetary Fund

(IMF), an important global financial institution, estimates that the world economic crisis of 2009 amounted to a one-time world output loss of a mere 0.5 percent.[9] Granted, the world economic crisis would have been worse had it not been for extraordinary policy intervention worldwide. But that is just the point: The ongoing, annual **violence crisis** is a much more severe economic problem than is the occasional **economic crisis** and demands at least equally extraordinary policy attention and intervention.

1.2 Assets, income, and the bathtub theorem

PURPOSE OF ECONOMICS. To survive and to reproduce into the next generation, all organisms must **produce**, **distribute**, and **consume**. The details vary by species but the economy of nature is real enough and biologists routinely apply economic thinking about (energetic) costs and (reproductive) benefits to the organisms they study. Whereas other species endlessly struggle for survival, the human species is endowed with the seemingly singular capacity to design systems of production, distribution, and consumption that, in principle, permit **continual betterment of our condition of life**. These systems have individual and collective elements to them. Private property rights for instance generally are collectively procured and secured via tax revenue and public expenditure on a suitable law and order apparatus. Among the signal achievements of the human economic system is the pervasive extent of trade. Whereas among nonhumans it tends to be the *species* that specializes, among humans it tends to be the *individual* within the species that specializes on acquiring a useful skill, the product of which is bartered against the specialized products of other individuals.

Economics deals with the production, distribution, and consumption of the means to livelihood with the aim of continual betterment of life. Three types of economy are the exchange economy, the grants economy, and the appropriation economy.

THE THREE ECONOMIES. Because of the importance of trade, the **exchange economy** has long been the focus of the economics profession. Any history of economic thought will discuss schools of thought such as mercantilists and physiocrats, and schools associated with the names of Adam Smith, David Ricardo, Karl Marx and Friedrich Engels, and others whose works all are characterized, one way or another, by a discussion of aspects of exchange economics. To exchange means that an agreement must be made as to the ratio at which goods and services are exchanged—is it one apple or two apples for an orange? is it one or two hours of work for 15 dollars of money? This can create conflict because the exchange ratio implies that values are assigned to each good or service with consequences that affect distribution and consumption and hence material well-being. Much of the academic discipline of economics today is concerned with how to press more product (output) from a given set of resources (input) or, which comes to the same thing, how to achieve a given output with a minimum of inputs. Because trade is such an important component, economists study causes and consequences of impediments to trade and how to efficiently overcome them. As a rule, peaceful economies are also trading economies, and vice versa.[10] Inasmuch as war disrupts trade routes and destroys trade facilities such as roads and ports, restoring and promoting internal and external trade and the needed infrastructure will therefore be important for postwar recovery. We discuss aspects of infrastructure rebuilding later on in this chapter.

A second kind of economy is the **grants economy**. Parents distribute to children, people make donations to charities, the government of one state makes aid available to that of another, and multilateral development banks provide loans at concessional interest rates. In all instances, a grant of economic resources is made without an immediate, if any, expectation of anything given in return.[11] No one has convincingly measured its size, but the formal and informal grants economy is probably huge. It is important to appreciate that grants transfer resources from one potential spender to another (e.g., from parents to children). The grants economy is therefore embedded within the exchange economy. Even though the general effectiveness of foreign aid has been questioned, the scholarly literature agrees that to aid violence-afflicted states, sustained postwar grants are necessary and effective (UNDP, 2008; WDR 2011). We address this topic in chapter 3 when discussing foreign-aid to violence-afflicted states.

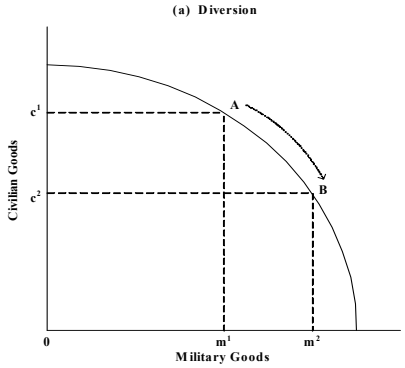

Figure 1.3a: Production Possibility Frontier (PPF) and resource diversion. *Source*: Anderton and Carter (2009).

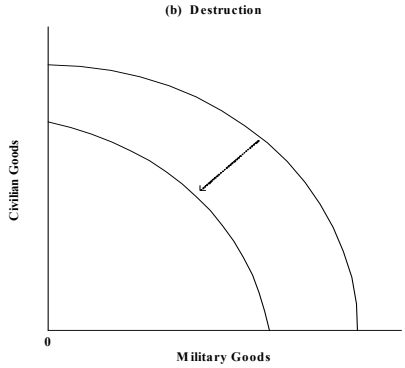

Figure 1.3b: Production Possibility Frontier (PPF) and resource destruction.

A third type of economy is the **appropriation economy**. This, too, is characterized by the absence of direct exchange. But whereas the exchange and grants economies are founded, respectively, on *voluntary mutual exchange* and on *voluntary unilateral giving*, the appropriation economy is based on *involuntary taking*, i.e., coercion. Taxation, for example, is a form of coercion as resources are taken under threat of punishment for nonpayment of taxes. But at least an indirect benefit is offered inasmuch as tax revenue is meant to be expended on public goods and services that benefit the taxpayer. In contrast, robbery at the point of a gun is pure appropriation. Mafia-type economies fall into this category, and corruption-rife economies probably as well: Although the appearance of exchange is maintained—a bribe for a business license or a trading permit for instance—it is of course a coerced transaction. Exchange encourages production; threat discourages production. Brought to a point, one might say that exchange, grants, and appropriation economics are based, respectively, on self-love, love of others, and fear.[12] The economy of fear plays a crucial role prior to, during, and even after war and crime. The salience of appropriation economics lies in the need to establish a credible and enforceable social contract within, between, and among communities and societies. (More on this in chapter 5.)

Production possibilities frontier: The maximum possible levels that can be produced of a set of goods and services, given currently available levels of labor, capital, and other production inputs.

PRODUCTION POSSIBILITIES. We shall have occasion to return to grants and appropriation economics. For now we are in the realm of exchange economics. One useful visual representation of the productive capacity of an economy and its consumption possibilities is given by what economists call the **Production Possibilities Frontier**, or PPF for short. Simply put, all feasible production within an economy is grouped into one of two classes of products. For example, the two classes might be civilian goods ("butter") and military goods ("guns"). Thus, in Figure 1.3a, if all of society's resources are used to produce only civilian goods and no military goods, then this is depicted along the vertical axis to the point where the axis is met by the curved line, the PPF. Conversely, if only military goods are produced, then this is depicted along the horizontal axis to the point where that axis is met by the curved line. In reality, most societies will produce a combination of the two goods, such as at point *A* where some of society's resources are employed to produce civilian goods and the remainder is used to produce military goods.[13] Economists acknowledge that some production of security-related items is necessary (e.g., security fences and border guards) if only to prevent predation. Nonetheless, it is also recognized that this must come at the expense of civilian production: Thus, the move from point *A* to point *B* in Figure 1.3a implies a reduction in the production of civilian goods as measured on the vertical axis. Typically, this would be the case during periods of heightened conflict or of war when military expenditure increases to shift resources toward the production of military goods and services.

The productive capacity of an economy is indicated in Figure 1.3 by the distance of the intercepts on the vertical and horizontal axes. The further along either axis the PPF intersects the respective axis, the more the economy is able to produce either military or nonmilitary goods. Thus, if war does break out and assets are damaged (humans injured or killed and physical capital such as buildings, seaports, and equipment damaged or destroyed), the overall productive capacity of society shrinks so that the PPF is depicted in Figure 1.3b as shifting inward, back toward the point of origin,

with the consequence that the highest production and consumption points attainable are smaller than before. This is a simple, intuitive, and effective illustration of why gross domestic product—measured as the annual monetary value of all production in an economy—declines in violence-affected countries (as seen in Figure 1.1).

Bathtub theorem: The inflow of water into a bathtub represents production, and the outflow represents consumption. An excess of the inflow of production over the outflow of consumption adds to the stock of available goods. Conversely, an excess of consumption over production diminishes the stock.

THE BATHTUB THEOREM. If consumption depends on production, then production in turn depends on the underlying **assets** that make production possible in the first place. One way of seeing this point comes from the **bathtub theorem**. It says that "the rate of accumulation is equal to the rate of production less the rate of consumption."[14] Open a water faucet to fill a bathtub. The inflow of water represents production; the outflow through the drainpipe represents consumption. If production is greater than consumption, water will accumulate in the bathtub and that is the amount of **saving**. This saving is an asset (a **stock of value**, rather than a **flow of value**). In times of crisis, when production fails, one has to consume part of the stock, like slaughtering one's cattle or eating seeds needed for the next sowing season. Continuous consumption of one's assets (draw-down of one's stock) is not a viable postwar reconstruction strategy. The only reconstruction strategy that is viable is one that emphasizes rebuilding the stock of assets, that is, of production that exceeds consumption. In war, production for civilian use is reduced (a move from point *A* to point *B* in Figure 1.3a), so that society needs to draw on its saving to maintain consumption at the accustomed level.[15] Conversely, the task of postwar rebuilding lies in rebuilding the stock of assets. Somehow, the water faucet needs to be turned back on.

Assets: To produce goods and services, a society needs assets with which to produce. These include natural, physical, human, and social or institutional capital. Asset stripping refers to the depletion of the stock of capital to serve current consumption needs, thereby diminishing society's capacity to produce in future.

ASSETS VERSUS INCOME. As the name suggests, and as will be explained in chapter 2, gross domestic product is a measure of production and of the income this production generates. Income generation is obviously important for individuals, families, communities, local governments, and whole countries. It contributes to one's standard of living and quality of life. But production, and hence income, is always based on and derived from some underlying base of assets. A farmer cannot earn income unless the land is fertile and yields produce. A doctor can heal the better, the better supplied is her surgery. And a cabinet-maker needs tools to ply his trade. Assets—or capital—are an important cause of production and income; production and income are a consequence of assets. Assets refer to **physical capital** such as machinery, equipment, and physical structures or facilities that one may have available to work with. There is the **natural capital** of Earth, that is, raw materials that can go into production processes. (Some of these are renewable, others are nonrenewable.) Assets also include peoples's talents, ingenuity, skills, training, education, knowledge, and experience, often collectively referred to as **human capital**: Of two craftsmen, the one working with a handloom likely will be less productive and earn less income than the one working with a million-dollar carpet-weaving machine. The second worker may need a considerable amount of formal education, or human capital, to understand, operate, and maintain the machinery.

Social capital: An economic asset consisting of the social and communal networks humans build.

Scholars have proposed the still controversial notion of **social capital** on which there exists neither agreed definition nor measurement but which roughly refers to an economic asset that consists of the social and communal networks humans build (see chapter 5). Certainly, in addition to communal physical assets such as highways, waterways, air- and seaports, and telecommunications facilities, there are public services such as the bank notes that serve as money and law and order functions fulfilled by government that enhance productivity. Bank notes appear to be physical entities of course but their function wholly relies on a network of mutual trust among strangers to accept otherwise worthless little bits of

colored paper as payment in exchange for goods and services. Thus, social capital, too, is a stock of achievements that, once destroyed, can be extremely difficult to rebuild and without which production and income-earning opportunities diminish. Trust, once broken, can be impossible to rebuild and can lead to a complete stop in economic activity and trade.

The *quantity and quality* of these assets contributes to production and the productivity of the population and hence to their income. Thus, Kenneth Boulding—a renowned economist in his time—argues that "[e]ssentially, the economic problem of reconstruction is that of rebuilding the capital of society."[16] Of course, many poor communities have little to rebuild in the first place, so that the task lies as much in the building as in the rebuilding of the capital or asset base of society. Although perhaps necessitated by the urgency of the situation, policymakers regrettably tend to give priority to income over asset building. A key observation here is that it is relatively easy to generate income by further depleting the remaining assets. Called **asset stripping**, recourse to this scheme must be avoided. For example, to generate income, a rural family may decide to slaughter their cattle to sell meat, hides, and other useful parts. By depleting their assets, income is generated but leaves this family poorer, not richer. If it is a matter of survival, this is understandable, but ultimately this is a strategy for death, not for economic progress.

1.3 The many facets of macroeconomic policy and politics

Objectives of macroeconomics: (1) low inflation; (2) low unemployment; (3) smooth business cycles; (4) sustainable developmental growth; and (5) policy coordination across political jurisdictions.

THE OBJECTIVES OF MACROECONOMICS. Five major objectives of macroeconomic policy concern the achievement of (1) low price inflation of inputs, outputs, and assets; (2) low unemployment of available resources, especially labor but also in regard to capital utilization; (3) smooth, rather than erratic, business cycles; (4) sustained, yet sustainable, human development and economic growth;[17] and (5) economic policy coordination across political jurisdictions. Item five is addressed in chapter 4, on international trade and finance. Item four was partly addressed in the foregoing paragraphs, the main point being that economic growth must be sustainable and cannot involve a continuous stripping of assets. Details are discussed in chapter 2. Item three is addressed in chapter 3. It discusses some tools with which to moderate and smooth business cycles. Items one and two are self-evident objectives but measurement problems exist. Even in peacetime, many developing economies find it difficult to provide adequate data collection and statistical services to measure, for example, aspects of formal and informal labor markets (e.g., population growth, schooling rates, labor force participation, child labor, and so on), prices of daily necessities and of financial assets (e.g., from food and energy costs to land, property, and housing values), and movements of financial capital in and out of a country. Interruption of these measurements in war, or even destruction of the capacity to measure, requires postwar emphasis on well-directed and well-focused capacity rebuilding efforts. Economic theory and, sadly, many economic practitioners often simply assume that institutions to provide the entire panoply of such measurements are fully functional. In practice, this is not the case and becomes an important element of postwar reconstruction.

A policy is a set of rules, directions, or guidelines to be followed for a particular issue area. Economic growth policy focuses primarily on productivity growth and long-term opportunities for production, and income generation, less on distribution and consumption. It assumes more of a constitutional and quantitative character. In contrast, economic development policy is somewhat more concerned with qualitative and equity aspects, such as rural development, the well-being of women, youth, and the elderly, and that of minority or disadvantaged population segments. Some also include measures of personal happiness and community vitality and resilience in this category.

VARIETIES OF ECONOMIC PHILOSOPHIES AND POLICIES. Almost anything can become an economic policy. One school of economics even holds that the best policy is to have only one policy, namely, to let the market work without overmuch government interference at all. All that government should do is to set a minimum of clear, generally applicable laws and

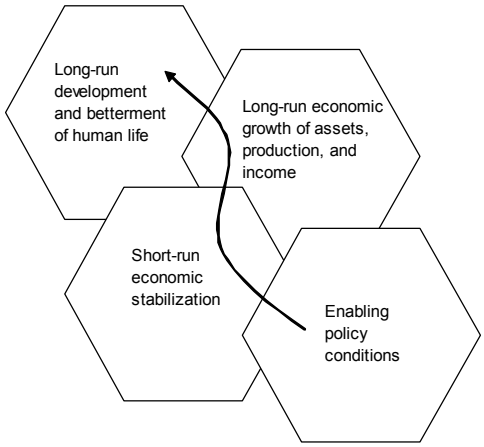

Figure 1.4: A macroeconomic framework.

regulations—the ground rules—and enforce them. These might refer to property and contract law for example or to regulations regarding fair advertising and competition. Markets should not be unfettered but they should be free, and market participants should be free to succeed, or to fail. Rather than government arbitrarily intervening in markets, and necessarily mixing vested political interests with economic ones, the discipline of the market will, in time, compel buyers and sellers to exercise the necessary care over their economic affairs. Indeed, it is not the presence of free markets, but their very absence—markets fiddled with by politics—that can cause severe economic and follow-on social and political problems. (Needless to say, there are other schools of economics, schools that view an expansive role of government more favorably.)

A **policy** is a set of rules, directions, or guidelines to be followed for a particular issue area. Ideally, policies are coordinated and coherent so that the many agencies charged with implementing policy work toward a common goal. In practice, policy is frequently not well coordinated, nor always well executed even if coordinated, and vested interests—domestic and foreign—seek to influence policy to push their own agendas.

Economic growth policy is discussed in chapter 2. It focuses not so much on asset growth itself as on the growth in asset productivity and subsequent income generation, and less on distribution and consumption. Economic growth of, say, 4 percent per person per year might be judged as "good," even if virtually all of the wealth and income gains accrue to just a few people in the country. In the end, however, growth policy will have to revolve around issues such as property rights, land reform, education policy, even business regulation, trade, and tax policy inasmuch as these bear on the degree to which they help or hinder to (re)build assets and generate income. International financial organizations (IFOs) or multilateral development banks (MLDBs) such as the International Monetary Fund (IMF) and the World Bank Group (WBG) have often been seen to push a particular version of growth policy, for instance to liberalize business regulations, open markets to global competition, and minimize government taxation and expenditure. Yet distributional issues cannot be divorced for long from growth issues. Broad-based **economic development policy**, rather than mere economic growth policy, will need to look at issues concerning urban versus rural development; health, education, and personal security; women, youth, the elderly, and other vulnerable populations; and so on. Some would place measures of personal happiness and community vitality and resilience into this category as well.[18] Still, growth helps to finance the development objectives and therefore cannot be ignored.

Short-run deviations from long-run objectives are possible of course, if only because of unforeseen events such as natural catastrophes (e.g., earthquakes, floods, volcanic eruptions), or manmade ones (e.g., wars in neighboring states, criminalization of an economy), or sudden increases or decreases in world commodity prices that affect the value of exports and imports. Economic authorities have relatively few tools available to them to deal with these events. Among them are fiscal policy and monetary policy (chapter 3). These are policies dealing with taxation, public expenditure, the setting of interest rates, and of the value of one's currency relative to those of one's global trading partners (chapter 4).

WHAT IS AN APPROPRIATE MACROECONOMIC FRAMEWORK? The preceding paragraphs suggest that there can be disagreement over just what would constitute an appropriate macroeconomic framework to follow. Macroeconomics is a contested field, not only among academics, but among policymakers who jostle for power in order to implement their vision of how things economic should be handled. Recognizing the necessity to deal with problems as they emerge, macroeconomic stability involves a delicate dance to achieve a triplet of long-run objectives, namely, **sustainable developmental growth**. Growth without development is dangerous; development without growth is illusory. Both must be conducted within the parameters of ecological constraints. Figure 1.4 illustrates our view. Short-run economic stabilization may be viewed in an instrumental fashion: Do what is necessary to do to prevent the economic ship from

capsizing. But if one is constantly stabilizing, it is perhaps because one's long-run compass setting continuously directs one into the nearest economic storm. As to growth, it is important to appreciate that asset depletion to generate current income—for example, excessive reliance on mineral wealth exploitation—is not a recipe for long-run development success. It also makes one overly vulnerable to commodity price fluctuations on the world market, requiring overly frequent short-run adjustments so that one will find it difficult to direct one's efforts toward the ultimate objective, the development and betterment of human life.

Sustainable developmental growth: Growth without development is dangerous; development without growth infeasible. Growth must serve developmental purposes; it must also be ecologically sustainable.

Enabling policy conditions refer to well-functioning, transparent policymaking and policy implementing institutions, to well-trained and accountable officials, and to a predictable regulatory framework.

The foregoing suggests that both a set of **enabling policy conditions** as well as a set of criteria are needed by which to evaluate success or failure of policy conditions, economic stabilization, economic growth, and human development. Enabling conditions—frequently destroyed in war—refer for example to well-functioning, transparent policymaking and policy implementing institutions, to well-trained and accountable officials, and to a predictable regulatory framework. Because economics is not an end in itself but an instrument directed toward a purpose, these criteria ultimately will have to do with objectives such as secure lives, decent work, sufficiency of income, ecological sustainability, even justice and human rights. In design and in implementation, macroeconomic policies need to be evaluated—indeed, audited—according to these larger goals.[19]

1.4 The nexus of violence, economic development, and global public policy

Table 1.1: The Millennium Development Goals

1: Eradicate extreme poverty and hunger
2: Achieve universal primary education
3: Promote gender equality and empower women
4: Reduce child mortality
5: Improve maternal health
6: Combat HIV/AIDS, malaria, and other diseases
7: Ensure environmental sustainability
8: Develop a Global Partnership for Development

***Source*: Extracted from UN (2009).**

On 8 September 2000, the United Nations General Assembly (UNGA) adopted a resolution, called the United Nations Millennium Declaration.[20] A part of the resolution later coalesced into what is now widely known and referred to as the **Millennium Development Goals**, or MDGs. To be achieved by the year 2015, the goals are listed in Table 1.1. Sadly, even though the Millennium Declaration resolution prominently speaks of peace, security, and disarmament, the MDGs themselves are wholly uninformed regarding the impact of war and violence on poverty and the other MDG goals. They reflect an appalling lack of comprehension that so long as there is violence there will be no development.

Only in August 2009 did the UNGA recognize that underlying virtually every one of the eight MDGs lies the fundamental need to speak to violence:

> "Although the linkage between armed violence and development is not explicit in the Millennium Development Goals, they offer entry-points for development agencies to consider. Objectives such as reducing poverty, ensuring maternal health and promoting education are all associated with effective armed violence prevention and reduction initiatives. *Nevertheless … there is no Millennium Development Goal that specifically deals with conflict, violence and insecurity*" (UN General Assembly, 5 August 2009, item #33, p. 11, A/64/228; emphasis added).

The World Bank's *World Development Report 2011* points out that not a single low-income country afflicted by violence has achieved even one of the eight goals (e.g., World Bank, 2011, pp. xi, 1, 5, 63). For an illustration, consider

Figure 1.5: Inflation- and purchasing power-adjusted per capita GDP, Ethiopia, 1950-2009 (I$; base year 2005). *Source*: Penn World Table 7.

the case of Ethiopia. Using gross domestic product data from the Penn World Table project that are adjusted for inflation, population growth, and for purchasing power differences across countries, we note in Figure 1.5 a steady rise in GDP from 1950 to 1974. Measured in **international dollars** or **purchasing power parity dollars** (I$), Ethiopia's per capita GDP was I$279 in 1950 and I$473 in 1974, an increase of about 70 percent over 25 years or 2.8 percent per person per year. In 1974, a violent revolution occurred; in 1977, a war was started with Somalia over the Ogaden region; in the early 1980s several massive famines occurred in part because of a brutally repressive political regime that pursued hurtful economic policies; in the early to mid-1990s, violently contested elections took place and long-running secessionist movements in Tigray and Eriteria resulted in more violence; Eritrea gained independence in 1993, but a border war with Ethiopia broke out in 1998 that was only nominally settled in 2000.

International dollars (I$): An artificial measure created to make the purchasing power of currencies comparable across countries.

In Figure 1.5, we see the economic result of this history of upheaval and violence. Over the 30-year period from 1975 to 2004, economic output per person completely stalled. Had Ethiopia continued to grow at its 1950-1974 rate—as indicated by the linear trend line in the figure—average production should have reached about I$800 in 2009 instead of the I$684 actually achieved. (And even this level only due to a growth spurt of the last five years of the data series.) In accordance with Figure 1.2, the area between the trend line and the actual GDP line denotes the size of the cumulated loss of production. It is I$7,721, over 11 years worth of 2009 income. Imagine you had to make do without your last 11 years' worth of income!

Figure 1.6: Inflation- and purchasing power-adjusted per capita GDP, Nicaragua, 1950-2009 (I$; base year 2005). *Source*: Penn World Table 7.

The case of Nicaragua is more stunning still (Figure 1.6). Again measured in international dollars, its per capita production grew from I$1,948 in 1950 to I$4,554 in 1977, or about 4.8 percent per person per year, a significant achievement despite what was known and acknowledged to be a repressive political regime. A long-running revolutionary campaign finally gained traction in 1978 and came to power in 1979, provoking an undeclared proxy war with the United States that involved harbor mining, arms smuggling, and the clandestine support of counter-revolutionaries by the U.S. administration against the express wishes of Congress. An internal war continued until multiparty elections were held in Nicaragua in 1990, resulting in the electoral defeat of the revolutionary forces. As evidenced in Figure 1.6, by then the economy had completely collapsed, with the result that production per person in 2009 was only I$2,192—almost equal to the 1951 level of I$2,148—whereas the trend line projection suggests that average production should have reached nearly I$7,000 by 2009. In a word, in the 60 years from 1950 to 2009, Nicaragua's economy has not grown at all. The reason for the continued economic collapse even after the 1990 multiparty elections have to do with the lack of supportive political framework conditions (see chapter 5). For example, former president Arnoldo Alemán (1996-2001) was convicted of embezzlement, money laundering, and corruption and sentenced to a 20-year prison term—and this

by his presidential successor, Enrique Bolaños (2001-2006), of the same political party. Meanwhile, the former rebel leader, Daniel Ortega, was reelected to the country's presidency in 2006.

We deal with the case of El Salvador and the outright criminalization of its postwar economy in one of the two case studies that conclude this chapter. But one more figure here will be useful to highlight the effects of *nonwar-related homicide* on an economy. This concerns the case of the Dominican Republic (Figure 1.7). Again, the base data on inflation- and purchasing power-adjusted per capita GDP are taken from the Penn World Table (version 7). The blue line in the figure shows steady production growth from I$1,820 in 1951 (the datum for 1950 is unavailable) to I$9,911 in 2009, or 7.5 percent production growth per person per year, an impressive achievement, almost on par with India's and China's recent economic growth records.

Figure 1.7: Inflation- and purchasing power-adjusted per capita GDP, Dominican Republic, 1951-2009 (I$; base year 2005).
Source: Penn World Table 7.

And yet, a study by the United Nations Office on Drugs and Crime (UNODC, 2007) estimated that since 1975 growth could have been increased by an additional 1.7 percent per person each year if homicide rates in the Dominican Republic could have been halved from over 16 per 100,000 people to Costa Rica's rate of about 8 per 100,000 people. Using this information, the red line in Figure 1.7 plots the hypothetical, per capita GDP levels that the Dominican Republic might have achieved each year, with the result that by 2009 average production should have been on the order of I$16,456 instead of the about I$10,000 actually achieved—more than a 60 percent difference.

The World Bank concludes—rightly—that "violence is a major impediment to development."[21] Violence prevention, or at least mitigation, and post-violence reconstruction of a stable social contract are necessary conditions upon which development goals can be built. To repeat an earlier point: Without peace there will be no development. By the same token, lack of development, or lack of even the hope for development, is a prime cause that gives rise to violence. A proper macroeconomic framework and policy orientation will be one important ingredient in the policy mix needed to lower the incidence of violence.

In all this, one needs to recognize and appreciate that violence rarely permeates the whole of a society. Often it is highly localized, and it can move geographically from one location to another, sometimes in response to policy action. For example, it is widely acknowledged that Colombia's drug-related violence abated in the 2000s, in part, because concerted efforts by its government, with overseas assistance, made it suitable for drug-gangs to move to Mexico. There, in turn, it is now acknowledged, government countermeasures have led to an explosion of violence since 2006 which has led to narcotics traffic-bases being set up in El Salvador, Guatemala, and Honduras, that is, in countries with inherently small economies of scale of their respective law and order systems. Moreover, "between 1998 and 2005, the United States deported nearly 46,000 convicted felons to Central America, in addition to another 160,000 illegal immigrants" (World Bank, 2011, p. 78), presumably greatly facilitating recruitment for the illicit drug trade. This suggests economically simple, but developmentally highly relevant, substitution effects that ultimately can be addressed only by coordinated global public policy. But violence can only be geographically "stationary," consistently affecting some city neighborhoods more than others, or some districts or provinces more than others. Nonetheless, a diverse economic research literature shows that news of violence can drive foreign direct investment (FDI) and tourists away, even from regions of a country that are completely safe for business, suppliers, employees, and customers to operate and live in. As the saying goes, a bad apple can spoil the barrel. To help mitigate this problem, more fine-grained information on the location, extent, and actual (rather than imagined) danger posed by violence to outsiders needs to be collected and provided. With geographic information systems (GIS) and real-time mapping systems this is not overly difficult to do.[22]

1.5 Policy lessons and tips

Lesson 1.1: The violence crisis is a much more severe economic problem than is the occasional economic crisis.

Lesson 1.2: Avoid, prevent, and mitigate violent conflict as heightened tensions, war, and violence always carry adverse economic consequences. Postviolence reconstruction is far more expensive than is prevention.

Lesson 1.3: (Re)build assets; do not deplete them. In postviolence reconstruction, short-run necessity to address issues regarding income generation, distribution, and consumption should never detract from focusing on asset (re)building.

Lesson 1.4: One cannot manage without managers. Capacity-(re)building of institutions and personnel to design and implement proper economic policy is crucial.

Lesson 1.5: One cannot manage that which is not measured. Decide on a sequence in which data collection and data analysis services need to be reestablished.

Lesson 1.6: Consider the elements of the macroeconomic framework broadly and holistically. Do not lose sight of the purpose that economics is to serve: Growth without development is dangerous; development without growth is illusory.

Lesson 1.7: As a rule, peaceful economies are trading economies. Restoring and promoting internal and external trade is vital.

Lesson 1.8: Lack of development affects levels of all forms of violence and vice versa. An appropriate macroeconomic framework and policy orientation can mitigate violence. Inappropriate policy can worsen violence.

Lesson 1.9: Violence can overwhelm country-specific capacity and may require regional or global public policy intervention. Sustained aid to violence-afflicted states is necessary and effective. It has to be structured with peacebuilding and peace-maintenance specifically in mind.

Lesson 1.10: Without neglecting violence-rife areas, build out the strengths of relatively unaffected regions.

1.6 Failure and success: Two case studies

Failure: El Salvador

Figure 1.8: Inflation- and purchasing power-adjusted per capita GDP, El Salvador, 1950-2009 (I$; base year 2005). *Source*: Penn World Table 7.

In 1979, El Salvador fell into a prolonged civil war, lasting until 1991. Tens of thousands of people died, many more fled. A rare occurrence, the population count in the country decreased (as it did in Cambodia during the worst excesses of the Khmer Rouge regime in the 1970s). Yet since the end of the civil war, violence and insecurity in El Salvador have not ceased. An initial spurt of recovery in terms of real per capita GDP (measured in purchasing power parity or international dollars, I$) proved short-lived (see Figure 1.8). A World Bank Country Brief refers to homicide levels of 55 per 100,000 people in 2006 and a gang culture that impedes the safety of schools, lowers property values, reduces social capital, makes travel on public transportation to places of employment unsafe, and projects an image of the country that undermines attempts to attract foreign direct investment.

A 2005 UNDP study (in Spanish, and not well known outside the country) concluded that the economic cost of

violence and insecurity amounted to 11.5 percent of 2003 GDP. Costs include those imposed on the medical sector, absenteeism and productivity losses in the workplace, and legal costs. The losses are more than double what the state expends on the health and education sectors combined. From 1993 to 1997 homicide rates well exceeded 100 per 100,000 people and by the early 2000s dropped to a fairly consistent, but still extraordinarily high, ratio of 60 per 100,000. (The WHO considers a rate above 10/100,000 epidemic.) As elsewhere, homicidal violence primarily affects young males and differs by day of week and across regions within the country (with homicide rates ranging in 2003 from 10.4 to 54.2 per 100,000 across the country's 15 administrative regions). The correlation between homicide rates and homicides committed by firearm is very high, a finding that holds for other countries as well.

Ordinary homicide—premeditated or in sudden anger—is but one form of violence and, in 2003, accounted for only 7.2 percent of reported cases of crime against property or persons. For example, vehicular homicide in El Salvador is also among the very highest per 100,000 people in Latin America (and in the world). Intrafamily and sexual violence levels are very high as well. All this suggests that constructive (or at least nondestructive) social behavior—as an example of social capital and social contract— has broken down in the face of institutional and society-wide incapacities. A culture of impunity arises, and with it a culture of insecurity and consequent failure in the ability to be economically active or productive. In a 2001 survey of business obstacles in Latin America, for example, El Salvador received the most unfavorable scores on crime and organized crime (which were also the highest of all 11 obstacles countries could be ranked on). Various surveys of small and large businesses in the country suggest business closure or lack of investment on account of crime. Microenterprises were not as affected, suggesting displacement of formal economic activity into the informal sector. Thus, the cumulative effects of a culture of violence reduce government tax revenue even as they increase public purse expenditure.

The case illustrates a number of lessons not learned or, if learned, not applied. For example, El Salvador's violence crisis is a much more severe economic problem than is any realistically conceivable occasional economic crisis. Assets, especially social capital, have not been rebuilt. Trade has been forced—and to a large extent—into the informal economy. Elsewhere, it is true, one must be careful that informal markets are not destroyed when peace comes, destroying in the process well-established networks of farmers, artisans, petty traders, and end-users, but in the Salvadoran case, the opposite has happened: Existing formal markets have vanished and now operate underground. Foreign assistance has not been forthcoming, neither in magnitude nor in staying-power, to assist the country to rebuild state and social institutions and staff them with adequately trained and paid personnel, a point only most recently recognized in the Word Bank's *World Development Report 2011*. And lack of development indeed has adversely affected all forms of violence, creating a vicious feedback cycle between violence and underdevelopment.

It is challenging to define "failure" and "success" unambiguously. But, no doubt, El Salvador is not a successful case of a civil war that ends in sustained peace.

Varieties of success: Malaysia and Singapore

It might surprise to include Malaysia and Singapore as a case study in a text on violence-afflicted countries. But what from today's view appear to be successful economies and polities, especially Singapore's, was hardly pre-ordained. A British trading post and then a colony as from 1824, Singapore was occupied by Japanese forces in the second world war, as were various other bits of southeast Asia that previously were British outposts. While Siam (Thailand) had remained nominally independent, the French held colonial powers up and down the Mekong river in Lao, Cambodia, and Vietnam (French Indochina), and the Dutch settled themselves in Indonesia (the territorially most prominent bit of the Dutch Empire). Portuguese claims were smallish in the region, ranging from Goa in India to Macau in China and East Timor in Indonesia. More weighty were the Filipino islands, first a colony of Spain, then of the United States. All in all, Southeast Asia and the islands just offshore constitute a restive region that has experienced very widespread, very severe, and very long-lasting violence.

In 1946, the Malayan Union was formed, British once again, combining the parts of the Malayan peninsula, minus Singapore. After a name change in 1948 to the Federation of Malaya, this became a sovereign state in 1957. Lagging behind, Singapore first became a self-governing state within the British Commonwealth in 1959 before achieving full independence from Britain in 1963. Upon independence, it then joined with Malaya, as well as with Sabah and Sarawak, territories across the sea on the otherwise Indonesian island of Borneo, into the Federation of Malaya. But only two years later, in 1965, Singapore was expelled from the Federation and today's constellation of sovereign states emerged: Singapore as an independent city-island state, and Malaysia consisting of Peninsular Malaysia and Malaysian Borneo.

Figure 1.9: Inflation- and purchasing power-adjusted per capita GDP, Malaysia 1955-2009, and Singapore, 1960-2009 (I$; base year 2005).
Source: Penn World Table 7.

Figure 1.10: Inflation- and purchasing power-adjusted per capita GDP, various Southeast Asian countries (I$; base year 2005).
Source: Penn World Table 7.

Although in recent years the region is primarily known for the upheaval in Indonesia—the violence in East Timor (Timor-Leste), in Aceh and the political collapse and resurrection of Indonesian politics in wake of the Asian financial crisis of 1997—and for the communist-inspired revolutionary movements in the southern Filipino islands, Malaysia in particular has had its share of dicey situations. Today, the Philippines still lays territorial claim to Sabah, for instance, Indonesia was never happy with large parts of Borneo in foreign hands, and the two engaged in political and armed confrontation from 1963-1966 (which ended only when Indonesia's Suharto took power in a coup against Sukarno and then ran his own dictatorial regime until 1997), and on the Malaysian peninsula itself, ethnic tensions among Malays, Chinese, and other cultural-linguistically identified communities. In addition, the Malayan Emergency, as the British called it, or the Anti-British National Liberation War of the post-World War II 1950s that eventually ended with Malaysian independence, was in the main driven by Marxist-Leninist/Maoist-inspired ideology. Although defeated in 1960, a resurgent movement was active on the peninsula, especially in the northern part, from 1968 to 1989 and commanded government attention and diversion of resources.

In all this turmoil regarding the peripheral and interior areas of Malaysia, the Singapore sat, independent and with a tradition-laden, great harbor, overlooking the Singapore Strait, the strategic waterway between the South China Sea, the Gulf of Thailand, and on to the Indian Ocean. The comparative economic record of Malaysia and Singapore may be seen in Figure 1.9, where Malaysia's record appears diminished only because Singapore's is so astounding. As Figure 1.10 demonstrates, among its immediate other neighbors, Malaysia actually sports the best output performance by far. Interestingly, Indonesia, the Philippines, Malaysia, and Thailand all sported roughly comparable per capita GDP levels in the 1950s.

Malaysia and Singapore heeded several of this chapter's lessons. For example, on the whole they avoided, prevented, or mitigated violent conflict (lesson 1.2). Focusing on physical and human asset rebuilding (1.3), they were successful in keeping an overall, especially distributional, development goal in mind (1.6), and with its port Singapore, especially, but later also Malaysia, both emerged as peaceful trading economies, attracting plenty of foreign direct investment and tourism business (1.7). Although Malaysia deals with some unrest and disputes in its peripheral regions to this day, it built on the strengths of its core without wholly neglecting other regions (1.10).

Chapter 2: The long-term economic goal: Investment, productivity, and growth

2.1 Theories of economic growth

Economic growth is welcome. Endogenous reasons for growth refer to causes that arise from within an economic system and may be amenable to change by policy. Exogenous reasons refers to causes seemingly beyond policymakers' ability to influence.

Economic growth is welcome. On a per capita basis, the average person today is considerably better off than the average person was even one hundred years ago. The spatial distribution of that success, however, is unbalanced, with very large numbers of people in Latin America, Africa, and Asia in particular still being poor. Theories of economic growth have to explain not only growth over time but also the spatial pattern of growth, both across and within countries. The theories should identify the underlying causes of growth, and it would be helpful if these proved to be **endogenous** rather than **exogenous**. Endogenous means that the causes are working from within the economic system and thus may be amenable to policy intervention; exogenous means that a cause has been identified but that it is beyond the ability of policymakers to manipulate. For example, new technology that increases labor productivity would be regarded as exogenous so long as the mechanism by which it comes about remains unclear. But if a mechanism were identified as having to do for instance with easy access to financial capital, or secure property rights, or proper incentive systems that encourage inventors and business people to risk time and (borrowed) financial capital in exchange for keeping the profits that inventions might yield, then these identified factors might be endogenous to the economic system and potentially amenable to policy intervention.

Classic growth theory suggested that any production surplus for the current population would, in time, be consumed by population growth. Societies would repetitively revert to subsistence levels of existence. In this theory, sustained economic growth per capita was not possible.

To move beyond subsistence, a surplus needs to be created and sustained that permits some people in society to take leave of working for mere survival and devote freed-up time to experiment, innovate, and implement. (This might be called a "survival+" economy.) Growth theory in the 1700s and 1800s emphasized the formation and growth of capital, and of efficiencies to be gained from specialization, and demonstrated the growth advantages of unimpeded trade within and across political jurisdictions. Although its distributional aspects are sometimes questioned, to this day free trade remains an important doctrine in economics. In terms of capital, **classic growth theory** argued that any surplus employed to increase and improve physical capital would bring some further surplus but that, in time, population growth would catch up and consume this surplus so that the population would revert to subsistence levels of existence. In this theory, sustained economic per capita growth was not possible.

With the advent of the industrial revolution and sustained economic growth in the United Kingdom, Western Europe, and North America, it became clear that this theory was wrong. But it was not until the early to mid-1900s that new growth theories were formulated. Two in particular emphasized the role of technological change and of entrepreneurs in fomenting such change. Joseph Schumpeter introduced the now famous phrase of **creative destruction**: In pursuit of profit opportunities, entrepreneurs in a competitive economy will bring to market innovative products and processes that on the one hand destroy competing lines of business but that, on the other hand, are so revolutionary as to move the entire economic system forward.[23] In the energy and transportation sectors for example, machines driven by water power were replaced by fossil-fuel powered machines, later supplemented with the ability to transmit electricity generated from fossil fuel over long distances. Likewise, the horse and wagon replaced the hand-carrying of goods, and canals and barges, transoceanic shipping, railroads, highways and the automobile, and modern air travel all challenged and transformed prior forms of transportation.

Schumpeter's story was plausible but also narrative and analytically intractable. Entrepreneurship, innovation, and

investment are good and well but not amenable to direct policy intervention. In contrast, Robert Solow constructed a mathematical representation or model of a hypothetical economy in which labor, capital, output, growth, investment, technological change, and saving to finance investment are key variables. His **neoclassical growth theory** resulted in three predictions: First, that an increasing amount of capital per worker (the **capital/labor ratio**) generates growth because more capital makes workers more productive; second, that countries with an initially small capital/labor ratio would grow faster than those which already sported large amounts of capital per worker because each additional unit of capital produces a higher return when starting from low levels than when starting from high levels; and third, that because of **diminishing returns** to ever more capital, economies would eventually reach a **steady state** where the simple addition of more quantities of capital generates no more additional growth. To overcome the steady state, the key idea is that an economy not only needs more capital (e.g., more typewriters) but better capital (e.g, computerized word processors rather than typewriters). Embedding technological change in the machines and work processes available for humans to operate with is required for continuous growth. Importantly, the model is silent on just where this technological change comes from. Technological change is exogenous to the model.

Neoclassical growth theory focused on the causal relations between and among factors such as labor, saving, capital, investment, and technological change to predict output and output growth. In contrast, Joseph Schumpeter's theory of economic development through creative destruction and modern-day new classical growth theory emphasize understanding the institutional conditions that must be in place in order to encourage entrepreneurship and make technological change and human capital formation possible. This, in turn, has led to a revival of long-standing traditions in institutional and evolutionary economics.

Solow's model also predicted that poor countries should converge onto the living standards of the rich. Evidently, this has not happened and economic growth theory needed to take yet another turn to explain the real-world observations.[24] In the 1980s and 1990s, Paul Romer, Robert Lucas, and Robert Barro were among those formulating **endogenous growth theory**, or **new classical growth theory**. In addition to creating mathematical representations whereby technological change arises from within the model (endogenous), the definition of capital was expanded to include **human capital**. This is important because, unlike physical capital with its feature of diminishing returns, it is believed that human capital exhibits **increasing returns**, meaning that each additional year of knowledge, education, skill, and experience acquired will bring higher returns than does each prior year. Further, important public good aspects of human capital make it possible to share gained knowledge at low cost. The applied work focuses, in part, on systematically identifying the institutional conditions needed within states to allow innovation, education, and physical and human capital to flourish—aspects neglected by earlier theorists. This has led to a revival of research in **institutional and evolutionary economics** which tend to study economies as dynamic and contested social systems. Among these institutions, which may be formal or informally constituted, are free trade, a minimal regulatory system, sound money, good law and order—especially secure property rights— corruption-free government, and other factors, that is, a panoply of good governance that together provide framework conditions which permit private parties to explore Schumpeterian opportunities to better their lives. But each of these institutions is contested because tweaking their rules can be to the advantage of one, and the disadvantage of another, party.

Violence disrupts trade and diverts economic resources into unproductive channels. Moreover, it destroys capital and the cultural, political, and economic institutions necessary for good policymaking and implementation, necessary also for enhancing the endogenous factors of economic growth. But before pursuing the topics of growth-enhancing investment, violence, and economic growth, a few things need to be understood about measuring economic activity.

2.2 Measuring economic performance

MEASURING THE ECONOMY PROPERLY. The most common measure of economic activity is gross domestic product, or GDP. It is measured as the money value of all final goods and services produced multiplied by their market prices. This

Table 2.1: Nominal and real gross domestic product

Year	Nominal GDP	Price level	Real GDP	Population	Real GDP per capita
1	10,000.0	100.0	10,000.0	100.0	100.0
2	10,500.0	102.0	10,294.1	101.0	101.9
3	11,025.0	104.0	10,596.9	102.0	103.9
4	11,576.3	106.1	10,908.6	103.0	105.9
5	12,155.1	108.2	11,229.4	104.1	107.9

***Note*: All numbers are rounded to one decimal place.**

is usually done on a calendar year basis. Of course, much economic activity goes unmeasured, e.g., agricultural production for self-consumption or economic activity in illegal markets that for obvious reasons is not reported, nor taxed. Moreover, much activity is counted whose contribution to well-being may be questioned. Suppose for instance that a woman suffers domestic abuse and requires medical treatment. Because treatment results in expenditure and income streams (a payment for medical service received by the attending medical personnel), it is counted as part of GDP, and may increase it. As no intrinsic contribution to well-being is made, it would have been better for GDP not to rise.[25] More nuance is needed for military and security-related expenditure that create income for hired personnel and for proprietors and shareholders of security-related companies but that, in the end, merely serve to protect ourselves from ourselves.[26]

Nominal GDP: Gross domestic product not adjusted for the effects of price inflation. Real GDP: Gross domestic product adjusted for price inflation so that GDP values are comparable across years. A further adjustment for purchasing power differences expresses GDP in international dollars (I$) and makes numbers roughly comparable across countries as well.

All economic numbers must be adjusted for population growth and output price inflation, especially since the poor tend to suffer the most from inflation (the devaluation of the purchasing power of money). For example, assume that GDP amounts to USD10,000 in year 1 (see Table 2.1), and suppose that GDP grows between years 1 and 2 by five percent, that is, to USD10,500, and then by five percent again in each of the following years. The resulting numbers are referred to as **nominal GDP**: They are a mixture of quantities produced *and* of the prices at which the quantities are valued. The **price level** in year 1 is 100 (think of this as an average price across all goods produced). Assume that prices grow by two percent each year relative to each prior year. Thus, the price level in year 2 is two percent higher than the price level in year 1, and that of year 5 is two percent higher than that of year 4. Finally, assume that population grows by one percent each year, for instance from 100 in year 1 to 101 in year 2.

To calculate inflation-adjusted or **real GDP**, divide any year's nominal GDP by the price level and multiply by 100. Apart from a small rounding error, in year 5 for instance we get (USD12,155.1/108.2)*100 = USD11,229.4, so that the economy has grown by about 12.3 percent: USD11,229.4 in year 5 is 12.3 percent larger than the USD10,000 from which the economy started in year 1. (The word "real" means growth in terms of the monetary value of the *number* of goods produced, rather than in terms of their prices.) But by year 5 the population also has grown, in this case by over 4 percent, so that a further adjustment is necessary. This is shown in the last column of Table 2.1. Divide USD11,229.4 by 104.1 to get USD107.9. Real GDP *per person*, now equals USD107.9, a 7.9 percent increase relative to year 1. (USD107.9 per capita in year 5 is 7.91 percent larger than the USD100 per capita in year 1.) Not bad, but a far cry from the about 21.6 percent suggested by nominal GDP growth alone. (USD12,155.1 in year 1 is about 21.6 percent larger than the USD10,000 in year 1.) Only the real GDP and the real GDP per capita numbers are comparable to each other, with the latter one being the preferred measure because it also accounts for population growth.

As indicated in chapter 1, when comparing countries using different currencies one more adjustment need be made. Suppose for example that the size of the German economy per person were a hypothetical EUR10,000 and that the size of the U.S. economy per person were an equally hypothetical USD10,000. Further suppose that the euro and dollar exchange on a one-for-one basis (EUR1.0/USD1.0). Thus, translated into U.S. dollars, the value of production per person in Germany would be USD10,000. But if the exchange rate changes, say, to EUR1.1/USD1.0 then the size of the German economy—measured in U.S. dollars—would appear to be only EUR10,000/EUR1.1 = USD9,091, or about 10 percent

smaller.[27] The problem lies not with a shrinking German economy, as may mistakenly be thought, but with a fluctuation in the market exchange rate between the two currencies. To bypass this and other problems with cross-country comparisons, researchers have developed a measure called **international dollars** (I$), or **purchasing power parity dollars** (ppp-dollars). Thus, when making comparison *within* a country, GDP and other economic numbers should be adjusted for inflation and population changes, and when comparing *across* countries, all numbers should additionally be converted to international dollars as well.

Another problem—a big one—is that the monetary size, let alone the growth, of an economy is difficult to measure if a state is bereft of labor and institutional resources to properly do the counting of goods and services produced, and of their prices. Moreover, in some states the informal economy—economic activity that is neither counted nor taxed—is very large. The United Nations Office on Drugs and Crime (UNODC) refers to figures reported by Prof. Friedrich Schneider (University of Linz, Austria) according to which the six Central American states (Costa Rica, Nicaragua, El Salvador, Honduras, Guatemala, and Panama) have shadow economies averaging about half again of reported GDP, and the International Labor Office (ILO) reports that the share of informal-sector employment in these countries is well above 50 percent of total employment. In Bosnia and Herzegovina, for example, official employment stayed steady at 600,000 people between 1998 to 2005, while informal employment rose from about 200,000 to about 500,000. In addition, the United Nations Development Programme (UNDP) speaks of the rise of a "criminal peace economy."[28] This would include, but not be limited to, illegal economic activity such as trade in narcotics, arms smuggling, human trafficking, or trade in endangered species.

Yet in many war-prone developing countries, especially predominantly agriculture-oriented economies, the informal economy *is* the economy for the vast majority of the people. Injudiciously trying to convert the informal to the formal, measured, economy—even if for the otherwise good reason of generating public sector tax revenues—may only disrupt existing family and patronage networks of farmers, artisans, petty traders, and end-users and disable an otherwise functioning, if unmeasured, economy. The stabilizing influence that informal economies can offer should not be overlooked. Misguided intervention that disrupts these economies can delay peace and can generate its own follow-on conflicts and attendant violence.[29]

Measurement problems also bedevil other important variables such as investment and international trade and finance (see chapter 4).

2.3 The effect of violence on economic growth

NATIONAL INCOME ACCOUNTING. Because one cannot earn what someone else has not expended, it must be true that when all of an economy's expenditure is added up it must equal all of that economy's income derived from production. Thus, equation (1) in Table 2.2 shows that the expenditures that result in income (Y) are made by private households on domestic consumption (C), by firms on domestic investment such as equipment and business facilities, either as replacement for worn-out items or as additions to the existing capital stock (I), and by government on various public services at national, province, and district levels (G). In addition, when a country exports goods (X), it earns income from foreigners so that foreigners' spending results in revenue streams that must be added to national income. Conversely, when households or firms import (M) goods from abroad, the resulting expenditure leads to income that accrues to the other countries and must therefore be subtracted from the home country as it does not add to domestic income.

Table 2.2: National income accounting

(1) C+I+G+(X-M) = Y
(2) Y = C+S+T
(3) C+I+G+(X-M) = C+S+T
(4) I+G+(X-M) = S+T

Equation (2) captures the idea that domestic income (Y) can be used in only three ways: After paying taxes (T), the resulting after-tax or disposable income finances either consumption (C) or saving (S). Equations (1) and (2) are equal to each other because both are written in terms of national income, Y, derived from and expended on what has been produced. Thus, the next equation simply repeats the left-

Table 2.3: Hypothetical national income accounting numbers

(5)	I	= S + (T-G) - (X-M)
S1:	30	= 40 + (30-30) - (30-20)
S2:	30	= 30 + (30-30) - (30-30)
S3:	30	= 20 + (30-30) - (20-30)
(6)	(I-S)	= (T-G) - (X-M)
S1:	(30-30)	= (30-30) - (30-30)
S2:	(30-30)	= (30-40) - (30-40)
S3:	(30-30)	= (30-20) - (30-20)
(7)	(X-M)	= (S-I) + (T-G)
S1:	(30-30)	= (30-30) + (30-30)
S2:	(30-30)	= (30-40) + (30-20)
S3:	(30-30)	= (30-20) + (30-40)

hand side of the first equation and the right-hand side of the second one. Because consumption (C) appears on both sides of equation (3), its effect cancels out in terms of national income accounting. We are left with equation (4) which, when rearranged in three different ways, forms the basis for three very important insights. To illustrate these insights, it will be useful to associate each of the variables with hypothetical numbers (see Table 2.3) and to insert them into equations (5), (6), and (7), respectively.

For equation (5), the numbers assume that government expenditure (G) equals government tax collection (T) so that there is neither a government budget surplus (T>G) nor a government budget deficit (T<G). Equation (5) then tells us how **gross private domestic investment** (I) on the left-hand side of the equation is financed but the items on the right-hand side. There are three sources: **private domestic sector saving** (S), **government sector saving** (T-G), and **foreign sector saving** (X-M). The first two, private and government saving [S+(T-G)], are also known as **national saving**. Since, by assumption, the government sector shows neither a budget surplus nor a budget deficit, no government sector savings are generated that could be recycled toward investment, but neither does the government sector absorb savings from the private sector to finance a government budget deficit.

For equation (5), Table 2.3 then displays three scenarios (S1, S2, S3), each of which assumes that investment equals 30. Scenario 1 (S1) assumes that private sector saving equals 40. The excess of saving over investment must go somewhere. Because it does not finance a government deficit (since T-G=0), the funds *must* be related to activity in the foreign sector, in particular to the excess of exports (funds flowing into the economy) over imports (funds flowing out). The funds flowing into a country on account of exports are **foreign currency earnings**, and the only way to use them is to return them as investments in the countries from which the currencies are earned. Thus, gross private domestic investment in the home country will be unaffected. In scenario 2, part of the former saving of 40 is employed to finance higher import levels. Now, the government and the foreign sectors both are balanced, and gross private domestic investment is fully financed from private domestic saving. Finally, in scenario 3, the shortfall of private domestic saving of 20 to finance gross private domestic investment of 30 is made up by the foreign sector. Here the excess of imports over exports means that funds are leaving the country but the only place where foreigners who earn these funds can reinvestment them is in the country from which they come. These will become gross private domestic investment, but the ownership of the assets bought belongs to foreigners. (Also see the balance of payments discussion in chapter 4.)

Private domestic saving plus government sector saving amount to national saving. This, plus foreign sector saving finances gross private domestic investment.

The three scenarios for equation (6) highlight another aspect of national income accounting. In S1, everything is balanced. But in S2, there is a government budget deficit (T<G=–10). Since the private domestic saving and investment sector is in balance, the government budget deficit must be financed from abroad. In this case, the excess of imports over exports results in foreigners holding funds that they lend back to the government of the originating country. And in S3, the government budget surplus implies just the opposite, namely that there *must* be a trade surplus as well. Think of the three elements of the equation (private sector; government sector; foreign sector) as a three-sided balloon filled with air. When one squeezes the balloon at one end, and the second end is closed off, then the air *must* move to the third end.

Finally, examine the three scenarios regarding equation (7). In each, we assume that the foreign sector is balanced. In S1, this is because both the domestic sector and the government sector each are balanced as well. In S2, the government budget surplus of 10 now can be used to finance the excess of domestic investment over the availability of private sector saving. And in S3, a government budget deficit now absorbs a portion of private sector saving so that less

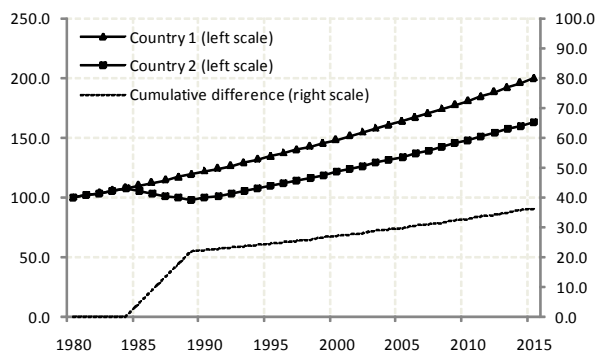

Figure 2.1: Diverging growth paths of war and nonwar economies.

Figure 2.2: Cumulative war losses.

is left over to finance gross private domestic investment.

In terms of national income accounting, violence-afflicted states generally suffer from three simultaneous problems. First, because of violence domestic production is falling so that tax revenue falls even as there is more need for government expenditure. This results in falling government budget surpluses or, more realistically, in rising deficits (T<G). Second, exports tend to fall off and reduced local production needs to be made up by imports. Thus, the foreign sector becomes unbalanced (X<M). In terms of equation (5), we might have the following scenarios:

$$I = S + (T-G) - (X-M)$$

$$\begin{aligned} S1:\ 30 &= 30 + (30-40) - (20-30) \\ S2:\ 20 &= 20 + (30-40) - (20-30) \\ S3:\ 10 &= 10 + (30-40) - (20-30), \end{aligned}$$

where in S1 the outflow of funds from excess imports is used by foreigners to finance the government budget deficit. But because of war or other violence, private sector activity falls. Therefore incomes fall, and the remaining income must be used to finance household consumption, so that less is available for private sector saving to finance private sector investment—as in S2. Put differently, who wants to invest in an economy beset by war? If government instead of borrowing from abroad dips into private domestic sector saving—as in S3—then gross private domestic investment falls even more. This, then, amounts to the third problem violent-afflicted states face: In addition to budget and trade deficits, gross private domestic investment is falling.

COMPOUNDING AND THE RULE OF 70. One important fact of growth pertains to its compounding effects. For example, one dollar invested at an annual interest rate of one percent will become I$1.01 a year later. Analogously, an economy of the size of I$1.00 that grows at one percent will have attained the size of I$1.01 a year later. The **Rule of 70** is a handy guide that approximates how long it will take an economy to double in size, given a percentage growth rate. For example, if the growth rate is 2 percent per year, an economy will double in about 70/2=35 years (the exact number of years is 36). Similarly, if an economy grows at 3 percent each year, then it doubles in 70/3 or about 23 years, a saving of 12 years of time. Seemingly small differences in growth rates accumulate rapidly to substantial differences in average living standards. Some East Asian economies recently have grown by 8 percent per year, so that their economies can double in size in about 9 years' time.

The Rule of 70: A handy guide to compute the approximate number of years it takes for an economy to double in size.

The effect of compounding in violence-afflicted states may be illustrated with Figures 2.1 and 2.2. In the first figure, each of two countries starts in 1980 at a GDP level of 100, and each then grows at 2 percent per year. But from 1985 to 1989, country 2 suffers a five-year long war with an annual 2 percent GDP decline, whereas country 1 continues to grow at 2 percent per year. From 1990 onward, both countries again grow at 2 percent annually. Using the scale on the right-hand side, the bottom line in Figure 2.1 shows that the diverging growth between the two countries in the five-year war period amounts to about 22 percentage points. But because of compounding, this

is not a one-off effect limited to the war period. Instead, the difference keeps growing so that by the end of one generation—25 years postwar—country 1's GDP stands at 200, double its starting point, whereas country 2's GDP stands at only 163.7, a 36.3 point difference. (And note that using the Rule of 70, country 1's GDP should indeed have doubled over the entire period from 1980 to 2015, that is, 70/2=35 years.)

Figure 2.2 shows the cumulative GDP losses for country 2 relative to country 1. When both countries grow at 2 percent per year during their respective peace times, the five-year war interruption amounts, by 2015, to eight times the starting GDP (the cumulative loss is 809.1). For country 2 to catch up to country 1 within 25 years postwar, by 2015, it would have to grow at a rate of 2.8 percent per year, that is, *40 percent faster* (2.8/2.0=0.4 or 40 percent) than country 1. Figure 2.2 shows that by the time country 2 does catch up, its cumulative GDP loss during the catchup time still is nearly four times its starting GDP. Either way, the annual and the cumulative losses are tremendous.[30]

How collective violence perturbs the economic system. Chapter 1 emphasized the importance of productivity-enhancing investment for long-term economic growth and well-being of the population. Investment referred not only to private and public physical capital (roads, machinery, and the like) but also to human, cultural, social, and institutional capital such as levels of education, the degree of trust among citizens, and the extent of well-working property rights, contract enforcement, and stable money. The preceding sections show how vulnerable is investment in war and they highlight the cumulative, long-term, effects of falling GDP as a result of falling investment as a result, in turn, of violence.

But more than investment is at stake. Interpersonal and collective violence can perturb the economic system in a variety of mutually reinforcing ways. Starting with the **supply-side**, war often is associated with spikes in input prices. Needed raw materials may be harder to get; suppliers charge higher prices to obtain and to transport them; electricity and other utility services may be disrupted and therefore disrupt other production as well; laborers and farm workers may be drafted into armies, become victims, or refugees, so that it is more difficult to find qualified workers. New investment to make agricultural or industrial production more efficient is not undertaken for fear that the investment will be destroyed in war and maintenance of existing equipment may be deferred, leading to an earlier breakdown of machinery. On the whole, average production costs rise. Economic growth falls, employment falls, and unemployment rises. The size of the effect depends on the type, intensity, duration, and spatial reach of the violence.

On the **demand-side** of the economy, all of the five components of aggregate demand, captured in equation (1), can be adversely affected. Demand for consumption falls as people individually try to save monetary resources in anticipation of becoming unemployed or in expectation of a long drawn-out war. Firms will be reluctant to invest when war may destroy investment. Moreover, why invest when consumers are expected not to buy? Exports can falter as transportation routes, especially airports, seaports, and border-crossing points, are blocked. Imports cannot continue unabated, so that people need to seek recourse to higher-priced domestically produced goods, driving up the cost of living. And war affects government tax revenue which falls when economic activity falls or shifts from the formal, taxed sector into the informal, untaxed one. Thus, the government spending component of aggregate demand also may fall. To compensate, government can try to borrow, increase its debt load, and inject spending, especially military-related spending, into the economy to prop it up. But replacement of private by public economic activity is not a viable long-term economic strategy. While individual people may do well out of war, entire economies do not. In a word, violence creates a vicious cycle that continually depresses the economy as illustrated by the numbers and simulations provided in chapter 1 and thus far in chapter 2.

2.4 Institutions and policies

Three societies. Any community consists of three societies. Commercial, civil, and political society (or economics, culture, and politics) form a three-legged stool. Overlaps notwithstanding, commercial society allocates resources via markets, civil society allocates resources via moral suasion, and political society allocates resources via power.[31] Most

	National	Transnational
Civil society	local NGOs; football clubs	global NGOs; religious org's
Commercial society	local business; business assoc.	TNCs; Intern'l Chamber of Com.
Political society	political parties; public sector	UN; IMF; ASEAN

Figure 2.3: Examples of institutions.

adults are engaged in all three societies simultaneously: They participate in economic life as producers and consumers, they engage in civic activities from neighborhood football clubs to membership in global nongovernmental organizations, and they participate in public life, if only as occasional voters.

A well-functioning society is also a well-balanced one. Shorten, or remove, any one leg of the stool, and the community will wobble or falter. Commercial society running rampant without moral checks from civil society and regulatory checks from political society is just as much a recipe for disaster as politics that lets neither commerce nor civil society bloom. All three societies operate both in the domestic and in the transnational sphere (Figure 2.3). Local business has its counterpart in transnational business, local NGOs in increasingly prominent transnational NGOs, and the local public sector in international organizations such as the United Nations at the global level or the Association of Southeast Asian Nations, the European Union, or the African Union at the continental levels.

Each of these actors has its own concerns and objectives, each seeks to influence the others, and the outcome of mutual influence-seeking and trading determines the governance of society, with formal lawmaking, implementing, and enforcing agencies delegated to government. One may argue the ideal-type "proper" role of government in the same way one may argue ideal-type conditions for economic growth. In practice, as far as economics and economic growth are concerned, one may say that commercial society drives it, that political society provides contested framework conditions to direct and manage it, and that civil society checks on the quality of the economy, for instance through insistence on subjecting growth to environmental objectives or by demands for equitable growth.

More conventionally, institutions and policies are thought of only from the viewpoint of political society, national and transnational. Thus, at the national level, ministries of economics, finance, trade, labor, industry, education, and similar bodies are charged with the implementation of policies set by their political masters. At the transnational level, the most prominent are the United Nations and its specialized agencies. A sampling of those dealing with economic policy include the United Nations Development Programme (UNDP), the International Labor Office (ILO), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Industrial Development Organization (UNIDO), the World Trade Organization (WTO), and various Economic (and Economic and Social) Commissions for Africa, Europe, Latin America and the Caribbean, Asia and the Pacific, and Western Asia. (For the United Nations organizational chart, see Appendix B.)[32]

As far as national ministries are concerned, the primary message is that all of them, regardless of their specific subject-matter charge and expertise, must be directed to act in coordinated fashion toward the goal of rebuilding society's capital. In a manner of speaking, all of them are state investment agencies, investing in education, in infrastructure, in the productivity of the labor force, and so on. The commerce, labor, immigration, and finance ministries for instance might need to work jointly on repatriating physical, human, and financial capital that may have fled during war. Returning the diaspora home can be an important way of rekindling economic growth for all. Private charities should be welcomed inasmuch as their work fits into an overall conception of rebuilding, maintaining, and securing for example the health status and physical well-being of the population. States blessed with natural resource wealth need credible ways of putting aside a portion of the earnings to build endowments that return dividends over the long-term. Timor-Leste (East Timor), for example, established a Petroleum Fund endowment stocked up by export revenue on is offshore oil- and gas fields. Earnings and withdrawals from the fund supplement the government budget to finance much-needed infrastructure projects. Sometimes referred to as sovereign wealth funds, states such as Kuwait and Singapore (one natural-resource rich, the other not) also have had such funds for many years.

AID, REMITTANCES, FOREIGN DIRECT INVESTMENT, AND TRADE. It is useful to compare the size of certain financial flows to each other. Thus, official development assistance (ODA) reached about USD100 billion in 2006.[33] In contrast, overseas workers' remittances to their home countries amounted to USD300 billion in 2006.[34] Foreign direct investment reached over USD1,000 billion.[35] Truly freeing up global markets for trade probably would result in even larger numbers.[36] When policymakers in violence-afflicted states think about capital rebuilding, the emphasis then must not be put on foreign aid, but on reconstituting and sustaining private sector activity. While foreign aid can play an important postwar role, in the end it reflects—like military intervention—third-party interests. As such, foreign aid has been, certainly in the past, capricious, haphazard, and short-term from the point of view of the recipient states. Only recently has at least the academic community argued that aid ought to be nonpolitical, predictable, and long-lasting, on the order of ten years postwar.[37] Moreover, it ought to be designed, delivered, and audited specifically with peacebuilding and peace-maintenance in mind.

THE ROLE OF INTERNATIONAL FINANCIAL INSTITUTIONS. The phrase **international financial institutions** (IFIs) refers in the main to the International Monetary Fund (IMF) and the World Bank Group (WBG) at the global level but also to regional development banks, that is, the African Development Bank (AfDB), the Asian Development Bank (ABD), the Inter-American Development Bank (IADB), and the European Bank for Reconstruction and Development (EBRD). The IMF is engaged in short-term lending in support of macroeconomic stabilization, whereas the others are engaged in long-term lending for physical infrastructure (re)building and social service provision.

Due to their relative financial heft, undoubtedly the most important U.N.-related agencies in regard to economic policy are the IMF and the WBG. The latter consists of the International Bank for Reconstruction and Development (IBRB), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the Center for Settlement of Investment Disputes (CSID). Importantly, the IMF and the WBG are autonomous organizations, each constituted by international treaty to which states accede when they apply to become members. On its web site, the IMF describes itself as "... an organization of 186 countries, working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world." In practice, three areas dominate the IMF's day-to-day work. First, economic surveillance monitors members' economic and financial developments and provides policy advice aimed at crisis prevention. Second, the IMF provides short-term lending to countries with balance of payments problems in support of policies aimed at correcting the underlying difficulties (see chapters 3 and 4). And third, it provides technical assistance and training. The IBRD and IDA (the World Bank) describe their work as providing "... low-interest loans, interest-free credits, and grants to developing countries for a wide array of purposes that include investments in education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management."[38]

Thus, the World Bank Group works in support of long-term asset (re)building and economic growth—after all, it was founded in 1944 and the name refers to reconstruction and development—whereas the IMF works in support of short-term economic stabilization. However, the crux of the matter lies in what these institutions do in day-to-day practice when a member state seeks assistance. Recognizing that both institutions—political entities created by sovereign states—can be constrained in the data they collect and the policy advice they give, both have been criticized for pushing inappropriate, even harmful, policy on member states in need. At one time, the World Bank for example indulged in financing a number of large dams for hydro power-generation. While power generation and economic growth are related on a nearly one-to-one basis—more power, more growth—the construction of dams sometimes caused displacement of vulnerable populations from ancestral lands and led to environmental damage as well. Negotiating infrastructure loans with central government politicians and bureaucrats to generate electric power to be transmitted to far-away cities while leaving local populations uprooted, displaced, and unattended betrayed notions of economic development that rightly were criticized by civil society. From time to time, the World Bank therefore saw itself compelled to acknowledge errors and to change policy and practice. In the late 1990s, the Bank was, however, in the lead when it came to promote

research on the economics of armed conflict and to translate findings into practical assistance.

2.5 Policy lessons and tips

Lesson 2.1: Economic growth is necessary and welcome. Always adjust economic growth measures for population growth, output price inflation, and purchasing power differences. Growth compounds quickly. Do not forgo even small growth differentials.

Lesson 2.2: National income accounting captures but part of what societies should measure to gauge progress. Supplementary measures on physical and mental well-being should be sought and analyzed in relation to how economic policies help or hinder progress on these scores.

Lesson 2.3: A generally agreed-upon theory of how to make growth happen does not exist. Government is to set investment-enhancing framework conditions, issue proper laws and regulations, define intervention points, and provide for adequate institutional capacity to implement policy but otherwise leave the business of growth to the private sector.

Lesson 2.4: Because of its overarching powers, government is contested. A well-functioning society is also a well-balanced one and the determination of economic growth policy cannot be handed to political society alone. Commercial and civil society are necessary to drive growth and to check on its quality. Civil participation, transparency, accountability, and recall of policymakers are important elements in this.

Lesson 2.5: No precise yardstick regarding a long-term economic growth rate to aim at exists. Prewar experiences, the remaining capital stock—and plans for rebuilding it—the record of similarly affected states, and those of neighboring states, may provide guidance as to a growth rate one can reasonably expect to obtain. Undershooting forfeits advances in living standards.

Lesson 2.6: The pursuit of economic growth "at all costs" in the absence of poverty and violence reduction strategies can be self-defeating and plunge a society (back) into war. Both good governance and good government, including capable policy planning, design, implementation, execution, and follow-through, are prerequisites for sustained peace and prosperity.

Lesson 2.7: Violence affects both the supply- and the demand-side of an economy. Addressing only one side or, worse, only one aspect of one side, is insufficient. The economic cost of violence is large and, over time, amounts to dramatically large numbers. One of the best long-term investments a society can make is to reduce, prevent, and mitigate violence in all its forms.

Lesson 2.8: As institutions, both the World Bank Group and the IMF have sometimes been late to recognize and acknowledge case-specific circumstances that would have required deviation from standard policy recommendations.

2.6 Failure and success: Two case studies

For our case studies, we consider two sets of countries. The first consists of what once was routinely called the European periphery, especially Greece, Portugal, and Spain; the second is the European core, especially France, Germany, and Italy. This is an interesting set of countries to compare. With the 1951 Treaty of Paris the core countries founded, together with the smaller Belgium, Luxembourg, and Netherlands, first the European Coal and Steel Community (ECSC) and then, with the 1957 Treaty of Rome, the European Economic Community (EEC). The later evolved into today's 27-member European Union (EU). Italy and Germany of course lost World War II, its dictators left the scene, and democratic politics was placed in their stead. France's politics changed not as much with the switch from the Third (1870-1940) to the Fourth Republic (1946-1958), and the Fifth Republic since then.

In contrast, the peripheral countries all were characterized by post-World War II military dictatorships and severe

internal unrest and civil war. Greece, for instance, was locked into internal violence for 30 years post-World War II, first in a civil war lasting from 1945 to 1949 and then suffered a U.S.-backed coup d'etat that resulted in a military junta ruling from 1967-1974. The junta collapsed following student riots in 1973 and Turkey's invasion of Cyprus in 1974. Greece joined what now is the EU in 1981.

Portugal's last king—Manuel II—was overthrown in 1910. There followed continual unrest, and World War I. A coup d'etat established a dictatorship in 1926, cemented in 1933. Formally neutral in World War II, the country fought a losing series of colonial wars (1961-1974) and eventually relinquished all its holdings, including massive territories such as Angola and Mozambique (which then went on to fight their own, long-lasting post-colonial internal wars). A democratic regime, as we know it today, was introduced in Portugal only in 1976, two years after a revolution that overthrew the generals. Still, only when Portugal joined the EEC (now EU) in 1986 did a measure of economic stability and integration into a wider market obtain.

Like its peninsular neighbor, Spain was formally neutral in World War II, dealing with the ongoing aftermath of the Spanish civil war (1936-1939). From this, General Franco's forces emerged victorious, and a military dictatorship survived until the General's death in 1975. Modern democracy was established with a new constitution in 1978. Spain joined the EEC (EU) in 1986. Franco had kept Spain out of the U.N., and it was not until 1955 that Spain's political and economic isolation ended when United States roped Spain into its anti-Soviet European bulwark. Shortly afterward the country received IMF assistance and put in place a set of young economic technocrats whose policies pulled off "el milagro español," the Spanish (economic) miracle, which was a boom period lasting from 1959 to 1973.

When one examines Panel A in Figure 2.4, it is striking that all three peripheral countries experienced a period of strong economic growth in the 1950s, 1960s, and early 1970s. Likewise, all three experienced economic stagnation lasting for about a decade *after* the overthrow of their respective dictatorships and the establishment of modern democracy. The pattern is exactly the same: Strong investment permits productivity and consumption and hence GDP increases, even under odious political regimes (something we also learn from South Korea and Taiwan under their respective military dictatorships or the "strong" leadership models in Malaysia and Singapore). But with regime change came investor uncertainty, a decline in investment and productivity, and stagnation in consumption levels, lasting from about the mid-1970s to the mid-1980s.

All six countries started, in 1950, at about the same GDP level of I$5,000 (France a bit more; Portugal a bit less) and all, expect Portugal end, in 2009, at about the same place, I$20,000 of consumption and I$30,000 of GDP. But occasional recessionary wrinkles notwithstanding, the growth path for the core is steadily upward, whereas that for the periphery is way up, then long-term stagnation, and then way up again. Importantly, the "way up again" is intimately tied to the European project initiated by the core: For both Portugal and Spain, economic advancement did not occur again until integration into the EEC (EU), whereas for Greece even that did not help until the post-Cold War mid-1990s, when Bulgaria and Romania opened up and when Greece made preparations for entry into what would become the eurozone as of 1 January 1999, and when the Balkan wars drew to an end. Proximity fosters trade, and trade fosters growth. And so it is probably no coincidence that this periphery, with Ireland, today forms the ironic core of the eurozone financial crisis: The so-called PIGS are Portugal, Ireland, Greece, and Spain.

Prior to the Paris Treaty of 1951, namely from 1948 to 1951, Marshall Plan aid or, officially, European Recovery Program (ERP) aid, was provided in substantial per capita amounts to the three core countries, at least relative to the but trifling per capita amounts provided to Greece and Portugal, and not at all to Spain. While the Plan's narrow, purely economic effects are debated to this day, there seems little question that its wider politico-economic, institutional effects were crucial and wide-ranging. Recognizing that Germany again would have to be the hub of the European economy, that all its neighbors' would need to rely for their own economic well-being on a well-functioning Germany economy, the Marshall Plan helped to initiate a pan-European vision for an integrated, free trade area, preceding the core's ECSC. The grants and loans that the Plan provided served—not unlike the IMF today—as a ready source of foreign exchange to purchase industrial and consumer goods in the United States. The Americans thus tied much aid to their own suppliers

back home. But, crucially, each European country had to come up with its very own plan of how best to use these resources, a lesson the IMF has only learned in the 2000s (see chapter 4). In Germany, for instance, repayment of Marshall Plan grant elements for industrial rebuilding and redevelopment was made in local currency into a revolving fund that then would re-lend them internally in seeming perpetuity: Today, the *Kreditanstalt für Wiederaufbau* (KfW) is still a going concern, long having repaid the initial Marshall Plan seed-money.[39]

In addition to the long-term vision to reconstruct the West European core on the basis of industry and trade—East-Central Europe had by then fallen under Soviet sway and its Marshall Plan counterpart, the COMECON—it is important to recognize that core-Europe could rebuild on the basis of a highly skilled and educated workforce and culturally relatively homogenous populations. It almost literally could pick up the pieces for the simple reason that there were pieces to pick up. In contrast, Spain had not only lost half a million people in its civil war—others had war losses too—but perhaps another half million moved away from Spain on account of the fascist regime that had installed itself. Social capital was more severely disrupted there than in the core. Greece, as mentioned, was preoccupied in the post-World War II years with its civil war and the aftermath thereof. Portugal was mired in its colonial dreams. At the time, all three were predominantly agricultural rather than industrial economies. Despite postwar growth, by 1960, all three were far behind the core in terms of per capita GDP (see Figure 2.4), and so they would remain for decades to come.

Regional disparities even within the core caused and cause tension: Italy is perhaps the most famous case for its advanced "north" and lagging "south." In (West) Germany, the border region toward (East) Germany was moribund and excluded from effective economic resurgence. All-in-all, though, the cases provide some concrete insight into the assets and growth issues discussed in this and the prior chapter, in particular regarding the importance of focusing on asset and institutional (re)building, the importance of a helpful neighborhood of states with whom to trade, the absence of continual violence (such as civil wars or repressive military regimes), the opening up of political decisionmaking processes for participation, transparency, and accountability, and of the importance of sustained, albeit thoroughly self-interested, outside interest and substantial financial and technical aid to spur reconstruction and development. This is not the kind of aid that El Salvador received—discussed in chapter 1—nor even the aid the European periphery received post-World War II.

Greece

Portugal

Spain

Figure 2.4, Panel A: Inflation and purchasing power adjusted per capita GDP, consumption, and investment, Greece, Portugal, and Spain, 1950-2009 (base year 2005; international dollars, I$).
Source: Penn World Table 7.

France

Germany* (For 1950-1969, see note.)

Italy

Figure 2.4, Panel B: Inflation and purchasing power adjusted per capita GDP, consumption, and investment, France, Germany*, and Italy, 1950-2009 (base year 2005; international dollars, I$).
Source: Penn World Table 7.
* For Germany, see note.

* Note on Germany: The Penn World Table 7 has standardized data on Germany from 1970-2009. Prior to 1970, Figure 2.4, Panel B, uses data from the Federal Statistical Agency of Germany (Statistisches Bundesamt Deutschland). Both line segments are for inflation- and population adjusted per capita GDP (not consumption, as the figure may lead one to believe), but measured in euros (EUR) with base year 1991. The first segment excludes the economic contribution of Saarland and West Berlin, the second segment includes them. The main purpose of including the 1950-1969 data in the figure, despite their different base year and currency, is to show that per capita GDP grew smoothly.

Chapter 3: Dealing with turbulence: Macroeconomic stabilization

> "It is important for governments to encourage private investors to make investments that are irreversible and this is likely to require the rebuilding of civil society with concern for investment-sensitive reforms, such as control of inflation, proper valuation of the exchange rate, restraint in revenue collection, and the reestablishment of transport infrastructure" (Dunne, 2006, p. 40).

Chapters 1 and 2 dealt with the importance of investment and capital rebuilding. If there are no assets, there will be no income. If assets decline, incomes decline. If assets rise, so do incomes. In a word, without a ship, one cannot sail.

Having a ship does not, however, guarantee trouble-free sailing. This chapter thus deals with macroeconomic turbulence, economic statecraft in the short-term. But in considering the short-term, one must bear in mind that the short- and long-term are connected. Continuing with the sailing metaphor, even as one takes the necessary detours, stabilization must not forget the proper port of destination. Steering the boat into the nearest storm is not helpful. For example, adopting economic regulations and policies that fail to reassure private investors or threaten to dispossess them is like dismantling the ship on the way to the storm. Moreover, it is important to realize that the bigger the ship, the more comfortable and safe will be the journey. Sheer size—an ocean liner, rather than a dugout—provides intrinsic stability. Thus, asset building must relentlessly continue.

Investment-sensitive reform must reassure not just investors, but in equal measure workers and society-at-large. Reform must be conflict-sensitive as well, in particular to the danger of violence renewal. It is no use—as scholarship and the main international financial institutions now agree—to grow the economy at the risk of recreating the conditions that gave rise to violence in the first place. Slow and steady is better than fast and risky. Thus, as important as economic growth is, overheating the economy and recreating social friction is not the proper prescription. Diverting some resources to build outriggers— peace-building investments, recreation and strengthening of the social contract, and reconstruction of the framework conditions that undergird social stability—may at first be more important than enlarging the dugout. Thus, UNDP states the current consensus view as follows: "[M]acroeconomic policies must give priority to minimizing conflict risk, even as they promote growth. This may mean tolerating moderate inflation and budget deficits" (UNDP, 2008, p. xxiii).

Macroeconomic stabilization has the purpose of moderating erratic swings in the business cycle. The tools include fiscal and monetary policy even though macroeconomic stabilization is not their primary purpose and may in fact detract from that purpose.

The purpose of **macroeconomic stabilization** is to moderate erratic movements in the business cycle. Its main tools are fiscal and monetary policy. [The latter includes foreign exchange rate policy (see chapter 4).] However, the purpose of fiscal and monetary policy is not macroeconomic stabilization! Instead, the purpose of fiscal policy pertains to the management of public finances, that is, to collect taxes and to disburse revenue. By setting and changing tax rates and disbursement objectives certain social and economic goals can be fulfilled such as income redistribution. Likewise, the purpose of monetary policy is to maintain the internal and external purchasing power of a state's currency but in setting monetary policy, rules, and regulations, again, other social and economic goals can be reached. Thus, macroeconomic stabilization is not the primary purpose of fiscal or monetary policy. Instead, stabilization is an add-on feature, but only a few states have the relative luxury to employ fiscal and monetary policy in this manner. In most states, and especially in violence-afflicted ones, chaotic fiscal and monetary policy contribute to macroeconomic instability and themselves need to be stabilized in the first place. They need to be regularized, made less capricious, and be handled in a more competent manner. Above all, this requires political credibility and technical capacity building.

Bearing the prior paragraphs in mind, the chapter begins with a presentation of a useful heuristic device, called the **aggregate demand/aggregate supply framework**, or the AD/AS model (section 3.1) The framework has the advantage

that a single visual representation pulls together many relevant demand- and supply-side variables, considers all actors (private and public), integrates domestic and foreign sectors, and simultaneously considers the short- and the long-term. Although economists do not agree on this framework as an explanatory device, they do agree on it as a heuristic device, the point of departure for refinements and extensions, and the model in contrast to which alternative representations of economies are constructed. The point of departure for policy debates and recommendations, it is a framework well worth studying. Sections 3.2 and 3.3 then consider elements of fiscal and monetary policy within the AD/AS framework. As before, sections 3.4, 3.5, and 3.6 deal with institutions and policies, policy lessons and tips, and two case studies.

3.1 A macroeconomic framework

Instead of experiencing a decline of 5 percent in GDP in one year and a rise of 6 percent the next year, all segments of society uniformly prefer to avoid large swings in the amplitudes of business cycles. For example, households like to possess confidence that they will have continuous employment and continuous income rather than being employed one year and unemployed the next. Similarly, businesses prefer a stable economic environment and stable consumer incomes. This greatly facilitates planning and reduces risk, especially for large-scale, costly investments. Policymakers also prefer a stable economic environment because it provides relative surety about the likely size of public sector revenue inflows and expenditure outflows. In addition, a country's trade partners prefer stability because when an economy plunges into recession it usually buys less from its overseas partners, hurting them in the process. Also, a country experiencing an up-and-down economy may be tempted to manipulate the value of its currency's exchange rate and this, too, can hurt its trading partners. In a word, the good news is that everyone agrees on the goal of securing a stable macroeconomic environment. The disagreements are over the details, mechanics, and effective implementation and timing, not over the goal itself.

THE SHORT-RUN AD/AS FRAMEWORK. Figure 3.1 is a visual representation of an economy. It reflects not so much a particular theory as that it serves as an accounting framework and heuristic device that includes a large number of relevant variables in a single visual image, hence its pedagogical value. On the vertical axis, one denotes inflation (in percentage terms) of the goods and services an economy produces. On the first horizontal axis, economic growth is measured by GDP growth, also in percentage terms.[40] GDP stands for gross domestic product—the monetary value of all production in a given state and time period, usually one year—and because somebody must be doing the producing, one can use a second horizontal axis to measure employment (as a percentage of the labor force). When the employment axis is run the other way, from right to left, one obtains a sense of the size of unemployment (also measured as a percentage of the labor force).

Short-run aggregate suppy (SRAS) refers to the business sector supplying goods and services to the economy in response to changes in the market price that can be obtained. In contrast, long-run aggregate supply (LRAS) refers to an economy's inherent productive capacity—its sheer potential to generate output on account of its asset base—regardless of whether or not that capacity is productively employed or lies idle.

The upward-sloping line in the figure is called the **short-run aggregate supply**, or SRAS. (In contrast, **long-run aggregate supply**, LRAS, refers to an economy's inherent productive capacity—its sheer *potential* to generate output on account of its asset base—regardless of whether that capacity is productively employed or lies idle.) To see why the SRAS-line is upward-sloping, consider, first, the black AS line and assume at the economy is operating at a point where output price inflation is 3 percent and GDP growth is 3 percent also (with an implied 95 percent employment rate and a 5 percent unemployment rate). Second, suppliers of goods and services are in business to earn profit (p), that is, total revenue (TR) minus total cost (TC). TR, in turn, is the combination of the prices received times the units of output sold (P_{output} x Q_{output}). Likewise, TC is the combination of prices paid times the units of input needed, such as raw materials and labor (P_{input} x Q_{input}). Third, the argument now proceeds on the assumption—to be relaxed shortly—that the prices of *inputs* are constant (unchanged).

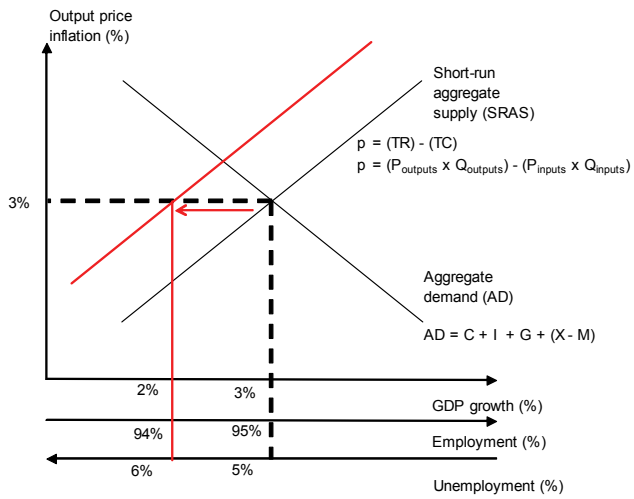

Figure 3.1: The short-run AD/AS framework.

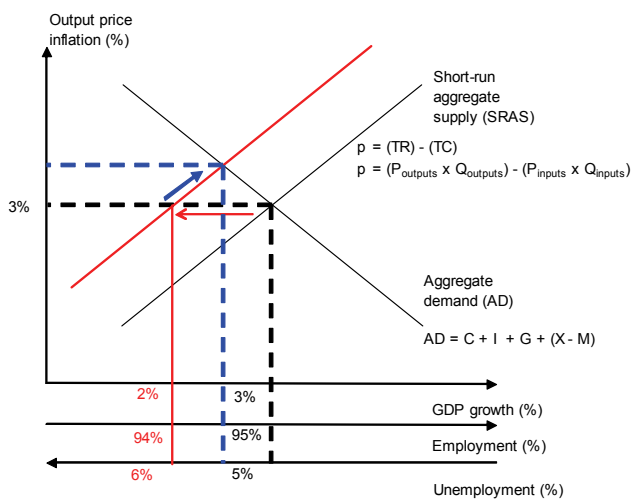

Figure 3.2: Feedback effect from the supply-side to the demand-side of an economy.

If for any reason the *output* prices should increase, firms notice an extra profit opportunity because costs (with constant input prices) are by assumption not rising as fast as revenue (with rising output prices). A firm will therefore want to produce larger quantities of output. In a word, higher output prices (an upward-movement on the vertical axis) induce firms to produce more output (an outward-movement on the horizontal axis). In combination, these two movements make the supply-line upward-sloping.

If one makes the opposite assumption about prices, profits would be threatened. For example, if input prices rise faster than output prices, then production becomes relatively more expensive, profits decline, and producers will want to produce less than they might have intended to before. Growth is throttled. This is visually represented in Figure 3.1 by a shift of the entire black SRAS line to the left (from the black to the red line). Because less is produced, one can read off the horizontal axes that GDP growth is now only 2 percent, employment falls from 95 percent to 94 percent, and unemployment correspondingly rises from 5 percent to 6 percent of the labor force. Input prices or production costs can rise for example on account of higher regulatory compliance costs, higher raw material costs, higher labor costs, or higher transportation costs. Of course, input prices can also fall, especially when improved technology lowers production costs per unit produced. In that case, the change in short-run aggregate supply would be represented by shifting the black SRAS line to the right instead of shifting it to the left.

FEEDBACK EFFECT. An economy never stands still. Any change anywhere in the system affects participants and leads them to change their behavior which, in turn, affects the system. Thus, in the case of initially constant output price inflation and more rapidly rising input price inflation (Figure 3.1), the reduction in production on account of falling profit opportunities means that the existing demand for goods and services cannot be satisfied as well as before. Buyers consequently compete for reduced supply and push output prices up a bit, which in turn stimulates supply a little bit as well (see the switch, in Figure 3.2, from the red to the blue situation). When the dynamics have worked themselves out, the economy ends up with output price inflation running at about 3.5 percent, and with GDP growth at about 2.5 percent, employment at 94.5 percent, and unemployment at 5.5 percent.

Aggregate demand (AD) refers to the sum of anticipated or actual spending in an economy.

AGGREGATE DEMAND. If short-run supply is primarily a function of profit opportunities and the various revenue and cost factors that affect them, then **aggregate demand** consists of the summation of demand by various categories of buyers. In the figures, aggregate demand (AD) is written as an equation, the same equation as used in chapter 2 for national income accounting: C stands for consumption by private households, I for investment by firms, G for government spending at the federal, provincial, and district or municipal levels, and (X-M) reflects the net value of exports and imports. The

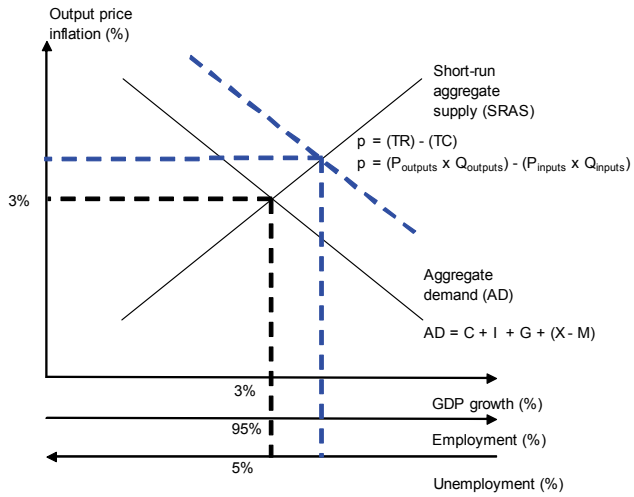

Figure 3.3: Aggregate demand shift. (The feedback effect on the supply-side is already reflected in the figure.)

value of exports is added because it represents demand from overseas for domestically produced goods but the value of imports is subtracted because it reflects demand that is realized in another economy. The AD-line is downward-sloping because the lower is output price inflation, the higher is the incentive to make purchases at home.

If any component on the right-hand side of the AD-equation rises in value then the left-hand side must rise in value also, thus reflecting more aggregate demand for goods and services. This is shown in Figure 3.3 by shifting the black AD-line outward toward the right along the GDP-growth axis to become the blue AD-line. As a consequence of a larger amount of demand relative to available supplies, output prices will eventually rise as demanders compete for access to the supplies. This signals profit opportunities. More production will be forthcoming and also more employment, and less unemployment, as indicated in the Figure.

JUST TEN VARIABLES. This macroeconomic framework involves just 10 variables: (1) output prices; (2) input prices; (3) quantities used and produced (inputs and outputs); (4) GDP; (5) employment; (6) unemployment; (7) consumption; (8) investment; (9) public sector expenditure; and (10) the net value of exports and imports. Astonishingly, absolutely anything that can possibly happen in the world will be reflected in one or more of these variables which then affect the economic system. For example, if threat of war induces people to save more, the reduction in consumption would lower drag aggregate demand leftward along the GDP-growth axis. Reduced demand implies less production, hence reduced growth, reduced employment, increased unemployment, but also a reduction in output price inflation as producers eventually lower prices to attract the remaining shoppers (or do not raise prices as much as otherwise they might). Reduced consumption means more saving. This means that excess supplies of loanable funds should drive down interest rates and, in turn, should encourage investment. But even at low interest rates, firms will hesitate to borrow if they, too, fear the onset of war. Government can make up for slacking private demand by borrowing and stimulating the economy through war-related production, but consumption generally falls much more quickly than government can react to pick up the slack, so that an economic slowdown or an outright economic recession is likely. (And of course, preparing for war is not the preferred way of stabilizing an economy.)

MACROECONOMIC OBJECTIVES. A simple and convenient tool, the AD/AS framework serves to quickly inform one about causes, pressures, dynamics, and consequences in the macroeconomic system as a whole. And it possesses another useful feature: In a single visual representation, it captures all five of the macroeconomic objectives (section 1.3). On the vertical axis, it captures information about the goal of low output price inflation; on the horizontal axis, it captures information about (sustainable) GDP and the long-term objective of GDP growth, as well as about employment and unemployment (which can be interpreted to reflect both labor and capital resources). The back-and-forth movement of the economic system along the horizontal axes captures information about business cycles and whether they are smooth or erratic. Even the need for global economic policy coordination across state jurisdictions is captured as imports from and export to other states' depend, in part, on economic conditions and policy in those states (see chapter 4). The framework does not, however, address income distribution or development goals (chapter 1).

POSTVIOLENCE RECOVERY AND RECONSTRUCTION (STABILIZATION AND GROWTH). Economies possess an inherent constraint on the supply side below which the economy's productive capacity is underutilized and above which it is strained. Under normal circumstances, it may be expected that an economy grows, net of output price inflation, say by 3 percent per year—its inherent long-term capacity for economic growth. Thus, when there is either a demand failure

or an input price shock on the supply side so that the economy operates at only 2 percent growth per year, then in the absence of compensatory demand from the public sector, the extra unemployment of labor and capital resources this implies will eventually compel workers to accept lower wages (or lower wage increases), thus increasing profit opportunities and moving supply back to its starting position. Eventually, growth of 3 percent per year is restored. If in the judgment of authorities the adjustment process during which unemployed resources lie idle takes too long, government can try to artificially stimulate the economy by increasing government expenditure. In terms of growth, employment, and unemployment, the economy would revert back to its normal long-run inherent capacity, but at the cost of an up-tick in output price inflation caused by the artificial stimulation of the economy. On the whole, an automatic, private sector supply-side correction is preferred over an artificial, public sector intervention. In violence-torn economies of course the private sector is hesitant to invest and understandably waits for the public sector to act first. This creates a two-sided pressure: In periods of slack private economic activity, tax revenues are low while the call for public sector spending is high. Consequently, fiscal deficits and accumulated public sector debt are likely to increase. This is fine so long as borrowing from abroad is possible and not unduly onerous. Whether debt becomes onerous depends, in part, on the conduct of deficit spending, that is, on whether it succeeds to bring the private sector fully back into the economy, in which case tax revenue grows and public expenditure needs decline in some degree so that the debt load can be carried and paid off in time (see section 3.2).

LONG-RUN AND SHORT-RUN. Economists are hard put to define the long-run growth capacity at which to aim an economy. Shall policymakers aim at annual economic growth of 2 or 3 or some other percentage? In practice, economists tend to use an average growth rate derived from the economy's record of past decades and they stipulate that average to be the economy's inherent annual growth limit at which to aim. For violence-torn countries, especially those emerging from decades of armed violence, use of this yardstick is incorrect. Depending on the remaining capital stock, the growth rebound may at first be very large before settling onto the inherent long-term growth potential of the country. From Figure 1.1 and others in chapter 1, it is apparent that both the experiences of economic collapse during episodes of violence as well as the experience of growth thereafter exhibit a wide degree of variation.

Not having a yardstick does not make the idea of having a yardstick false. Rather, the problem is that without a goal of economic growth to aim at, policymakers may be too timid and be content with, say, 2 percent, when 3 percent can safely be achieved, or they may aim at 3 percent growth when the economy's inherent growth limit lies at only 2 percent. Danger lies on either side of the dividing line of the inherent but unknown long-term growth capacity: Constantly overstimulating an economy in pursuit of an objective that it cannot deliver will, in time, cause pressures to build up—particularly inflationary pressures—that can altogether derail an economy and plunge society back into war; but an economy that grows slower than it safely could forgoes employment and output growth needed to finance the rebuilding of assets and that, too, threatens the stability of peace.

3.2 Fiscal policy: Governing under duress

PURPOSE. **Fiscal policy** concerns how public sector revenue is raised and how that revenue is spent. Fiscal policy is not a crisis management tool. (It is understood that there may be conflict over fiscal policy itself inasmuch as it provides access to a nation's treasury.) Instead, its primary function is to promote society's orderly development and well-being, that is, its growth and continual betterment. This is usually achieved through a two-pronged approach: One is to provide enabling environments or conditions that stimulate the private sector; the other is to provide economic security for those population segments that cannot manage on their own. Although sometimes necessary, to spend fiscal resources on macroeconomic stabilization is a costly distraction from its primary purpose.[41] The analogy to chapter 2 is straightforward: Just as it is preferable to build, rather than strip, assets in order to derive income, it is preferable to avoid directing resources to emergencies if these can be prevented in the first place.

REVENUE. Governments can raise funds from many sources, from income and profit taxes levied on persons and

businesses, to import and export taxes, to taxing tourists and products such as cigarettes, to raising revenue from selling natural resource wealth directly such as petroleum export revenues (**natural resource rents**) or obtaining revenue from granting natural resource exploitation licenses to domestic and foreign firms. Governments also charge fees for public services, from driver's license and passport fees to entry fees at national parks. In addition, revenue can be raised at the national, provincial, and district or municipal levels. Moreover, governments can raise funds by issuing currency (**seignorage**), by depleting **foreign exchange reserves**, and by borrowing domestically or abroad either through private sector financial institutions or from bilateral or multilateral lenders. And governments can receive outright grants, for example in the form of development or military aid. The fiscal *policy* aspect enters by making all these revenue sources consistent, coherent, and viable, and to orchestrate their overall effect such that maximum economic advantages for the economy at large are secured. Many developing states rely for a major portion of their revenue on natural resource rents. This means that a particular sector of the economy carries a disproportional burden—but often endows it with disproportional political influence as well—while other sectors contribute proportionally less to the public purse. Similarly, public expenditure policy affects particular sectors, such as education, agriculture, or transportation infrastructure more than others so that macroeconomic goals are entwined with sectoral and regional goals.

Fiscal policy concerns how public sector revenue is raised and how that revenue is spent. It is not a crisis management tool. Instead, its primary function is to promote society's orderly development and well-being, that is, its economic growth and continual betterment. Although sometimes necessary, to spend fiscal resources on macroeconomic stabilization is a costly distraction from its primary purposes.

THE TAX SYSTEM. Economists list five criteria to characterize a good tax system. First, low costs of administration and compliance, or *administrative simplicity*. Second, the system should be *flexible* to adapt quickly to changing economic and political circumstances. Third, the tax system should be *transparent* and amount to political *accountability*. Fourth, it should be perceived as *generally fair* across income groups. And fifth, the tax system should *enhance economic efficiency*, should not distort economic efforts. For instance, excessive income tax rates can lead to tax avoidance (people perform less taxable work) or tax evasion (not declaring income or moving work to low-tax jurisdictions elsewhere). Perception of excessive taxes on capital can lead to inefficiencies in the capital markets. By the same token, undertaxing undesirable economic activities, or even subsidizing them, encourages their unabated continuance. For instance, adverse environmental effects of automobile traffic can be mitigated by appropriate taxation. Likewise, outright subsidization of certain product categories like fuel—or food, for that matter—distorts the economic system. In the larger interest of the protection of vulnerable populations, of social peace, this might politically be necessary but at the danger of creating powerful vested interests on the supply and the demand side.

Horizontal tax equity: Persons who are equal in every respect should be treated equally in taxation as well. Vertical tax equity: Those capable of paying more should pay more.

As regards fairness, the tax system should display horizontal and vertical equity. **Horizontal equity** means that persons who are equal in every respect should be treated equally in taxation as well. For example, in tax law a married couple should not be treated differently than an otherwise identical unmarried couple. **Vertical equity** means that those capable of paying more taxes, should pay more. This leaves the political problem of determining the income brackets and the tax rates for those brackets. Some economists argue that because income is the result of a person's contribution to society, it should not be taxed at all. Instead, consumption should be taxed through a sales or value-added tax. This has the beneficial side-effect of encouraging saving and of providing a pool of loanable funds for investment and future economic growth. This would also simplify the tax system and reduce the administrative cost of tax collection and limit opportunities for corruption in the tax system. To protect certain populations from hardship, a state can elect to exempt some consumption categories from taxation, e.g., food stuffs and medications.

These ideal-type specifications do not come about overnight. Especially in violence-afflicted societies, rebuilding

a well-functioning tax administration will take years. Some states therefore focus revenue-raising efforts on easily taxed "victims," such as the export sector, but an unequal burden of taxation induces tax evasion efforts and, with it, carries very real dangers of subverting the state apparatus through corruption. The practical difficulties of rebuilding and then tapping a broad, society-wide tax-base should not be underestimated. Dedicated, long-term training and capacity rebuilding grants may need to be offered to violence-afflicted states.

DEBT. Many developing and emerging economies, especially those in postviolence situations, find that resource needs far outstrip resource availability. The resulting budget deficits have led governments to artificially inflate the economy by printing overmuch money (section 3.3) and/or to take on unsustainable domestic or external debt burdens. To be sure, if economic growth generates sufficient revenue to service the debt, it may be sustained indefinitely. (Just like private companies can carry perpetual debt, so can governments.) But unsustainable debt must be lowered.[42] This can be done in three ways. First, receive outright debt forgiveness (grants).[43] Second, increase public revenue and dedicate the extra resources to increase debt service (interest and payoff of debt principals). And third, decrease public expenditure and use the saved funds to service the debt. As mentioned at the outset of this chapter, there is now widespread agreement that public expenditure cuts must detract neither from sensible spending that enhances the framework conditions for growth nor from poverty alleviation. If debt is taken on it must be focused on uses with the highest long-term social return. The composition of public expenditure may be more important than its level.

In this regard, it is worth noting that few countries' public sector accounting systems measure annual deficits and accumulated debt properly. The conceptually correct way, for private households and businesses as for the public sector, is not to focus on revenue minus expenditure streams but on assets minus liabilities, or **government net worth**. For example, when a debt-financed seaport is built, the liability the debt poses is balanced by the asset of the port. The port generates revenues on its own. In addition, by stimulating economic growth it also contributes to higher tax revenue. Thus, the debt incurred can be serviced and paid off. In practice, however, most states' budgets include a debt service line item that is not linked to the underlying assets so that it is impossible to assess whether the assets repay their cost. In violence-afflicted states, especially in war-torn states, assets such as seaports frequently suffer loss of business days and physical destruction so that the delay in debt repayment or the inability to repay the debt at all should be counted as part of the cost of war.[44]

Fiscal policy as a tool of macroeconomic stabilization requires that government has the flexibility and wherewithal either to issue **discretionary spending** or to forgo tax revenue to leave more spending power in the private sector. This would prop up an economy during recession.[45] In practice, developing nations, especially violence-afflicted ones, rarely have discretionary funds at their disposal, nor the leisure to forgo tax revenue, hence the overwhelming need to draw on funds from global sources. In the past, these have added to unsustainable debt levels so that in recent years very-low interest rate loans, debt relief, debt forgiveness, and outright grants have become more prominent in the fiscal affairs of violence-afflicted states. This suggests a *bifurcated approach* to fiscal policy: Design, implement, and adhere to sound fiscal management practice for its own sake and top up the remaining need from overseas in a nonburdening manner with the long-term goal—over 10 or 20 years' time—of achieving sufficient economic growth from within to gradually crowd out and graduate from overseas assistance.

PUBLIC EXPENDITURE POLICY AND MANAGEMENT. Public expenditure policy aims to achieve three goals: (1) overall fiscal discipline, (2) constant reevaluation of spending priorities within the revenue constraint, and (3) operational efficiency.

> "The interdependence of [these] three levels is one of the most powerful findings of both practice and theory. The pursuit of aggregate fiscal discipline is often done in such a way as to undermine both level 2 and 3 performance—arbitrarily reordering priorities and devastating service delivery and operational performance more generally. Similarly, a lack of discipline and budgetary realism in making strategic policy choices leads to a mismatch between policies and resources, resulting in inadequate funding for operations. More positively, fiscal

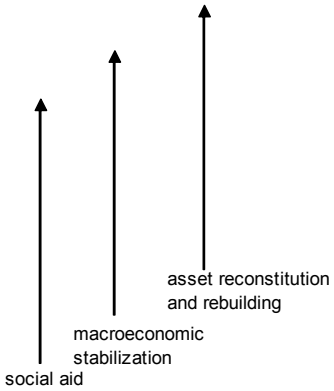

Figure 3.4: Postwar aid.

stability creates an environment that encourages sound level 2 and 3 performance. In turn, sound performance at these levels feeds back into fiscal stability."[46]

The World Bank lists a range of criteria for budget and financial management. Being general principles, they apply to violence-afflicted states as to any other state. They are *comprehensiveness and decisionmaking discipline* so that for instance not only current but also capital expenditures are properly budgeted; *flexibility* that avoids making implementation overly tight and strategy overly loose; *legitimacy* so that those with power to change policy during implementation had the opportunity to participate in policy formulation; *predictability* of the short-, medium-, and long-term time paths of expenditure flows; *contestability, honesty, and information*, so that accurate and timely information can be used in politically and technically unbiased ways to contribute to expenditure review and evaluation and potential policy changes; and *transparency* for decisionmakers and the public and *accountability* by decisionmakers, decision implementors, and users of public funds.[47]

FOREIGN AID. A consensus has developed that advises against peak amounts of aid being delivered immediately after the end of war when the absorptive capacity of the postwar state is still limited. Instead, capacity-rebuilding needs to be offered and aid needs to peak perhaps 3 to 5 years postwar when the institutional capacity to absorb aid has been rebuilt. For instance, IMF authors of a book on the Democratic Republic of the Congo (DRC) write that "we found that too often international aid to postconflict countries seems to taper off shortly after a peace agreement is reached, whereas, in fact, appropriate and prolonged aid is needed to consolidate peace and avoid a reemergence of conflict."[48] As regards aid sequencing, immediate support for social recovery turns out to be more important and effective than support for reconstruction and stabilization. The reason is that neglect of addressing pressing social priorities can lead to resentment that restarts the violence. While safeguarding peacebuilding and peace-maintenance, the ultimate aim must be reconstitution and rebuilding of assets. The intermediate aim must be stabilization but the immediate aim must simply be to assist damaged population. Fiscal policy and fiscal aid must accommodate this sequencing and balancing. In practice, this will involve separate tracks of aid that overlap in timing (see Figure 3.4).

A 2002 paper finds that "while both humanitarian and reconstruction aid are welfare-enhancing, humanitarian aid reduces long-run capital accumulation and growth. Reconstruction aid, on the other hand, may increase the long-run capital stock and, if carefully designed, avoid the pitfalls of the Dutch disease".[49] This, too, suggests that aid needs to be purposeful and be delivered in stages. Reconstruction aid includes aid for intangibles, especially institution-building, reestablishment of the legal and regulatory system and judicial and supervisory agencies, the tax system and tax administration, and rebuilding of regional trade links. In addition to humanitarian and reconstruction aid, general government budget support aid may be necessary on a continuous basis as well to rebuild, strengthen, and support ongoing government policy and administrative work. The IMF's work on the DRC in the early 2000s is a case of a clear recognition of the connection between economics and politics and that aid design (circumstances, objectives, size, time profile, and composition) must take this connection into account:

> "Three main phases—stabilization, reconstruction, and development—were defined and later included in the country's poverty reduction strategy. The stabilization phase sought to remove the most severe distortions and break the vicious cycle of hyperinflation and declining value of the currency. Priority had to be given to paying the wages of civil servants and the military on time to defuse social tension and rebuild confidence in the public administration. In parallel, with the help of the World Bank, the administrative capacity of key ministries, including the finance ministry and the central bank, had to be buttressed. Replacing lost administrative capacity is a lengthy process because many civil servants were killed during the war. It takes time to train replacements, which underscores the importance of prolonging foreign aid. At the same time, the foundations of a level playing field for the private sector

Figure 3.5: Inflation- and purchasing power-adjusted per capita GDP, Costa Rica, 1950-2009 (base year 2005). Source: Penn World Table 7.

were put in place."[50]

The latter included sequencing of aid to restructure high-impact economic sectors—in the case of the DRC mining, forestry, and transportation. Thus, how aid is timed, sequenced, and spent is sometimes as important as the issue of creating absorptive capacity per se.

SPILLOVERS. Another finding of recent research—dramatic enough to have led to almost immediate aid policy changes—is that wars create can spillover effects that can adversely affect neighboring states to such a degree that they, too, need fiscal assistance, as much as do war-host states.[51] An example may be seen in Figure 3.5. It shows, in blue color, inflation- and purchasing power-adjusted per capita GDP from 1950-1980 for Costa Rica, as well as a linear projection to (and beyond) 2009.[52] In red, the actual record for 1981-2009 is shown. A lost decade of the 1980s—when Costa Rica's neighbors, El Salvador, Guatemala, Honduras, and Nicaragua, each were embroiled in internal wars—starkly manifests itself in the gap between the projected and the actual outcome. After the peace agreements of the early 1990s, brokered by Costa Rica's then-president Oscar Arias, the country's former growth resumed. Still, based on the 1950 to 1980 data, by 2009 per capita production had not reached its projected level. Like its warring neighbors, Costa Rica thus suffered a 30-year economic penalty even though it has not been at war itself. The cumulative gap between projected and actual per capita GDP between 1981 and 2009 amounts to I$65,062, equivalent to about 8 times the value of the country's per capita 2009 income, a massive loss.

The research literature has shown that the knock-on or spillover effects can be greater in neighboring countries than in the war-host state. The reasons for this are many-fold and involve for instance the need to deal with sometimes millions of refugees, interruption of trade routes and markets, environmental stresses, lost tourist revenue, and higher security expenses in connection with securing border regions and safeguard refugee encampments, all of which carry fiscal consequences.

3.3 Monetary policy: Dysfunction in a violent world

Monetary policy deals with the internal and external (foreign exchange) value of a state's currency, the determination of interest rates, and the regulation and supervision of the banking system.

Monetary policy deals with the internal and external value of a state's currency (that is, inflation and the currency's foreign exchange value), the determination of interest rates, and the regulation and supervision of a country's banking system. The primary institution is the central bank, and its primary tool consists of influencing the amount of money (the **money supply**) available in the economy to carry out economic transactions. Although the two are like Siamese twins that cannot easily be separated, in this section we deal primarily (but briefly) with some domestic aspects of monetary policy and address (more extensively) foreign exchange-related issues, such as exchange rate mechanisms and regimes, currency valuation, and other matters in chapter 4.

MONETARY POLICY MECHANICS. To appreciate some of the pitfalls of monetary policy in postwar situations, it helps to first understand the textbook purposes and mechanics of monetary policy. Assume that a commercial bank has made a loan to a private firm. The firm gets the funds and the bank obtains a signed contract in which the firm promises to repay the loan. This contract, or note, can be sold to the central bank (with the firm now owing the funds to the central bank), and the central bank can elect to pay the commercial bank for the note by printing money. The commercial bank

can take these new funds and loan them out to yet another customer. By buying notes from commercial banks, a central bank thereby injects additional funds into the economy. Likewise, governments can finance budget deficits by borrowing via domestic financial markets, that is, via commercial and investment banks. The central bank can purchase these notes, again injecting additional funds into the economy. In practice, central banks tend to purchase government-issued debt, not commercial debt. Strangely, one arm of government, the central bank, therefore buys debt issued by another arm of government, the executive branch. The central bank thus "monetizes" government debt. The more debt the central bank purchases, the more potential funds are available to commercial banks to loan out. Since commercial banks are for-profit enterprises, a large supply of loanable funds leads them to compete for borrowing customers by lowering the interest rate on loans. So long as the demand for currency (**money demand**) needed to carry out daily economic transactions is steady, the central bank's injection of money supply will lead to lower interest rates and provide an incentive to private households and commercial enterprises to borrow more money. Of course, the point of borrowing is to spend the borrowed funds, and thus economic activity and employment is stimulated via the aggregate demand side of an economy. Importantly, if the funds are borrowed by firms to finance investment to increase their productivity and to expand their businesses, then the supply-side of an economy is also affected. The combined effect is that employment and economic growth increase (more demand) while inflation is held in check through growth in productivity-enhancing (cost-lowering) physical investment.

This mechanism requires a deep, well-functioning private financial market and a nearly flawless interface between and among public policy formulation, policy implementation, and a smooth and well-predictable private sector response. In postwar economies, frequently all three of these are lacking and much of the initial financing of development and growth objectives will have to come from official overseas sources.

The quantity theory of money argues that overly rapid increases in money supply will eventually result in corresponding increases in inflation.

THE LONG- AND SHORT-TERM, AGAIN. Monetary policy may stimulate and support economic growth in the short-term but is no substitute for an independent long-term growth policy. To see this, we introduce—as in chapter 3—an accounting equation, one from which one can derive something called the **quantity theory of money** (a theory of how the quantity of money in an economy affects other economic variables.) The equation is written as (1) P x Q = M x V, where, on the left-hand side, P stands for the price level in an economy and Q stands for inflation-adjusted, or real GDP. Together, they amount to an economy's nominal GDP, called Y (section 2.2). On the right-hand side, M stands for the money supply and V for **velocity**, or the turnover-rate of money. One might think of M*V as a country's "effective money supply", namely the money supply per se times how often each unit of currency is used.

To illustrate: In 2010 the nominal GDP (y)—the value of goods and services produced—in the United States was USD14,6602.2 billion and breaks down into a price level (P) of 1.10654 and real GDP (Q) of 13,248.7. But the amount of money (M)—cash and funds available in checking and saving accounts—to purchase these goods and services was, by one measure, only USD8,629.3 billion. It follows that every dollars must have been used on average 1.69 times, the velocity (V). That makes sense because when a person uses his or her paycheck money to purchase groceries, the store deposits the funds and reissues the dollars via paychecks to its employees who, in turn, conduct purchases of their own. Thus, every available dollar is used several times over. Cash turns over very often, checking account dollars turn over somewhat less often, and saving account dollars turn over even less often. As stated, the average turn-over rate, or velocity, of money in the United States in 2010 was 1.69 times. It turns out that while the turnover-rate of money (V) has values that differ from country to country, within a country it tends to be relatively stable from year to year. For practical purposes, V may be considered constant (and is then written as V*).

To make things easier, the following example works with rounded numbers. Specifically, let P=1.1, Q=14.7, M=8.6, and V=1.9. If velocity is constant, V*, the first equation can now be rewritten in two informative ways where in each case a second variable also is assumed constant. The first rewriting involves moving the expression Q from the left-hand side to the right-hand side of equation (1). This results in equation (2) P* = (M x V*) / Q. In words, the effective money

supply divided by a country's real output equals the price level. Now, take the rounded U.S. numbers and hypothetically *change* the money supply (M) from USD8.6 trillion to, say, USD9.6 trillion while keeping, for the purpose of the exercise, the price level and the velocity the same. Place the numbers into equation (2) to obtain 1.1* = (9.6 x 1.9*) / Q and the nominal GDP (Q) therefore *must* increase to USD16.6 trillion (or else the equation would not be an equation). The first lesson then is that if a country's central bank increases the money supply, this can stimulate the purchase, and hence the requisite production, of more goods and services. More production requires labor and capital to work more hours. Earnings increase and so will, in time, overall employment.

But before shopkeepers call manufacturers to increase production, or before manufacturers get around to increasing production, shopkeepers might try to raise output prices in order to deal with the influx of demand caused by the increased money supply. To simulate the extreme case, where all new money shows up only in higher prices, we rewrite the first equation a second time, resulting in equation (3) Q* = (M x V*) / P. Once more, substitute the rounded U.S. numbers to obtain 14.7* = (9.6 x 1.9*) / P and for the equation to hold, the price level therefore *must* rise from 1.1 to 1.2. Hence the second lesson is that when an economy's supply capacity is constrained, the extra money can only show up as output price inflation.

In sum, in the short-term, before suppliers much notice that there is "more money chasing goods," an extra injection of money into the economy can stimulate GDP. But an economy's inherent long-term capacity for growth is limited by its asset base so that annual GDP growth is constant in the long term, as in equation (3). There, with Q* and V*, it *must* be true that an increase of money results in a corresponding increase in the price level. Printing and injecting money into the economy will, over time, not lead to more production but to more inflation. Just like a lubricant alone does not make an engine run, money alone does not make an economy grow.[53] This is the reason why policymakers like to keep money creation under tight control. (See the case study on Zimbabwe in section 3.6.) In the long-term, it is assets and their productive capacity, not fiscal or monetary policy, that improves peoples' lives. This buttresses once more the need to conduct stabilization policy firmly within the objectives of long-term growth policy.

DYSFUNCTIONALITIES. The collapse of money and, with it, of monetary policy in violent economies is easily shown by the number of states in which citizens have adopted alternative currencies during and after war. Timor-Leste (East Timor) uses the U.S. dollar as its official currency. So does El Salvador. After 2003, Iraq used euros and dollars, before eventually issuing a new dinar. Issuing a new currency after violence is popular: the German Reichsmark became the Deutsche Mark after World War II. Both Argentina and Brazil reissued their currencies around the time of their respective military dictatorships and the years thereafter as both tried to recreate stable, credible currencies and financial markets. Kosovo used the Deutsche Mark before switching (with Germany) to the euro. The euro is also used by Montenegro and other follow-on states to the former Yugoslavia, regardless of whether or not these states acceded to the European Union. Zimbabweans use a whole slew of substitute currencies, including the Botswana pula, the British pound, the euro, the U.S. dollar, and the South African rand—anything but the Zimbabwean dollar. The main reason for currency substitution is that war and inflation tend to go together, debasing the store-of-value function of money. In Zimbabwe, by the third quarter of 2008, inflation was running at an annual rate of over 500 billion percent.[54] The country's private financial sector collapsed. In essence, a parallel "public" monetary system, privately managed, emerged. Neither a functioning bank-to-customer nor a functioning bank-to-bank (interbank) market exists. In criminalized economies, including but not only those such as Afghanistan or Colombia that are associated with the trade in illegal narcotics, very large sums of money travel through informal channels, circumventing formal private financial institutions and staying outside the reach of public policy influence. In a word, violence can undermine the policy assumptions that underlie ordinary monetary purposes and mechanics.

RECONSTITUTION AND COORDINATION. Whereas postwar fiscal policy might require rebuilding of the physical and administrative apparatus of state ministries and provincial offices, including capacity building of trained personnel, the institutional rebuilding of monetary policy generally involves a smaller staff and physical facilities. The issues monetary policymakers need to deal with are, however, extremely important and involve, among others, the following: Rebuilding

the central bank; regaining domestic credibility; reestablishing the internal and external banking and payment systems; rebuilding systems for bank supervision; restarting the provision of credit, especially of access to loans by micro-businesses and small- and medium-sized enterprises (SMEs); reining in the high inflation that ordinarily accompanies periods of violent conflict and dealing with the consequent currency depreciation on foreign exchange markets. Unlike normally functioning advanced economies, where fiscal and monetary policy are judiciously kept apart to provide for independent policy judgment and implementation, in postwar emerging and developing economies, monetary policy should be closely coordinated with fiscal policy and follow politically set objectives of employment and growth and only later on transition into an independent role. Monetary policy might initially be more forgiving in its goal of reducing inflation so as to support employment and growth objectives and aim at a phased-in reduction of inflation over an agreed-upon, but credible, time frame.[55]

3.4 Institutions and policies

Many domestic institutions and their purposes and policies have already been mentioned (e.g., the central bank; tax administration). This short section focuses on two important international institutions, the **International Monetary Fund** (IMF) and the **World Bank Group** (with additional comments in chapter 4). Following the first worldwide oil-price shock in 1973/4, many developing and emerging economies suffered from two problems: internally, drastic economic mismanagement and, externally, a difficult foreign trade, foreign debt, and foreign exchange rate environment. The IMF provides short-term balance of payment-related financial assistance on condition that economic policy in the recipient state change in particular ways. This conditionality—required, in part, to ensure that states can repay funds borrowed from other member states—has been subject to much criticism. In brief, from the mid-1970s to the mid-1980s, the IMF loaned funds on concessional terms to particularly needy, low-income member states. This was handled through a lending facility known as the Trust Fund. This fund was replaced in March 1986 by a Structural Adjustment Facility (SAF), followed by an Enhanced Structural Adjustment Facility (ESAF) in December 1987. In September 1996, the ESAF was made a permanent, rather than temporary, lending instrument, and in November 1999, ESAF, in turn, was replaced by the IMF's Poverty Reduction and Growth Facility (PRGF).

Short-term macroeconomic stabilization can be, and frequently has been, associated with great economic pain. In the past, Structural Adjustment Programs, or SAPs, were carried out via central government budget cuts and the raising of tax or other revenue, with the aim of reducing government budget deficits. This reduces the need for unsustainable borrowing or inflationary money printing. SAPs included demands to properly value the local currency on the foreign exchange market and to improve macroeconomic policies so that private investors felt confident to once again sink money into a country. The view that these measures can reduce economic growth and increase economic dislocation, unemployment, and poverty may be simultaneously correct (at a short time-scale) and incorrect (at a longer time-scale over which the IMF tends to evaluate success or failure). A contemporary example is provided by the 2011 financial and attending political crisis in Greece where, in exchange for the actual release of an already approved tranche of financial aid, eurozone countries and the IMF demand substantial budgetary changes from the Greek government which, in turn, have to be pushed through the Greek parliament and ultimately be endorsed by that country's population. As elsewhere, this is inducing fights over the redistribution of future income- or other tax obligations, or cuts in benefits or services where those who are poor and/or politically voiceless may be expected to bear the larger share of the burden.

While refuting wholesale, undifferentiated criticism, the IMF has from time to time acknowledged adverse effects of its mandated policies. By the late 1990s, one consequence of this acknowledgment was that central governments not only leave social expenditure on education and health care untouched but in fact increase such spending. In some cases, this clause was written into the conditionality agreement. Even so, in specific cases the poor still suffered, and the IMF next agreed to work more closely with the World Bank and with civil society to better protect particularly vulnerable populations, in a word to integrate short-term adjustment policies more self-consciously with the goal of doing no harm

to the most vulnerable populations. Hence the introduction of the Poverty Reduction and Growth Facility (PRGF).

The PRGF, in turn, was replaced in 2009 with a Poverty Reduction and Growth Trust (PRGT) with three loan facilities, of which the Extended Credit Facility (ECF) is the direct successor to the PRGF in the sense of providing "financial assistance to countries with protracted balance of payments problems" but with the important qualification that "ECF-supported programs should be based on the country's own development strategy and aim to safeguard social objectives."[56] Thus, the evolution of IMF programs has gone through three stages: From imposing IMF conditions on poor states that had little choice but to accept them, to lending conditions that reflected World Bank and civil society concerns especially in regard to poverty reduction to, now, conditions that are being led by the affected low-income countries' own views on poverty reduction and growth. In this, the IMF nonetheless (1) puts emphasis on widespread public participation and "ownership" of poverty reduction strategies in the affected states, (2) is flexible about how states achieve poverty reduction and growth objectives so long as macroeconomic stability is not threatened, and (3) highlights good governance (public resource management, transparency, and accountability).

3.5 Policy lessons and tips

Lesson 3.1: Do what is necessary to do, but remember that the short-term is the handmaiden of the long-term.

Lesson 3.2: There does exist a useful heuristic device—the AD/AS framework—with which many proximate causes and consequences of changes in aggregate demand, aggregate supply, and economic policy can be traced, at least to an approximation.

Lesson 3.3: Everyone agrees on the goal of securing a stable macroeconomic environment. The disagreements are over the detail, mechanics, sequencing, magnitude, and length of aid, not over the goal itself.

Lesson 3.4: The purpose of fiscal and monetary policy is not crisis management. To prevent macroeconomic instability is better than to use costly fiscal and monetary resources for stabilization. Economically inappropriate macroeconomic policy can be as damaging as war.

Lesson 3.5: A good tax system is simple, flexible, transparent, fair, and enhances economic efficiency. A good expenditure system is disciplined, operationally efficient, and routinely reevaluates spending priorities within the revenue constraint.

Lesson 3.6: Postwar aid should be offered over the long-term (up to 10 years), not short-term (1 or 2 years).

Lesson 3.7: The ultimate aim must be the reconstitution of assets. The intermediate aim must be macroeconomic stabilization. The immediate aim must be to assist hurting populations. Policy must accommodate this sequencing, overlapping, and balancing of aid. Neighbors of war-afflicted countries also need help.

Lesson 3.8: Money accommodates economic growth; it does not, by itself, make an economy grow.

Lesson 3.9: Violence can create dysfunctionalities regarding the formulation and conduct of fiscal and monetary policy. If unaddressed, it is unlikely that war-torn societies can be rebuilt into functioning entities.

Lesson 3.10: Not all violence-afflicted states are atypical in all respects. In seeking and providing policy advice and technical support, all sides should be pragmatic, not dogmatic.

3.6 Failure and success: Two case studies

Failure and contrast: Zimbabwe and Botswana

Figure 3.6 compares inflation- and purchasing power-adjusted per capita GDP, and the per capita personal consumption levels out of GDP, of Botswana and Zimbabwe. Botswana became an independent state in 1966, the year in which the Rhodesian civil war of liberation from white rule began. This lasted until 1979, and Zimbabwe attained independence in 1980. Except for a rough patch in the early to mid-1990s, when South Africa abandoned apartheid, and the shock of

Figure 3.6: Inflation- and purchasing power-adjusted per capita GDP, Botswana (top), 1960-2009, and Zimbabwe (bottom), 1964-2009 (I$; base year 2005).
Source: Penn World Table 7.

the 2009 world financial crisis, Figure 3.6 shows Botswana's economic output per person growing fifteen-fold, from I$578 in 1960 to I$8,872 in 2009. (But consumption grew more moderately: about eight-fold, from I$492 to I$4,126.) For Zimbabwe, economic output per person—lower than Botswana's to begin with—has fallen by almost half, from I$280 in 1960 to I$143 in 2009, and so has consumption.

In terms of annual economic growth rates, Zimbabwe achieved negative growth in seven of the past ten years. By late 2008, inflation was said to be running at over 500 quintillion percent. Even for economists that is a big number, a quintillion being a one followed by 18 zeroes. (Numbers run from million to billion, trillion, quadrillion, and quintillion.) In January 2009, the central bank introduced a Z$100 trillion banknote. With independence in 1980, Robert Mugabe took power, repressed white and rival black opponents alike, engaged in murderous campaigns, and got himself involved in the DR Congo's bloody war (1998-2002). For Zimbabwe, it has been a downhill ride ever since.

As for other southern African countries, the prevalence of HIV/AIDS in Zimbabwe is high. Average life expectancy has plummeted all across the region and both Botswana's and Zimbabwe's figures are now under 40 years of age (although Botswana's life expectancy *at birth* is nearing 60 years of age again). But in addition, Zimbabweans have fled in droves; not only white farmers who once made Zimbabwe the breadbasket of the region, but blacks are leaving by the tens of thousands as well, often to Botswana.

Botswana's economy in based on minerals—diamonds of course, but also copper, nickel, and before long platinum. Exports account for half of GDP (non-diamond exports for 20 percentage points, diamonds for 30 percentage points). Encouragingly, non-mineral GDP growth is higher than that of mineral-based GDP growth so that the economy is diversifying. Inflation, in the five to ten percent range over the past few years, is relatively modest. The government's fiscal position (government income, expenditure, and debt) and the banking system are considered sound. Private investment in the economy is high, as are the country's foreign exchange reserves (to cover import needs). In fact, the World Bank considers Botswana an upper-middle income country. Unemployment and poverty rates, however, are high, as is inequality of income distribution.

In contrast, Zimbabwe is an utterly collapsed state. Virtually no one does business in Zimbabwean dollars anymore; the economy—or what is left of it—is run by recourse to substitute currencies, especially the South African rand (ZAR) and the U.S. dollar (USD). For all practical purposes, private banking has ceased, government debt is extraordinarily high, foreign exchange reserves are near zero. There is no functioning protection of private property rights, the rule of law is absent, and no one invests in the country. Two-thirds of its people are in poverty, nearly half the population is undernourished, infant mortality is rising, as is maternal mortality upon giving birth. Total government revenue collapsed from USD942 million in 2005 to an estimated USD133 million in 2008, about what some Wall Street bankers still made in 2008 as well.

The reasons for the difference in economic performance are easy to discern: Zimbabwe does not have a functioning political system; Botswana does. Even if, as until recently in Japan, one party tends to win all the national elections, they nonetheless are freely and nonviolently contested. When they come, the post-Mugabe years could also be disastrous of

course but perhaps the example of Botswana will inspire the desire to imitate. After all, Zimbabwe is equally well-endowed with natural resource wealth.

Success: Chile

Figure 3.7: Inflation- and purchasing power-adjusted per capita GDP and consumption, Chile, 1951-2009 (I$; base year 2005).
Source: Penn World Table 7.

From 1973 to 1990, Chile went through a period of military dictatorship. As may be seen in Figure 3.7, per capita GDP, adjusted for inflation and measured in international dollars (I$) grew throughout the 1950s and 1960s, stalled in the early 1970s and continued to plummet in performance during the early years of the Pinochet dictatorship. A period of renewed growth was followed by another collapse in the early-1980s. During the Pinochet years consumption never exceeded the high point of Allende's last year, 1972. Post-Pinochet, a period of sustained, rapid growth ensued that, by now, has led Chile to be the most well-off country in South America. It is the subcontinent's only member of OECD.

In terms of fiscal and monetary policy, Chile is widely regarded as a success case. It follows sound—and consistent—macroeconomic policies with transparency, predictability, and credibility. In some regards, Chile is a world leader in economic policy innovation. Begun during the dictatorship, these policies have been continued through several democratically elected administrations. With few exceptions, state enterprises have been privatized, by far the largest exception being CODELCO, the copper mining giant. The retirement, or pension plan, fund has been privatized, and international trade has been fostered through numerous free trade agreements. Chile has seen recurrent government budget surpluses that, for example, permitted the country to respond to the 2008/9 world economic crisis which had badly affected its export-dependent economy with a domestic stimulus program that will not unduly burden the country's medium-term position. In fact, since 2001 Chile has adhered to an explicit "structural fiscal rule," codified into law in 2006, that *requires* the government to run a small annual budget surplus over the business cycle. In this way, surpluses are accumulated during times of an expanding economy, to be used to prop up falling domestic demand during contraction, as in 2009.

Foreign direct investment is high, albeit focused on the extractive and utilities fields and often in the form of acquisitions of existing assets rather than the financing of new capital formation. Despite continuous, rapid growth, population-wide educational achievements are lacking, and income inequality and poverty rates still are high. The country will need to manage a transition to a more broad-based and inclusive social and economic policy framework.

As regards monetary policy, the central bank is independent, the currency floats freely on the world market, and interest policy is handled flexibly in light of economy-wide needs. There are no restrictions on foreign investors bringing funds in or repatriating profits. Consumer inflation is targeted at around 3 percent and generally held there (apart from exceptional periods, such as the 2008/9 crisis). All in all, Chile has made good policy choices, combined with consistent implementation.

Chapter 4: The global economy: International trade and finance

Section 4.1 deals with the accounting mechanics of recording the value of a country's international trade and the associated financial flows. Other sections deal with some of the relevant international trade and finance institutions, policies, and issues (4.2 to 4.5). Each section provides examples on how war and violence can affect international trade and finance. Because there is little that even a well-intentioned government of a violence-afflicted state can do about the mechanics of international trade and finance, much of the message of this chapter is less a "how-to" guide than it is a "beware of the pitfalls and position yourself accordingly." Section 4.6 concludes the chapter with two case studies.

4.1 The balance of payments

The Balance of Payments is an accounting framework that tracks the monetary value of a country's imports and exports of goods and services as well as the corresponding financial flows. The frameworks consists of credits (inflows) and debits (outflows) which must sum to zero. By definition, the balance of payments must actually balance.

Ordinarily divided into two parts—the current account and the financial and capital account—the **balance of payments** (BoP) is an accounting framework that countries use to track the monetary value of the import and export of goods and services as well as to track the corresponding financial flows. In essence, the BoP is a giant checkbook recording debit and credit entries for outgoing and incoming payments. It is best to learn about the mechanics by looking at an example. Table 4.1 reports BoP data for El Salvador for 2005. It is important to bear in mind that because this is the payments balance for *El Salvador*, all monetary entries are in terms of its currency. But because El Salvador has adopted the U.S. dollar as its own currency, its BoP entries are in U.S. dollars.

Table 4.1: Balance of Payments, El Salvador, 2005 (USD millions)

Item	Credit/exports USD-inflow (+) USD-demand	Debit/imports USD-outflow (-) USD-supply	Balance
1. Current account			-893
1.1 Merchandise	+3,429	-6,534	
1.2 Services (net)		- 82	
1.3 Income (net)		- 571	
1.4 Unilateral transfers (net)	+2,865		
2. Financial and capital account			+947
2.1 Capital transfers (net)	+ 94		
2.2 Public sector (net)	+ 329		
2.3 Private sector (net)	+ 470		
2.4 Change in net reserves (- = increase)	+ 59		
2.5 Other		- 5	
3. Statistical discrepancy		- 54	- 54
4. Balance [should be zero]	+7,246	-7,246	± 0

Source: Adapted from IMF (2009b); adjusted for rounding errors.

The merchandise entry in line 1.1 in Table 4.1 records the dollar value of the inflow and outflow of tangible goods into and out of El Salvador. When exports leave the country, corresponding payments flow into the country. Foreign purchasers of goods first demand dollars on the foreign exchange market and the dollars thus acquired then flow into El Salvador. This is treated as a checkbook credit item, hence the plus sign. Conversely, when El Salvador imports machine tools from Germany, dollars flow out of El Salvador to the foreign exchange markets to be converted into euros to pay the suppliers. The BoP treats this as a debit entry, with a minus sign (dollar outflow) attached. As may be seen in Table 4.1, for 2005 there was a USD3 billion net outflow related to merchandise trade (USD3,429 – USD6,534).

Trade in intangible items is referred to as services and are recorded in line 1.2. For example, the dollar value of insurance and transportation services bought abroad by Salvadorean firms is recorded here. Likewise, services for tourists (who bring *in* dollars) would be recorded in this line item. In 2005, the net effect of service trade amounted to minus USD82 million, the payments for which are dollar outflows (negative sign in the BoP). Firms and people in El Salvador

also make short-term overseas loans (of less than one year maturity) and take up such loans. Interest received (+ sign) or paid (– sign) is recorded as income (line 1.3). For 2005, the net effect was –USD571 million. The positive and negative entries for unilateral transfers also are netted out already. These resulted in a net inflow of dollars of USD2,865 million in 2005 (about 17 percent of GDP that year), mostly from Salvadoreans who work abroad and sent money back home to their families. Since the transaction takes place without a direct counter-transaction, the term unilateral (one-sided) transfer is used.

The current account reflects the monetary value of a country's international trade in goods and services. The financial and capital account records nontrade flows. Expect for a statistical discrepancy, the two accounts balance out.

When all the pluses and minuses in the **current account**—the monetary record of a country's international trade in goods and services—are summed up, the net result for 2005 was an outflow of dollars of USD893 million—the first item in the last numerical column of the Table—or about USD3.4 million per working day.

Foreign recipients must recycle this overhang of dollars in some way. Some quantity of dollars is used for the illegal trade, of narcotics for example, and dollars are also employed to conduct trade in the world energy markets but for the German producer selling machine tools to El Salvador there really are only two options. The first option is to keep the earned dollars and invest them in El Salvador, for example to build up a local distribution network, so that the outflow and inflow of dollars, even though separately recorded, cancels out. The second option is to sell the earned dollars (for euros) to whoever wants to buy them. Potential buyers include commercial and central banks. Ownership of the dollars would be transferred from one party to another. But it does not make much sense for a commercial or a central bank just to buy dollars and hold them. The purpose is to invest them, and the only sensible place to invest them is in or via the financial markets where the funds come from and where they can earn interest. In the end, therefore, the money the machine tool producer earns flows back to El Salvador (albeit with a change in ownership).[57]

The **financial and capital account** records this net flow-back of dollars via private and official channels. In 2005, this amounted to USD947 million. Relative to the current account, the statistical discrepancy in line 3 is USD54 million—often called errors and omissions—so that in line 4 all the various plus and minus signs sum to zero. By definition, *the balance of payments must always sum to zero*. (In spite of media and political usage to the contrary, there is no such thing as a balance of payments surplus or deficit. There can be a current account surplus, or deficit, and this must be balanced by corresponding, canceling flows in the financial and capital account.) Economists are not worried about the existence of a statistical discrepancy so long as it is (1) sometimes positive and sometimes negative over the years (suggesting random fluctuations) and (2) small relative to the sum total of currency inflows and outflows. For 2005, in El Salvador the sum of inflows and outflows amounted to about USD14,5000 million, so that the error of USD54 million is indeed small.

As to some of the specific items in the finance and capital account (line 2), the public sector entry for example largely reflects foreign aid inflows (grants). The private sector entry reflects inflows of dollars when foreign companies buy up companies in El Salvador (in the commercial banking sector for example). The change in net reserves refers to foreign exchange holdings of the central bank. When it *sells* dollars to acquire, say, euros, dollars flow *out* (minus sign) but the central bank's holdings of euros *increase*. Thus—counter-intuitive but logical within the BoP framework—an increase in holdings of foreign currency is reflected with a minus sign in the BoP. Conversely, a decrease of foreign currency holdings is reflected with a plus sign, as was the case in 2005.

As regards war, civil war, crime, and other forms of violence, balance of payments effects can show up in a variety of accounts and subaccounts. Needless to say, with porous borders and cash, much legal and illegal activity will simply not be captured in the accounting at all. The importance of remittances and foreign aid, both important consequences of the country's 1979-1991 civil war, was already hinted at. We take up some of the violence-related issues pertaining to trade and finance as reflected in the BoP in the next two sections.

4.2 Violence and international trade

THE BENEFITS OF TRADE. No one doubts the importance of trade *within* countries. For example, crossing jurisdictional borders when trade takes place between the states of New York and California in the United States ordinarily raises no problem at all. By analogy, the existence of political borders between the United States and Canada and between the United States and Mexico should raise no problems either. So long as trade is voluntary, it is mutually beneficial. If it were not, people would not trade. Although the net benefits of trade may not be shared equally between trading parties—there almost always are fierce political fights over its redistribution—and although some economic actors may select from a larger range of trading options than other economic agents, it is nonetheless true that from the bazaars of Asia to the village markets of Africa and the roadside stalls of Latin America, people intuitively understand the benefits of trade. Trade—local and long-distance—is as old as humanity. To enhance their own productivity, people use their labor power to specialize in only one or at most a very few economic activities in which they produce a surplus, to be traded against the surpluses that others produce. Today, virtually no one is entirely self-sufficient anymore. Both for those who have attained a modern, high standard of living, as well as for those who aspire to it, incessant, extensive, and dense trade is a universal necessity. What irks is not the presence of trade but its absence, or its manipulation so as to tweak the net benefits more to one side than the other.

DETERMINANTS OF TRADE. Prior to the invention of state borders—modern-day European borders for example were made firm not even 150 years ago and, with the development of the European Union, are already breaking down again—the borders that mattered were primarily geographical, not political. What mattered were benefits and costs, such as production, communication, and transportation costs. Geography bestows advantages and disadvantages with regard to the distribution of natural resources and of land-, freshwater-, and sea-dependent production possibilities (e.g., agronomy, aquiculture, raw material extraction, oceanic fishing, and sea-based raw materials). Put simply, it is unwise to try to produce tropical fruit north of the Arctic Circle or grow lettuce in the Sahel. In addition, geography helps determine transportation costs. It is no surprise that immediate neighbors trade at higher volumes with each other than they do with more distant partners, where distance includes considerations of topography (mountainous regions being more costly to leave and reach than flat terrain). Globalization is about spatial reach, and thus primarily a function of communication and transportation costs (along with rule of law to enforce property and contracts).

Emerging and developing economies still rely on trade in raw materials and agricultural products and increasingly also on remittances from migrant workers (e.g., Filipino nurses, Bangladeshi oil-field workers, or Mexican farmhands). As a rule, too, to facilitate internal and external trade, violence-afflicted states will need to rebuild and develop their infrastructure capacity, especially roads and sea- and airports, and revamp their institutional capacity to knowledgeably, effectively, and efficiently reintegrate into the world trading system and deal with a host of issues, including terms of trade, tariffs and customs, special economic zones, and overmuch dependency on sectors such as mining.

In this regard, statistics from the World Trade Organization (WTO) reveal two important facts. One is that international merchandise trade is dominated by neighborhood effects (intra-regional trade) and this, in turn, is highly correlated to transport infrastructure. The other is that world trade in manufactured items has grown much faster than trade in fuels and mining products which, in turn, have grown slightly faster than trade in agricultural products.[58] Both of these facts speak against infrastructure-poor, skill-poor, landlocked, war-torn states. Transportation services, especially tourism, have also grown hugely. Tourism is one of the largest industries in the world. For obvious reasons, dangerous locations attract little such trade even if the infrastructure is in place to host overseas visitors. Thus, transportation and safety go together, and it is probably no accident that terror organizations for example strike tourist-related targets so frequently (e.g., New York, London, Madrid, Bali, Egypt). Similarly, unexploded remnants of war—for instance uncleared land and naval mines, but also the danger posed by improvised explosive devices in still-active wars—can lead to land and sea-routes being excluded long-term from economic service as, for example, is still the case in Angola and Cambodia. Chechnya and Nagorno-Karabakh are among the most heavily mined regions in the world. There, as in Sri

Lanka, rebel forces appear to have placed mines as a kind of "fence" to secure and hold territory. Postwar of course that poses a problem as mines are easy, quick, and cheap to lay but difficult, time-consuming, and expensive to clear. All this suggests from an operational point of view that peace negotiations include talks and agreements regarding the postwar reconstruction of infrastructure for internal and external trade.

A NATURAL RESOURCE "CURSE"? In a 2008 report, the African Development Bank (AfDB) distinguished between risk factors that may *predispose* a community or state to experience large-scale violence and *triggers* that may release latent violence. The risk factors are the presence of natural resources; low income; low economic growth; ethnic antagonisms; neighborhood effects and external instigation of armed conflict; geography and large populations; a youth bulge, especially proportionally large numbers of young men between 15 to 29 years of age; political repression and corruption; competition for scarce resources; inequality; religious extremism; flawed or incomplete transition to democracy; high military expenditure and large armies; diasporas; colonialism and superpower rivalries; and the existence of previous conflicts.[59] Triggers include the attainment of political independence or statehood, regime change, and military coups; elections; neighboring conflicts; and other dramatic events. By themselves, none of these guarantee the outbreak of violence of course. For instance, Botswana is blessed with the presence of natural resource-wealth without having experienced large-scale violence in spite of achieving statehood, holding contested elections, and having large, neighbors prone to violence. Instead, the risk factors and triggers are extracted from comparative, cross-country statistical work but with the now firm (and always firm) understanding that the local historical context and the quality of policy- and decisionmaking matters.[60]

Nonetheless, in specific cases, the availability of high-value, stationary natural resources has encouraged capture, especially when, for example with the end of the Cold War, external financing for contesting parties dried up. The relevant equation is simple: No money, no war. Thus, when external financing fails (e.g., state sponsorship, diaspora financing), internal sources need to be accessed. This includes illegal harvesting of tropical timbers, diamond and other mining, or illicitly raising and selling crops with narcotic properties. Crime networks that trade in banned substances (e.g., chlorofluorocarbons) or endangered species, that engage in arms smuggling, money laundering, and human trafficking are probably very large in monetary terms. While in traditional state-on-state war, armed violence has disrupted trade,[61] in the post-Cold War era, consumers in advanced economies share responsibility in violence that takes place elsewhere insofar as the financing of organized crime and collective violence depends on global distribution and consumption networks and trade opportunities.[62] Efforts by global nongovernmental organizations to create voluntary regulatory frameworks, most famously the instigation by the London-based group Global Witness of what became the Kimberley Process Certification Scheme (KPCS), to impede the trade in conflict goods are themselves liable to be taken hostage to vested interests. Thus, KPCS has evolved into a producer and distributor cartel where violence-prone states such as India, Indonesia, Israel, and Zimbabwe were and are members in good standing, while a reformed, post-Charles Taylor Liberia for many years was not.[63]

TRADE IMPEDIMENTS. Establishing, or reestablishing, welfare-enhancing legitimate trade is important. Constructing, reconstructing, and upgrading trade-related physical infrastructure, streamlining border- and customs procedures, reducing or eliminating im/export taxes, pursuing trade opportunities especially with immediate neighbors to generate regional trade multiplier effects is crucial for economic growth within and across political jurisdictions. But global trade is biased against economically developing states. As mentioned, compared to official development assistance (ODA) of about USD100 billion in 2006,[64] global workers' remittances of USD300 billion in 2006[65] and foreign direct investments of over USD1,000 billion[66] are very large. Truly opening global markets probably would have an even larger impact. Dollar values of trade distortion policies are extremely complex to compute. But agricultural producer support estimates (PSEs) amounted for example to USD280 billion in 2004 for the OECD countries—three times the value of ODA—and estimates for the average annual level of United States' agricultural subsidies between 1995 and 2001 run between USD14 billion to USD66 billion. EU-15 agricultural subsidies run into the tens of billions of euros as well.[67] If these were eliminated, the benefits would accrue not solely to developing states—let alone solely to postwar

developing states—but a substantial portion would benefit them. In a word, the value of trade impediments is much higher than the value of aid made available to postwar/violence states. The blame for the substantial risk of war-renewal[68] on account of lack of economic growth thus lies in part with the protectionist policies of economically advanced economies, an issue again for example in the relation of the European Union with North African and Middle Eastern (MENA) countries in the wake of the 2011 uprisings, wars, and changes in MENA countries. Inasmuch as peace negotiations among conflicting parties in emerging and developing states frequently involve participation by advanced economies, raising the issue of negotiating unrestrained access to global markets may be helpful.

4.3 Violence and international finance

This section begins with some of the (ideal-type) mechanics of international finance before moving on to describe and discuss some dysfunctions and problems related to violence-afflicted states.

EXCHANGE RATES. Like food and drink, household goods, and other ordinary items, most currencies can be bought and sold on markets. The main economic purpose of trading currency is to facilitate the exchange of trade and services across currency boundaries. For example, a French tourist traveling to South Africa will need to supply euros in exchange for rand, the South African currency. Thus, the supply of euros (EUR) increases. Correspondingly, so does the demand for rand (ZAR). If the original exchange rate was ZAR12/EUR1 (or, taking the inverse, EUR0.083/ZAR1), then the extra supply of euros drives down its price so that its value drops. Now South Africans have to pay, say, only ten rand per euro (ZAR10/EUR1). Conversely, Europeans have to pay more euros per rand: EUR0.1/ZAR1. From South Africa's view, the consequence of the extra French tourist is that European goods become cheaper (one euro worth of European products now costs South Africa only 10 rand, instead of 12). The euro's **currency depreciation** is matched by the rand's corresponding **currency appreciation**. The complementary effect is that South African products become more expensive for Europeans, so that South African firms have a harder time selling products for export. The tourism sector's gain comes at the expense of all the other export sectors.[69]

Currency appreciation means that one unit of home currency can buy a larger amount of foreign currency than before. The home currency is said to have become "stronger." An appreciating currency eases imports but hinders exports as foreign products become relatively cheaper to home customers and home products relative more expensive to foreign customers.

In terms of the macroeconomic framework introduced in chapter 3, an appreciating currency is expected to diminish trade exports (X) and encourage trade imports (M), so that the net effect of (X-M) should result in a smaller trade surplus (or a larger trade deficit) which, in turn, would lead to declining aggregate demand and reduce economic growth and employment. Of course, one needs to keep in mind that the extra French tourist stimulates the local economy through demand for local accommodation, food, transportation, and so on. Currency appreciation or depreciation therefore amounts to a restructuring of the domestic economy—or, at a minimum, generates pressure to restructure—a tradeoff between and among economic sectors that stand to gain or to lose from currency fluctuations. Restructuring does not proceed smoothly and creates its own conflicts. Also, exchange rate depreciation may run into a constraint of insufficient transport infrastructure to make use of sudden external trade opportunities. Conversely, costly-to-maintain infrastructure may be idled by fast exchange appreciation.

As a rule, most countries favor a strong or high-value, appreciating currency. The reasons for this are at least two-fold. First, if South Africans can access European goods for ZAR10/EUR1 rather than for ZAR12 per euro's worth of European product, then cheaper imports benefit South African consumers and also importers of intermediate goods needed for production of goods and services. Together, this tends to put a lid on consumer and producer price inflation and leaves consumers with extra monies to spend on additional consumption (or saving). But cheaper imports can threaten domestic producers, and hence employment markets, and is of course not welcome when this occurs at a large scale. A stronger currency helps forestall these effects. The second reason why a high-value currency can be desirable

is because it will then compel domestic producers to become more efficient to defend (or regain) their domestic market despite import threats. A government that artificially cheapens its currency in effect subsidizes local producers, giving them the message that production efficiencies are not desired, or that inefficiencies will be tolerated. To deal with short-term exigencies this may be acceptable politically (and even economically) but not as a long- or even medium-term strategy. After all, economic growth—an important message of chapters 1, 2, and 3—depends on growing net investment and growing productivity. To undermine this process via currency manipulation is self-defeating.

A flexible exchange rate regime means that a country's monetary authorities normally will not intervene in the private markets that determine the value of the home country's currency.

EXCHANGE RATE REGIMES. The currency appreciation and depreciation mechanism just described requires that two currency regions maintain a **flexible exchange rate regime** toward each other whereby a currency's value is determined primarily by the market rather than by monetary authorities. These authorities—the central bank but sometimes the ministry of finance or another government agency—can participate in the selling and buying of currencies and thus influence the market but this tends to be done only in case of unusually large movements in currency values. Currency market intervention can also be done on a routine basis—called a **managed float**—in order to transition a particular currency from one exchange rate position to another more smoothly than the private market might do. In the extreme, governments can appear as buyers or sellers of their own currency with such regularity that in effect a **fixed exchange rate regime** results (at least within a narrow, desired band).[70] This amounts to an implicit price control and, despite notable exceptions—e.g., Denmark and Venezuela—is primarily used by fairly small island economies.

In the popular press, the impression is sometimes given that flexible exchange rates are, somehow, "good," and fixed exchange rates are "bad." This can be true, but so can the opposite: A flexible exchange rate regime can promote instability, just as a fixed exchange rate regime can fulfill macroeconomic stabilization functions. Much depends on the specific circumstances of the case. For example, if the government of a war-torn or postwar state (or any state, for that matter) decides to peg its currency to the euro or another widely traded, stable currency (e.g., Kosovo, Timor Leste, El Salvador) it hands monetary policy to the country whose currency it adopts. Thus, if a large amount of aid denominated in euros is made available, it would be exchanged at a fixed rate and spent domestically. To adopt a foreign currency as one's own or to stipulate a fixed exchange rate then amounts to the same thing: For all practical purposes, a **currency union** is created. The domestic currency cannot appreciate and neither undermine export prospects nor artificially cheapen imports. A credible fixed exchange rate policy provides a guarantee to foreign investors that private monies put into the country can be extracted again at an *a priori* known rate. Nonetheless, exchange rates that fail to keep pace with the changing conditions of the underlying economies themselves can become a source of macroeconomic instability. For example, after World War II, a system of fixed exchange rates was agreed among the world's major economies, and while successful for the period of reconstruction, the system collapsed spectacularly in 1971. Europe and Japan had recovered from the war and had rebuilt their economies. As their productivity improved—and as productivity improved at different rates within Europe—more competitive product pricing on the world market became possible. Adherence to a fixed exchange rate system under these conditions became unduly burdensome. It was like saying that an hour's worth of work must always be exchanged for the same hourly compensation, regardless of the worker's productivity.

COLONIAL-ERA CURRENCY UNIONS. The currencies of 12 states of the former French colonial empire in Central and West Africa still are tied to France (through the Central African CFA franc and the West African CFA franc, denoted XAF and XOF, respectively). Formerly fixed to the French franc, they now are fixed to the euro.[71] Created in 1945, post-World War II, the CFA was devalued repeatedly, either relative to the French franc, or with the French franc against other currencies. But on the whole the CFA value was so high as to subsidize (artificially cheapen) European imports for African urban elites and to penalize agro-export dependent farmers who lost market share, employment, and income opportunities when foreign customers switched to have their needs supplied from farmers elsewhere in the world. It is unrealistic to believe, for example, that Côte d'Ivoire or Cameroon—major cacao producers—can effectively compete

with Ghana or Nigeria (or Brazil or Indonesia, to round out the list of the world's top-six producers) when their exchange rates cannot adjust. In effect, the CFA countries should produce and sell more cacao but an artificially high CFA value induces importers to purchase from non-CFA countries. Thus, production structures are distorted all around the world.[72] The connection to lack of employment and economic growth—and therefore to the lack of peace—becomes evident.

FOREIGN CAPITAL FLOWS. Among other things, a flexible exchange rate regime implies that large amounts of foreign aid, including wages and salaries of aid workers, and remittances of migrants' overseas earnings increases the demand for the local currency, leading to its appreciation and making it more difficult for a violence-afflicted state to export products to earn the foreign exchange required to purchase needed imports, even as this makes it cheaper to import products that compete with local production and hence with local employment and economic growth. The consequent slack in domestic aggregate demand reduces price pressures and tends to hold inflation down, an important, welcome side-effect. But as the primary need is to rebuild productive economic activity, governments often resort to debt-financed government projects. The combined effect can be the crowding out of private by publicly-financed economic activity, large government budget deficits, and balance of payment difficulties. Fear of such an unsustainable economic strategy was the very reason for the IMF's erstwhile harsh, mandated policies of bringing government finances under control—through spending cuts—even if this damaged the achievement of domestic social objectives, production, employment, and growth (see section 3.4). This sort of painful structural adjustment can encourage eventual foreign direct investment (FDI) but if this takes too long to take effect, the social pain can lead to resumption of violent conflict. It is worth observing that in the immediate postviolence period, the likelihood of large private capital inflows is low at any rate, as potential investors wait to see how policy and the economic environment develop. What inflows there are will most likely be speculative money that might boost the exchange rate but create little productive capacity. Longer-term investment prospects are influenced by making profitable investments, which is influenced by the probabilities of social and political peace. For the IMF to drive an overly harsh bargain to compel macroeconomic stability at the risk of relapse into armed conflict will not attract investors. As mentioned (section 2.3), the IMF recognized this point by the late 1990s and now is more discriminating in its policy recommendations and the design of its aid packages.

CHOOSING A REGIME. No one exchange rate regime is always appropriate, and the choice of regime must be based on observant pragmatism, not on dogmatic adherence to a rule. In practice, different violence-afflicted states have chosen different avenues, from dollarization (the adoption of another state's currency), to dual-currency systems, to flexible rates, to interventionist managed floats. The presence or absence of currency black markets usually is a good indicator of whether undue policy is followed. Likewise, large speculative currency flows—betting for or against a particular currency—can indicate that policy adjustments may be needed.

Currency defense: The attempt by monetary authorities to maintain the foreign exchange value of the home currency.

VIOLENCE AND GLOBAL FINANCIAL MARKETS. Beyond these general mechanics and considerations, there are two specific causal connections between violence and exchange rate movements. One causal link goes from exchange rate fluctuations to violence; the other goes in the opposition direction. Perhaps the best-known case is that of the 1997 East Asian financial crisis where vast speculative currency movements destabilized entire economies, especially in Indonesia, Malaysia, the Philippines, Thailand, and South Korea. In short, suppose that the exchange rate of the Thai baht (THB) to the U.S. dollar (USD) is THB10/USD1 and also that currency speculators *expect* that the rate will change to THB20/USD1. A dollar bought by selling ten baht now can thus be sold again for twenty baht if the expectation comes true. If very many speculators start selling baht to snap up dollars cheaply, then the very act of concerted baht-selling drives down its value. The expectation becomes a self-fulfilling prophecy, and the baht collapses. (If the expectations turn out to be wrong, it is the speculators who lose money. The business risk is quite real.) The problem lies not so much in currency depreciation or appreciation per se, but in the rapidity of the changes. Thus, a speculatory attack that drives the baht down in value increases for example the cost of needed imports. While this depreciation should correspondingly make tourist visits and exports cheaper, economies do not adjust to reallocate

labor and production resources the very instant the currency markets heave. To deal with the extraordinary harm that can be done by the divergence between the physical economy and the financial economy, governments sometimes try to countermand currency movements. In the case of the Thai baht for instance this meant to meet the speculative selling of baht by *buying* them—with dollars from the central bank's foreign currency holdings. When these holdings—needed to pay for imports—are depleted, the **currency defense** has to be abandoned and the currency and, with it, the domestic economy collapses.

One question then is why speculators attack a currency in the first place. Why do they form expectations about a currency, one way or another? In the case of Thailand the view developed that the country had taken on too much real estate-related, U.S. dollar-denominated debt. At the time, the actual exchange was a fixed rate of THB25/USD1. In the belief that this fixed rate could not be maintained, speculators sold baht and bought dollars. The speculators were correct: the Thai government did not—could not—defend its currency indefinitely as it ran down its nearly USD50 billion dollar reserves. The currency was floated and eventually dropped to less than half its pre-crisis value, to THB56/USD1. (It has recovered since.) The IMF poured in billions of dollars in loans to the Thai government, putting "real money on the table" to play against the speculators which then left the currency alone because, in principle, the IMF pockets are very deep and the stakes can be raised. Speculators are not in business to lose money. But the damage was done. With the collapse of its dollar-pegged currency in July 1997, a vast financial and economic collapse followed, unleashing political tensions—and here is the connection to the potential for violence—that have not subsided to this day. The Thai government collapsed, a new constitution—although long in preparation—was introduced in October 1997, but then abrogated during a military coup in 2006.

In Malaysia, a vast economic crisis ensued within days of the Thai currency crisis. This resulted in a nasty political struggle over economic policy differences between Malaysia's ruler and its finance minister, a struggle also not settled to this day. While mass violence did not occur in the case of Thailand, nor in the case of Malaysia, the related currency collapse in Indonesia was directly associated with the end of the Suharto regime in 1998 and the beginning of the violent secession of Timor Leste (East Timor) in 1999 and the atrocious civil war that followed there and in the northwestern province of Aceh as well.

The opposite causation—from violence and war to currency collapse—has already been noted on several occasions, for example, in Zimbabwe but also in Germany following the failure to reconstitute its economy post-World War I. Even for the less spectacularly catastrophic cases of the post-WW II U.S. wars in Korea, Vietnam, the Persian Gulf, and Iraq and Afghanistan, the value of the U.S. currency—and with it, the economic effects via foreign trade on the domestic economy—appears to suffers regularly with the onset and conduct of war.[73] Financial historians point to the development of the domestic and global bond market as intricately linked to the need to finance war.[74] To finance war-related spending, governments can cut nonwar spending or print money, which is inflationary. Neither option is attractive and, in quick-thinking democracies at least, voters will not like either of these routes of action. Alternatively, governments can sell war bonds, borrowing money domestically. Voters gamble, in essence betting their savings that their government will win the war and eventually be able to repay the borrowed funds with interest. War bonds are financial votes of confidence, or lack thereof. But governments can also raise bond money from abroad. In the case of the United States and its wars in Afghanistan and Iraq in the 2000s, this money largely—and ironically—comes from China. The mechanism is that the United States is running a very large trade deficit with China, and the dollars that China thus earns are plowed back into the U.S. financial markets from which the U.S. government borrows to plug its gaping federal government budget deficit. Much of China's dollar reserves are held in **sovereign wealth funds** (SWFs). If China were to decide to sell off its massive dollar-holdings, the U.S. currency would be equally massively devalued. This danger is countered only by China's self-interested desire not to undermine the value of these holdings. Like private business speculators, there is no reason why it would want to lose money. But even an orderly unloading of dollars, a shift by China into currency holdings other than U.S. dollars, would still put downward pressure on the dollar—and upward pressure on the currencies into which China would substitute.

4.4 Institutions and policies

A brief overview of IMF and World Bank policy history was provided in chapter 3; aid policy was addressed in chapter 3 as well. Here, the focus is placed on a sampling of global trade and finance institutions, public and private (formal and informal), and their relation to conflict potential or conflict resolution. Formed in 1995 and headquartered in Geneva, Switzerland, the World Trade Organization (WTO) is an international organization composed of member states that have signed and ratified various legally binding agreements regarding their conduct in the international trade of goods and services and the protection of intellectual property rights. The WTO secretariat administers trade agreements, serves as a forum for trade negotiations, operates a well-used dispute settlement mechanism (over 300 cases in its first 10 years of existence), reviews members' trade policies, and provides technical assistance and support to emerging and developing economies. By mid-July 2008, 153 states were members; about 30 more were negotiating accession. On its web site, the WTO makes explicit reference to negotiation and peaceful dispute resolution to reduce the risk of "military conflict."[75]

To promote trade while extricating themselves from their own overly complex laws, rules, and regulations, many states have set up special economic zones, or export processing or free trade zones (SEZs; EPZs; FTZs). These amount to economic experiments and are location or product or industry specific. Forms of governance range from fully public to fully private and any mix in-between. Shenzhen, in China, and Subic Bay, in the Philippines, are prominent examples. Many countries have multiple such zones, India in particular. Inasmuch as the establishment of an SEZ requires the acquisition of special physical sites and the construction of appropriate transportation and other infrastructure, conflict, including violent conflict, with local communities can emerge. A prominent case involved Tata Motors of India which had planned to locate a production facility for its Nano automobile in the Singur SEZ. Disputes over land acquisition, population displacement, fair land compensation, and other issues led Tata to abandon the project in late 2008 and to locate elsewhere in India.

A very different kind of institution is for example the Extractive Industries Transparency Initiative (EITI), an attempt to bring transparency and accountability to the billions of dollars generated in the global trade of raw materials extracted from Earth. This stemmed, in part, from a publish-what-you-pay campaign that sought to compel companies to publish the sums paid to states for natural resource extraction (natural resource rents) so that government use of these funds could be tracked and corruption and fund mismanagement be reduced. This has led to related follow-on efforts, for instance the development of a Natural Resource Charter—"a set of economic principles for governments and societies on how to use the opportunities created by natural resources effectively for development"—which involves Ernesto Zedillo, former president of Mexico and now an economics professor at Yale University, Michael Spence, an economics Nobel laureate and professor at Stanford University, and Paul Collier, an economist at Oxford University and former Director of Development Research at the World Bank.

On the financial side, the Bank for International Settlement (BIS), headquartered in Basel, Switzerland, serves as a bank for central banks. Formed in 1930, it describes itself as "the world's oldest international financial organisation." Its original function was to collect, administer, and distribute reparation payments imposed on Germany with the Treaty of Versailles following World War I. Since then, BIS has evolved into a statistics gathering, research, and policy deliberation, advice, and coordination venue for central bankers. Nonetheless, because severe disarray in global financial markets can lead to political and military conflict, and vice versa, BIS's work is never far removed from considerations of the link or links between violence and economy. A search of the BIS web site for keywords such as war, crime, and violence yields many references to research papers and, even more so, to policy speeches. A 2007 BIS working paper shows the drastic, permanent economic dislocation caused by financial crises, wars, and civil wars.[76] Its authors find that the failure of emerging and developing economies to converge to the level of advanced economies can be wholly explained by the frequency and severity of such crises. The policy implication clearly relates to crisis prevention or, at least, avoidance.

In the wake of the finance-induced global economic crisis of 2009, researchers and policymakers seek to reform the

global financial architecture—in part, in conjunction with the BIS—and, with it, to broaden global macroeconomic and financial policy coordination. In the mid-1970s, at the invitation of the then-president of France, an informal gathering of the leaders of France, Germany, Italy, Japan, the United Kingdom, and the United States, soon joined by Canada, evolved into an annual G7 economic policy coordination meeting. Later, Russia, the EU, and representatives of international financial institutions joined the meeting. But in September 2009, at the Pittsburgh meeting, the gathering was opened up to the G20, a group that includes Brazil, China, India, Indonesia, Mexico, South Africa, and others. It had become clear enough that the relative economic heft of the G7 had shrunk and that policy coordination required talks among an expanded set of participants.

Because billions of people still have no access to banking services, informal financial networks are in fact extensive (e.g., *hawala*). Because they are informal, they can and have been abused to move illicitly gained funds or funds intended for illicit purposes. The Financial Action Task Force (FATF), established as one outcome of the 1989 G7 meeting, is an intergovernmental body, headquartered in Paris, "whose purpose is the development and promotion of national and international policies to combat money laundering and terrorist financing." It has produced nearly 50 "recommendations" that effectively serve as performance standards for its over 30 state members. Among other work, FATF published in April 2009 an anti-money laundering (AML) and counter-terrorist financing (CTF) Evaluations and Assessments Handbook for Countries and Assessors. Assessment teams visit members and evaluate and assess compliance with the FATF standards. The resulting reports are publicly available on the FATF web site.

Although FATF deals in part with informal and illegal money flows, many of its recommendations pertain to local, national, and supranational laws, rules, and effective enforcement regarding commercial banking, and certainly the very large global financial firms have directly and indirectly participated and cooperated in the formulation of FATF's work. In regard to global trade and financials flows, however, one of the challenges concerns how to deal with *Fortune 500*-type, truly globe-spanning giant corporations that each employ hundreds of thousands and even millions of people in virtually every state on Earth and the sum of whose intra-firm activity accounts for a large fraction of global trade and financial flows. Complicity in, or at least insensitivity to, human rights abuses is alleged, and sometimes documented, both for wholly private corporations as well as for state-run companies (e.g., Chinese companies in Africa). But on the whole, companies and their suppliers, employees, and customers are victims of violence much more often than they are perpetrators. They much prefer to deal with single, universal standards, rather than with a multiplicity of standard setters, standards, and costly audits. Indeed, businesses speak of audit fatigue as they try to comply with numerous mandatory and voluntary standards, some local, some national, some global, issued by different agencies and authorities. In this regard, the International Accounting Standards Board (IASB), in London, for example issues International Financial Reporting Standard (IFRS). The objective of the body is to create global standards, globally followed and globally enforced. Yet much of the business world is approaching the topics of peace and security solely from a risk- and liability management perspective, rather than from a more engaged and forward-looking violence prevention and avoidance perspective. Thus, the documented risk of civil war relapse for instance should encourage both peace negotiators and the major corporations or councils of corporations such as a national Chambers of Commerce to talk with each other before any peace deal is signed.

4.5 Policy lessons and tips

Lesson 4.1: The effects of war, civil war, and crime do affect a country's balance of payments, the value of its currency, and its trade position, and therefore inflation, employment, and economic growth.

Lesson 4.2: Voluntary trade is mutually beneficial. This is as true within borders as across borders.

Lesson 4.3: Statistics from the World Trade Organization reveal two important facts. One is that international merchandise trade is dominated by neighborhood effects (intra-regional trade) and this, in turn, is highly correlated to transport infrastructure. The other is that world trade in manufactured items has

grown much faster than trade in fuels and mining products which, in turn, have grown slightly faster than trade in agricultural products. Both facts speak against infrastructure-poor, skill-poor, landlocked, violence-affected states. Hence, shortcomings in these areas need to be rectified quickly.

Lesson 4.4: There is no natural resource curse per se. Nonetheless, failure to diversify can create undue, fragile natural resource dependency and can also serve as a focal point of violent conflict to finance war.

Lesson 4.5: Foreign aid is small relative to workers' remittances and foreign direct investment. Freeing global trade from protectionism would release far more "aid" to violence-afflicted states than does official development assistance.

Lesson 4.6: There is no one right foreign exchange regime. But proper currency management is important to guard against black currency markets or speculative currency attacks that can plunge states into episodes of severe violence. Conversely, war adversely affects currency values and economic performance.

Lesson 4.7: The connections between violence and currencies, and currencies and violence are surprisingly deep—from colonial-era currency unions to currency speculation and war bonds—and can carry both decades-long lasting economic decline and bondage as well as explode with a suddenness and rapidity against which there is virtually no defense other than foresight and preventive anticipation.

Lesson 4.8: Very many public, private, and public-private global organizations exist in the field of international trade and finance. With the exception of the IMF and the World Bank, they have not, on the whole, directly engaged with the topic of interpersonal and collective violence. They should.

4.6 Failure and success: Two case studies

In terms of the chapter's lessons, balance of payments and finance aspects were discussed with case material in the chapter itself. In this section, both cases focus a bit more on trade.

Failure: Fiji

Figure 4.1: Inflation- and purchasing power-adjusted per capita GDP, consumption, and investment, Fiji (1960-2009) (I$; base year 2005).
Source: Penn World Table 7.

For nearly one hundred years, from 1874 to 1970, the United Kingdom was Fiji's colonial overlord. To work Fijian sugar fields, Britain moved contract labor from another one of their colonies, India, to Fiji. (By the early 2000s, over 40 percent of the population was of Indian descent.) This planted the seeds of post-independence ethnic-based strife on the islands. Two coups in 1987 unseated then-recently elected ethnic-Indian dominated governments. Subsequently, tens of thousands of Fijians of Indian heritage emigrated, leaving the economy short of skilled labor resources, adversely affecting labor productivity. The political uncertainties resulting from the 1987 coups were not settled until 1997. During this time period military expenditure absorbed at times well over ten percent of the annual government budget, artificially boosting GDP. Then, in 2000, another coup occurred, which resulted in international economic and political penalties, including the erection of trade barriers for this export-dependent state. Exchange rate (and price) controls further discouraged trade and foreign direct investment as well. In 2005, unrest arose again, resulting in yet another coup d'etat in 2006. Today, uncertainties remain with regard to land-tenure and other issues and the political situation is ultimately unresolved.

In terms of this chapter's lessons, the islands of Fiji are small and distant. This implies insufficient economies of

scale for domestic manufacturing. Its near neighbors also are distant and small islands, with the same economies of scale problem. Thus, both local and neighborhood trade effects are small to begin with. Distances to the continents are large and imply high transportation costs for exports and imports and impede industrial diversification. Consequently, Fiji's economy is natural-resource based, mostly tourism, fisheries, forest products, and commercial agriculture—especially the export-dependent sugar cane sector—and some mining, notably of gold deposits. Civil strife, violence, and war accentuate these natural difficulties.

Due to collapsing investment, Fiji's economy declined for about 7 years prior to the 1987 coups. The economy is generally subject to sharp swings in performance (see Figure 4.1). Declining sugar prices, despite subsidies offered by the European Union, drastic fluctuations in tourist revenues even when that sector is shored up with periodic currency devaluations aimed at the Australian and New Zealand tourist markets, low and declining foreign direct investment, and continuous skilled labor emigration due to the political stand-offs are the main factors that explain Fiji's uninspiring economic performance in the 2000s. Figure 4.1 shows clearly that while the level of investment increased during the 1960s, 1970s, and into the early 1980s, it has never since recovered. The share of investment in GDP is declining, slowly eroding the physical asset base of the country. That GDP and consumption appear to have risen since 1990 is due to military expenditure, the taking up of unsustainable debt, and the periodic bolstering of the fickle tourism trade. Neither the fiscal nor monetary policy stance of the current government is sustainable. Annual budget deficits and cumulative debt are very high and a much needed structural reform and diversification of the economy has not happened. Debasing the currency to attract tourists and foster relatively low value-added exports instead of seeking currency stability and investment in human and public and private physical capital to increase productivity has proved to be an inappropriate and inadequate economic strategy.

Success: Vietnam

Figure 4.2: Inflation- and purchasing power-adjusted per capita GDP, consumption, and investment, Vietnam (1970-2009) (I$; base year 2005).
Source: Penn World Table 7.

In contrast to Fiji, Vietnam has been much more economically stable and successful in recent years. War in Vietnam had lasted for over a century, going back to the 1860s, when the country became a French plantation colony. Independence struggles, World Wars I and II, and two follow-on wars lasted until 1976 with the conclusion of the second Indochina war. By then, millions of people were injured or dead or, as for Fiji, had left the country which led to a depletion of labor resources. Vietnam invaded Cambodia in 1978 and was itself briefly invaded by China in 1979, so that the war periods did not end until that year.

By 1980, when Vietnam's wars had ended, political, economic, and cultural reunification proved difficult and led to few economic advances. Fiji's per capita GDP (I$3,593) was nearly six times as large as Vietnam's (I$657). But by 2009, the roughly I$3,000 gap had been cut in half to about I$1,5000. Moreover, whereas in 1980, Fiji's GDP composition showed some balance between investment and consumption while Vietnam's was all consumption (that is, asset depletion or debt-accumulation via borrowing), by 2009 the situation has reversed: Vietnam is balanced and Fijians live on borrowed money.

Nonetheless, Vietnam's transition from war-induced devastation to relative success was not automatic. As Figure 4.2 shows, the improvement in the country's economic fortune begins not with 1976 but with 1990. The reason for this is that in 1986, Vietnam's leadership—as in China beforehand—approved the introduction of a socialist-oriented version of free market economics. Importantly, not only did structural reform per se take place, but it took place in the context

of economic diversification across agriculture, industry, and services, making the country less vulnerable to shocks in any one sector. The end of the Cold War and subsequent boom in globalization added its own, fortunate impetus. Coffee cultivation and exports grew, as did the production and export of cashews, rice, black pepper, and other agricultural products. Even so, foreign direct investment in low-skill manufacturing as well as in high-skill, high-technology fields has proved very attractive, sustained, and successful, so that the share of agriculture in GDP has declined and that of industry has increased. Rural labor resources migrate to urban centers where industrial development has been able to absorb them, at least in economic terms. More recently, offshore oil exploration has commenced. Thus, even though heavily dependent on international trade and finance, Vietnam has done much better in this regard than has Fiji.

In terms of the chapter's trade-related lessons, Vietnam's recent success is driven by making use of its domestic, neighborhood, and global trade opportunities. This is likely to continue as Chinese wages and manufacturing costs rise and contract manufacturing shifts south to Vietnam. But it took a long-delayed political decision to enable these opportunities to come to the fore. Importantly, the 1997 East Asian financial crisis that devastated Indonesia, Thailand, and other states in the region had little effect on Vietnam's economy. Undoubtedly, as with the pre-democratic regimes in Hong Kong, Singapore, South Korea, and Taiwan in the 1970s, political stability, combined with an economic opening-up, is a key factor explaining the attraction of private business interests to Vietnam. Interestingly, across a range of global rankings, such as competitiveness, human development, ease of doing business, economic freedom, perception of corruption, and other indices, Vietnam does not rank high. This suggests that its economy is riding along a narrow channel of politically facilitated trade opportunities that may not take an independent and sustainable hold. For example, by late 2007, about 40 percent of GDP was generated through state-owned enterprises (SOEs). While Vietnam's leaders have done an admirable job of controlled economic growth aimed at securing economic and social stability, a potential downside is that of inadvertently maneuvering into an economic corner where policy flexibility is restricted to a set of unpalatable options.

Chapter 5: Designing and promoting peace

> "The end of war does not necessarily imply economic security, and there are risks. First, problems of micro insecurity, with armed inhabitants desensitized to violence ... Second, macro insecurity, the considerable risk that war will be resumed ... A third type of risk is the fiscal shocks resulting from the war to peace transition." (Dunne, 2006, p. 40).

> "... of conflicts that have ended since 1989, those that ended in peace agreements have a considerably lower rate of [war] recurrence (14 percent) than the overall rate of 47 percent. Conflicts that ended in outright victory for one side had a recurrence rate of 45 percent, and all of those with an ambiguous ending recurred. This is consistent with other findings which show that peace accords supported by the United Nations and generous development assistance produce better outcomes than military victories alone" (UNDP, 2008, p. 17).

The estimates vary but war recurrence—or war after war—is common. On the order of one-fifth to one-half of all concluded recent civil wars restart within a few years' time. Recidivism is high.[77] Risk factors for war recurrence that need to be addressed in the design of peace include "low per capita income, weak economic growth, the presence of socioeconomic horizontal inequalities and abundant high-value natural resources ... [even more so] in the presence of high unemployment, especially among youth." For example, **horizontal inequality**—inequality among culturally distinct groups rather than within them—depends on "how inclusive the post-conflict political system is; whether or not conflict itself has remedied such inequalities, as in the case of successful ethno-regional secession; whether or not previously excluded or marginalized groups or regions have gained more equitable economic and political standing from peace agreements and their implementation; whether prior injustices associated with real and perceived discrimination against an aggrieved group are satisfactorily addressed; [and] how the dynamics of inter-group relations are affected by the conditions of post-conflict peacebuilding and development." Peace treaties therefore should do more than pay homage to the free market and make reference to a sound, stable, public sector-enabled macroeconomic framework. These things themselves need to be placed within a higher-order level of economic principles of institutional or treaty design, as addressed in sections 5.1 and 5.2. Third-party intervention via diplomatic, military, or foreign aid channels is not always for the better: Third parties have vested interests. How these interests, stemming from an underlying incentive structure, are related to the higher-level design principles is discussed in section 5.3. The remaining three sections—5.4, 5.5, and 5.6—conclude the chapter with brief considerations of institutions and policies, policy lessons and tips, and two brief case studies.[78]

5.1 The economics of design

Some fields of economics deal with societal institutions, their design, and their mechanics.[79] These have been employed for example to design revenue-maximizing auctions by which a government allocates portions of the electromagnetic spectrum for use to competing cell phone and radio and TV-broadcast companies. Another example comes from thinking about the design of default options. For instance, in the U.S. American retirement system most employees whose companies offer retirement contribution benefits (defined contributions) have to opt into the retirement contribution benefit plan. If they do, a portion of their bi-weekly or monthly income is placed into tax-advantaged stock, bond, real-estate, or other funds of their choosing, as is an additional amount provided by the employer. If a specific employee does not opt in, the paycheck is not reduced either. Neither does the employer contribute. As it turns out, under the *opt in* requirement a surprisingly large percentage of employees fail to do so. As a consequence, they forgo the steady accumulation of retirement savings, they forgo tax advantages, and they forgo contributions from their employers as well. If, however, the design is changed so that employees must *opt out*, most employees again fail to do so. Simple inertia

or default options appear to explain people's choice behavior: If they are not already in the retirement plan, they do not do anything to join. Conversely, if they are in the plan, they do nothing to leave it.[80]

Choice architecture: The self-conscious and deliberate design of incentives that inhibit undesired and promote desired individual behavior such that a social system as a whole moves toward a desired outcome.

In a similar way, one challenge of peace economics is to understand both peace failures and peace successes from a design perspective—what in the field of industrial organization is referred to as the *structure*, *behavior*, *performance* triplet (or rules, strategies, and outcomes)—and to invent new mechanisms by which to arrive at the desired outcome of stable peace within and between societies. Structure—or **choice architecture**, as Thaler and Sunstein call it[81]—refers to the self-conscious and deliberate design of an incentive or set of incentives that inhibits undesired and promotes desired individual behavior, guiding the choices people make in such a way that a social system as a whole moves toward a desired outcome. For the retirement example, a simple switch from opt-in to opt-out contract provisions changes choices (in this case through inertial default behavior) and gets the desired outcome of more people saving for their retirement years.

Rent-seeking: Generating unearned income by seeking to rewrite political, economic, and cultural rules in one's favor rather than earning income through fair competitive and productive effort.

Put this way, it becomes clear just why people, firms, parties, or vested interests in general jostle to massage the rules and why influence-seeking, lobbying, bribery, and corruption (**rent-seeking**) are so widespread. There is a powerfully compelling logic in the chain which, read backward, says that social outcomes are generated by aggregations of individual behaviors and that these, in turn, stem from the ground rules. To understand that which is or to design that which is to be (peace, for instance), one must turn to the crux of the matter and create new, or modify existing, rules under which choices are made. The difficulty lies not in understanding behavior per se—there is no question that natural and legal persons respond to incentives—but in understanding which rules and which combination of rules lead to which behavioral responses by large numbers of interacting, self-interested parties and with which ultimate outcomes. The difficulty lies in complexity, especially of social systems where deliberate experimentation is difficult or impossible to carry out.

It may be argued that the history of humankind itself amounts to a set of giant natural experiments, that certain lessons have been learned from the politically, culturally, and economically successful societies that have emerged from these natural experiments, and that these lessons amalgamate today into cries for democracy, the rule of law, and free markets economics.[82] Even so, the quality of these outcomes varies across societies. The question is what are the structural differences that, in one case, produce high quality, long-lasting, and stable peace and, in the other case, do not?[83] In a way, what we are searching for is a kind of market regulation, a setting-down of mutually agreed, enforceable rules by which society lives, a reconstruction of a social contract. What are the key elements of designing stable peace, and can they empirically be shown to hold?

5.2 Social contract and the economics of designing peace

In chapter 1, we introduced the notion of social capital. We said that although neither agreed definition nor measurement exist, social capital might be viewed as an asset that consists of the social and communal networks humans build. We referred to examples such as the bank notes that serve as money and enhance productivity by reducing transaction costs. Of course bank notes are not, themselves, a social or communal network. Instead, they greatly facilitate the building of such networks, e.g., by enhancing trade over vast geographic spaces and over long periods of time (e.g., work done today that is compensated at the end of a growing season). At a deeper level, their use relies on the collective faith in the imputed value of what otherwise are inherently worthless colored bits of paper. Social capital, although it may find

expression in formal and informal institutions and their products (e.g., bank notes), thus is more akin to intangibles such as trust between and among members of a community, and toward strangers.[84] Together, these networks represent a stock of achievements that, once destroyed, can be extremely difficult to rebuild. In their absence, production, markets, and income-earning opportunities diminish.

Actually, bank notes are a good example of this. Today, virtually all societies use **fiat money**, inherently worthless paper, that with seeming magic become valuable "money" not on the say-so of a governing authority but on the large-scale acceptance of its users. It is the community of users that endow money with value, that ascribe value to paper. Today, money is a social fiction, a communal faith, or a "collective thought" as contemporary Buddhist philosopher Ken McLeod calls it.[85] Once the faith in the value of this kind of money dissipates, people flee into other assets such as precious metals, gold in particular. Hence the fearful specter of hyperinflation: Once faith in the value of money is lost, no seller wants to receive it, even as buyers inundate them with it. The economy simultaneously overflows with and yet runs out of its most important lubricant. (And, as noted elsewhere in this text, war economies tend to suffer from inflation and the loss of collective faith in the affected currency more than do peaceful economies.)

Social contract: a framework of widely agreed rules, of social cohesion, of trust, along with external or self-policing enforcing institutions.

If social capital is the epiphenomenon, social contract lies at the base of collective thought. Mansoob Murshed observes that "some societies despite having conditions predisposing them to civil war, such as horizontal inequality, polarization, and natural resource rents, do not descend into conflict," and that behind a veil of surface factors "other factors [are] at work, specifically a weakening of what may be described as the social contract following classical thinkers such as Hobbes, Locke, and Rousseau among others." He continues:

> "...even if rents from capturable resources do constitute a sizeable prize, violent conflict is unlikely to take hold if a country has a framework of widely agreed rules, both formal and informal, that govern the allocation of resources, including resource rents, and the peaceful settlement of grievances. A viable social contract can be sufficient to restrain, if not eliminate, opportunistic behavior such as large-scale theft of resource rents, and the violent expression of grievance" (Murshed, 2009, p. 35).

What is required, then, is the reconstitution of "a framework of widely agreed rules," of social cohesion, of an economy of trust, and of trust in trust-enforcing institutions. Murshed then connects the quality of social contract to economic achievement:

> "... higher per capita income implies a better functioning social contract, institutions, and state capacity. Yet economic development, even if it eventually diminishes motives for conflict, may at first increase violence in poor institutional settings, if growth is not pro-poor and disadvantages some groups ..." (Murshed, 2009, p. 36).

The World Bank's recent *World Development Report 2011* has quasi-officially endorsed these views in its call for peace, justice, and jobs, noting that underneath it all one requires the reconstitution of people's confidence and trust in social institutions. But neither Murshed's article nor the Bank's *Report* are particularly specific on what we called, in Figure 1.4, the enabling policy conditions in regard to social contract. In the pages that follow, we lay out some relevant principles that designers of peace agreements should not fail to meet. They cannot guarantee peace, but they can make failure less likely.

* * * * *

From systems control theory, three requirements are known.[86] There must be agreement on goals, there must be ways

to measure goal compliance or deviation, and there must exist a correction mechanism. So we have the triplet of goals, feedback, and enforcement. It is also known that such a system can fail in various ways (e.g., there is no agreement on goals, or there is no timely measurements, or resources are insufficient to take corrective action). Further, it is known what types of institutions are necessary to prevent system failure (namely, those that foster goal agreement, those that provide measurement, etc.) The crucial question is how to construct these institutions in the first place so that they fulfill their intended function. In principle, private markets provide these institutions but it turns out that peacemaking and peacekeeping are subject to severe market failure so that one needs to think about the construction of collective institutions to deliver peace services. Evidently, these too can fail.

However, a number of rules of thumb-like design principles that should be followed in building such institutions are available.[87] If followed, they should explain the successful making and the resilient keeping of peace. Conversely, their absence or violation should explain the continuance or recurrence of war. The principles—steps toward a **choice architecture of peace**— should be viewed as a mutually reinforcing package. Applying selected principles will diminish prospects for peace.

THE PRINCIPLE OF CHANGING PAYOFFS. To induce people toward cooperate action, one must minimize incentives to defect and maximize incentives to cooperate. A number of wars have been prolonged unnecessarily because the incentives to defect from peace negotiations were large. For example, in Angola, in the 1990s UNITA's ability to mine and sell raw diamonds created cash flow. Similarly, the Angolan government's ability to extract and sell crude oil kept it well-financed. Both sides were flush with money and had no financial reason to settle. (Compare this to the Mozambican case where both sides settled when they *did* run out of money.[88]) One way to change the payoffs would have been to contribute (or deny) superior military intelligence and arms to one side, thus changing the balance of force. Assuming a benevolent intervener, this kind of third-party intervention would have changed the structure of the conflict so that side A would have been forced to offer negotiation. If side B then did not reciprocate in a fair-minded fashion, the intervener could have withdrawn to reimpose the cost of fighting on both parties.[89] (In practice the third-party will not always be neutral; see section 5.3.)

THE PRINCIPLE OF CREATING VESTED INTERESTS AND LEADERSHIP. If two players themselves are unable to change the relevant payoffs, an external force (a leader) may need to intervene. A **leader** is an actor able to organize changes in the payoff structure and/or the rules of the game. But the intervention of a potential leader needs to be rewarded with its own positive payoffs, for why else should a leader intervene?[90] This can be illustrated with the case of Rwanda in 1994 where little was done until after several hundred thousands people had been killed. There was no sufficient vested interest to prevent the budding crisis: The war had been going on since 1990. A contrary example is that of Haiti in the early 1990s. When large numbers of refugee arrived on Florida's shores, the U.S. government was prompted to intervene because it had a vested interest in keeping people out of the United States. Similarly, in the Balkan wars of the 1990s, the initial vested interest was to contain the slaughter within the Balkans. It was only when large numbers of refugees did spill into the richer, West European nations, and when there was a danger of the violence spreading throughout the neighborhood, that the EU—and ultimately NATO—intervened. Therefore, one way to foster peace is to deliberately engineer and trigger preventive rather than curative vested interests.[91]

THE PRINCIPLE OF GRADUATED RECIPROCITY AND CLARITY. Research has shown that a strategy called **tit-for-tat** can be highly successful and stable. It works as follows. Suppose there are two players, A and B. In the first interaction A will cooperate with B. Thereafter, A always copies what B did in the prior round of play. If B cooperated, so will A in the next round. If B defected from cooperation, so will A in the next round. For example, if party B to a conflict made a concession, so will A in the next round. If party B failed to make a follow-on concession, neither will A on its next turn. This strategy's unmistakable clarity and automaticity builds reputation effects and credible commitments to cooperate. It also builds credible threats to defect. Either way, there is no second-guessing about what A will do conditional on what B has done. Moreover, the tit-for-tat strategy holds no grudge and forgives a past defection (noncooperation) by B: Party A readily resumes cooperation once party B cooperates again. Although tit-for-tat is a

forgiving strategy, if B misunderstands or mistrusts A, there can be set in motion a series of rounds of mutual defection. Therefore, scholars recommend that A assume a graduated response strategy and show limited provocability. This means that if B defects, so will A but by something less than full defection. For example, if B fails to make a follow-on concession, A offers only a minor follow-on concession in turn. If B then continues to defect, A will gradually move toward full defection also. Thus B loses all the benefits to be had from cooperation.

A perhaps surprising example is provided by the Libyan uprising in spring and summer of 2011, and of the refusal of Libya's leader, Muammar Gaddafi, to resign from power. Given the design of the options, Gaddafi can either fight to death or face capture and trial before the International Criminal Court in The Hague. No doubt anticipating the adverse outcome of a trial, Gaddafi continues to fight, with horrible consequences for the peace and welfare of the people. A graduated response might instead provide an exit option by which a state would volunteer to receive Gaddafi as an exilee. If he does not accept, then the stronger response is played. But the design of the ICC statues no longer permits the exile option as member states are obligated to capture and turn over indicted persons to the ICC.

THE PRINCIPLE OF REPEATED, SMALL STEPS. Breaking a problem into smaller parcels allows parties to interact with one another repeatedly. Instead of a single, big peace negotiation, one may have to have many little ones. This increases the frequency of meetings and lengthens the duration of the overall interaction. If any one small round can be driven to a cooperative outcome, both sides risk losing gains already obtained and risk forfeiting future gains to be had if they fail to continue to cooperate in subsequent rounds. The more the parties can be brought to see the ultimate goal by taking small steps instead of giant leaps, the more likely it is that they will succeed. Contrast the lack of progress in the all-or-nothing approach to the Israeli-Arab conflict with the formation and gradual expansion of what eventually became the European Union. An all-or-nothing approach can be a ploy to prevent negotiations from succeeding. An intervener would need to be able convince or compel conflicting parties to engage in small talks.

THE PRINCIPLE OF COMMON VALUE-FORMATION. In a 1978 book of essays, Thomas Schelling reports on a game he played with his children. Take a checker board, populate it with a random but thorough mix of black-colored and white-colored play pieces, and leave a few squares empty so that pieces can be moved about. Then stipulate a rule, for example that pieces "like" to be surrounded by some minimum number of same-colored pieces. That is, each piece has a preference for *some* neighborhood mixing, just not to the extent that the neighborhood becomes dominated with opposite-colored pieces. The maximum degree of acceptable opposite-color homogeneity is determined by the rule: For instance, for a center piece no more than 5 out of 8 neighbors can be of the opposite color and, for an edge piece no more than 3 out of 5. If a neighborhood exceeds this limit, then the piece in question moves to an empty square where the rule would be met. For each of a number of varying degrees of homogeneity, Schelling found that after a series of moves to meet the rule, distinctly black and white neighborhoods developed. What appears to be *forced segregation* may be the outcome of *voluntary aggregation*. Like and like attract each other but when they do, they also appear to form to opposing groups.

If one can change the pieces' preferences, say so that each piece "thinks" of itself as gray-colored, then *any* degree of mixing is perfectly acceptable and any moves that do take place do so for reasons other than color (or identity). The lesson is that one needs to find and foster that which binds conflicting parties rather than that which divides them.[92] The transcendent formation of common preferences produces voluntary aggregations of like-minded actors who are likely to cooperate for mutual benefit. This applies to individuals, groups, and states, and can account for the proclamations of former enemies who during negotiations learn that they share values such as leadership, political savvy, and care for their respective citizens, and may even end up with personal respect for each other.[93] This principle also explains why culturally similar nations tend to cooperate well, disagreements notwithstanding. Similarities in political and economic systems, religious beliefs, language, and cultural heritage do not guarantee but tend to forge reliable bonds across states to form clusters of cooperative behavior. Large group size (large numbers of conflicting parties) by itself will not necessarily make collective action on common value-formation impossible; neither will small group size always promote it. Examples of attempts at common value-formation are, in Europe, the Organization for Security and Cooperation in Europe (OSCE) and, in Asia, ASEAN.

THE PRINCIPLE OF AUTHENTIC AUTHORITY. Those affected by **collective action**—negotiating a peace agreement involves multiple people, and is a collective rather than a private action—must have a voice in shaping the decision. This raises issues of authentic representation that vests authority in peace negotiators. This form of representation may or may not be Western-style democracy. It includes items such as people's right to organize and assemble, to address and solve their own problems, and to search for and find indigenous solutions to what may be unique problems.[94] In the absence of voice (authentic representation), peace may not be stable. Disaffected groups may continue to fight if they believe that their concerns have not been heard, let alone addressed. To prevent disaffection and violent conflict, majorities may need to grant minimum rights to others such as freedom to exercise one's religious beliefs. Because of its focus on representation, this principle allows for continuous self-transformation of institutions as old problems dissipate and new problems arise that affected communities need to address. All voices need to be heard, and satisfactory solutions can be surprisingly varied.[95]

THE PRINCIPLE OF SUBSIDIARITY. Global institutions can be inimical to achieving desired outcomes.[96] The principle of subsidiarity addresses this point. Subsidiarity means that problems be addressed at the minimum level necessary, and that higher-level, external involvement not be the automatic first-response to a lower-level problem. Kick solutions "up," not "down." Many conflicts are best resolved at the local level without involving an outside intervener. In case of internal dissension, one would expect that a state would have a vested interest in its own continued coherence and viability. For example, in the case of conflagrations following the introduction of Islamic law in some Nigerian provinces one can argue that the federal state of Nigeria has the obligation to intervene in the provinces before the violence grows out of hand and leads to civil war. Only if a violent conflict in one province threatens to affect a community beyond that province, should the next-larger level of the overall community become involved. In a similar vein, the Global Commission on Drug Policy argued in June 2011 that the in other respects remarkable achievement of the 1961 United Nations Single Convention on Narcotic Drugs, to which member states are legally bound to adhere, has become an impediment to experimentation with alternative policies. Under the Convention's current design, a single member can hold all others "hostage" and prevent desirable changes to adapt to changing circumstances. Changing the institutional design to accommodate "bottom-up" experiences through regular review conferences would be helpful.[97]

THE PRINCIPLE OF CONFLICT RESOLUTION MECHANISMS. Peacemaking and peacekeeping rest on agreements, but disagreements over agreements arise and can lead to war-resumption. To keep disagreements from escalating, the parties must have recourse to conflict resolution mechanisms such as mediation, arbitration, and a system of courts. The fragility or utter absence of such mechanisms weakens peacemaking and peacekeeping and increases the likelihood of failure. Any peace treaty would need to provide for speedy, low-cost access to dispute resolution venues. External interveners can help provide such mechanisms. One example is given by the legally binding treaty documents that make up the World Trade Organization (see chapter 4). Explicit mention is made of its dispute-resolution mechanism as providing a forum to air and settle differences when otherwise they might have resulted in recourse to harmful measures. The continuing exclusion of Turkey from the EU and its institutions serve as a counter-example. Tensions between Greece and Turkey thus have one less avenue of redress, moreover one that might be handled with the principle of common-value formation if Turkey were to be an EU member. Of course, parties must agree in the first place to seek external resolution when bi-lateral talks fail and must be prevented from reneging. For example, Cambodia and Thailand have fought border skirmishes over land adjacent to a revered temple site, Preah Vihear, and sought resolution via presentations at the International Court of Justice in The Hague. To prevent the parties from reneging, other principles must be in force as well: The principles do not come singly, but as a package.

THE PRINCIPLE OF INFORMATION AND MONITORING. Information reduces uncertainty and can help create shared values. It leads to better forecasts of expected benefits and costs and therefore of behavioral choices. By the same token, misinformation can create uncertainty, false certainty, division of values, and worse forecasts. Indeed, players may have a vested interest in creating misinformation. The news industry can be of assistance to peacemaking and peacekeeping, and maintenance of a diverse, free press is of great importance. **Monitoring** refers to the ability to collect, process, and

verify information. It is the ability to effectively proctor the actions of the other player. This requires funds and skills. For example, advanced, industrialized countries have on occasion shared results of their outer space-based satellite monitoring with other states. Such government monitoring is excludable, relying on the self-interest of the government in possession of such tools. In contrast, commercial satellite networks could monitor and publicize troop and equipment movements, as it is in commercial companies' own interest to create a pricing structure that is *inclusive*, so that relevant information can easily be bought and sold. This would encourage negotiation, given that wars are more difficult to win when information about the sides' strengths and movements is readily available. The objection that this would help entrench repressive governments or help guerilla movements overthrow legitimate governments does not hold when this principle is combined with other principles such as those of creating vested interests, authentic authority, and accountability.

THE PRINCIPLE OF ACCOUNTABILITY. Information has the advantage of naming individuals responsible for war actions and war crimes. Today, it is virtually impossible for leaders to remain anonymous in making war. With that comes accountability before world opinion. But mere knowledge of who did what is not sufficient. Accountability implies enforcement. A permanent International Criminal Court is better than the uncertainty involved in whether or not the U.N. might create a special tribunal as violent conflicts erupt. A court involves the principles of information, reciprocity, and clarity: Any future war-maker knows ahead of time that he can be called to account for his actions. (As noted, hoever, a no-exit type of strict accountability can lead to an undesirable side-effect, as when a war criminal will rather fight to the death than submit to the ICC.) Accountability has another aspect to it, one that links it to the authentic authority principle. One way to frustrate peace negotiations and to prolong violence or war is to send junior officials (or to frequently change the negotiators) who are not authorized to make credible, binding commitments. There must be insistence on continuity in representation precisely so that a small set of persons can be held accountable even for their actions in negotiations.

THE PRINCIPLE OF SELF-POLICING ENFORCEMENT. There are two types of enforcement, **external policing** and **self-policing** (through a self-reinforcing contract). External policing suffers from various problems. For example, U.N. peacekeeping forces are financed on a mission-by-mission basis and are often too late and too feeble to intervene effectively in conflicts as one U.N. member waits on another member to commit troops or funds to the mission at hand. For these reasons, self-policing enforcement is preferable. This speaks to a design of incentives, a choice architecture, such that players prefer to cooperate rather than to defect. One reason why trade is so hugely successful is that the prospect of a *future* trade contract makes parties willing to fulfill the current contract to the satisfaction of the other party. The "shadow of the future" (Axelrod, 1984) looms large to influence present behavior. Self-policing or self-reinforcement is linked to the monitoring and reciprocity principles. If monitoring shows that player B defects, a self-policing agreement may induce player A to also defect and thereby withhold future gains from B. In this regard, it is generally more efficient and effective to supply parties with the ability to monitor each other than to rely on external monitoring. Exceptions occur when for example economies of scale (the nesting principle) make it worthwhile to outsource at least part of the monitoring function.

THE PRINCIPLE OF NESTING. Economies of scale, of learning, and of scope may favor the nesting of institutions which foster coordination and complementarities. The current U.N. system serves as an example of economies of scope as a large variety of specialized functions are (generally loosely) organized under the auspices of a joint umbrella organization. Peace negotiations are unlikely to show economies of scale—each case is different—but peacekeeping likely would (common equipment, basing, lift capacity, emergency supply depots, etc., all are fixed costs). This suggests the development of a standing global peacekeeping force utilizing, for example, private military companies that already protect humanitarian aid workers. This might be combined with an automaticity principle that requires automatic action, which may be an external intervention, when pre-specified trigger points are reached. For example, the constitution of the African Union (AU) mandates that a nondemocratic replacement of government of any of its member states results in automatic membership suspension, and this mandate has been applied repeatedly.[98]

* * * * *

Rather than guaranteeing peace success, this list of twelve design principles can help prevent peace failure. No order of priority has been proposed or yet found; indeed, the order of priority may be case specific. Several of the principles apply to macroeconomics in violence-afflicted states. For example, a fiscal policy that rewards constructive participation in societal rebuilding rather than withholds benefits changes the payoffs for society's members and also links to the common value-formation principle. Long-term rather than short-term investment or aid creates external vested interests in successful peace outcomes (e.g., China in Africa). Separating functions of policy setting, fiscal disbursement, and service delivery goes with the principle of subsidiarity (devolution of decisionmaking to the local level) and that of self-policing enforcement (through service customers' ability to complain to the disbursement agency which can then select an alternative supplier). It is important for peace negotiators and aides to recognize that not only is the mere presence of references to (macro)economics in peace treaties important but that these references themselves obey a higher-order set of principles based on economics. As Murshed (2009) suggests, under the same set of challenging conditions, some states succumb to violence while others do not. And as the UNDP (2008) study points out, some states experience relatively strong economic growth after the end of war, but others do not. Much of the difference has to do with the quality of the decisionmaking and decision-implementing institutions and much of this, in turn, has to do with whether the design of these institutions coheres with the higher-order principles outlined here. The World Bank's 2011 *World Development Report* takes a step in the right direction when it reports at length on institutional legitimacy (authentic authority), inclusive-enough coalitions (formation of common values), and the need for sustained external support (creating vested interests). Our list is a bit more comprehensive and, more importantly, systematic but in either case it is clear that the needed research has only just begun.

5.3 Third-party intervention[99]

Third-party intervention (e.g., via diplomatic, military, or foreign aid channels) is no straightforward thing. The Afghan and Iraqi wars (since 2001 and 2003, respectively) show that intervention, even if well-intentioned, can make life worse for violence-afflicted populations. Diplomatic involvement in the peace process can be vital. In some cases military support is necessary just to bring the parties to the negotiating table and keep them there. In Sierra Leone, the involvement of British armed forces was important in forcing rebel leaders to negotiate. As discussed, aid can also be important, as may aid conditionality (the threat, or promise, of changing payoffs).[100]

Third parties are never just benevolent, however. They have interests and will bring these to bear: Cuba intervened in Angola; the United States in Vietnam, Russia in Afghanistan, NATO in the Balkans and in Libya. They may be more supportive of one side than the other, may push their own agenda in negotiations, and may tie aid to their own interests. Forced negotiation can legitimize the ruling positions of those who may have started armed conflict in the first place and may marginalize civil society (violating the principle of authentic authority).[101]

The quantitative academic literature on third-party intervention—theoretical and empirical—is only beginning to flourish. A useful distinction is between **unilateral third-party intervention** and **multilateral third-party intervention**. A key insight is that multilateral intervention requires solving its *own* collective action problem. The likelihood is that only minimum levels of intervention will be agreed, perhaps too weak or fragile to assist the parties (and populations) in conflict. In contrast, unilateral intervention does not require collective decisionmaking.[102] What, then, are its determinants? One author suggests eight relevant factors. First, there must be *information* that something is amiss, and there are two aspects to this: ignorance and apathy. Without information (ignorance) about a neighbor in conflict, nonconflict neighbors cannot do anything at all, and any humanitarian instinct that might exist cannot be activated. But even with information, nothing might be done on account of incapacity (or apathy). Second, bothersome (i.e., costly) *noise* that spills over to nonconflict neighbors is a form of information. For example, refugees moving from one state

to another impose costs on the recipient state (Afghans in Pakistan, for instance). The more noise, the more one might expect neighbors to be willing to intervene in some fashion to help stop the refugee flow. Third, one would expect that the less the *distance*, the more informed and caring the neighbors are. Conversely, the more distant, the less informed or caring they are. Fourth, distance is mediated when *relations* exist. Colonial ties or immigrant groups whose national origin lies in violence-afflicted states will make the former colonial power or the immigrant-host country more receptive to provide aid (e.g., France regularly intervenes in its now sovereign former West and Central African colonies). Fifth, the more the *din* from several neighbors, the more one is distracted from any one of them and the less one is inclined or able to offer assistance. Sixth, what would motivate one to come to a neighbor's aid also depends on the *noise at home*. The more in number or intensity are the domestic problems, the less one is willing or able to come to one's neighbor's rescue. Seventh, there is economic and strategic *self-interest* such as the protection of trade routes or of obtaining international stature (e.g., being seen as engaging in peacekeeping actions). And eighth, for a number of states, a motivation for intervention is the *opportunity* for military (peacekeeping) training in real-time conditions.

Note that an item like humanitarian goodwill is not among the determining factors; neither is budgetary cost. Peacekeeping tends to be done for rather more hard-edged reasons. Take Canada as an example. It first burst onto the peacekeeping scene in 1956 to help a splintering NATO alliance that had been undermined when Washington told Paris and London to get out of the Suez region. Likewise, in 1960, when Belgium threatened to pull out of NATO over the unrest in Congo, Canada sent peacekeepers to that troubled African region. The peacekeeping in Cyprus, to which Canada contributed, was related to keeping NATO members Greece and Turkey at bay.[103] As to the budgetary cost of peacekeeping, despite protestations to the contrary, it is generally trivial—at least in relation to the cost of maintaining standing, national armies.

If nothing else, this list can serve as a rapid assessment checklist to evaluate the likelihood of whether a third-party state will or will not intervene to help create and guarantee the stability of peace, and to gauge the sincerity, and therefore desirability, of accepting or not accepting offers of help.

5.4 Institutions and policies

In section 2.4, we suggested that any community consists of three societies, that commercial, civil, and political society (or economics, culture, and politics) form a three-legged stool. Commercial society allocates resources via markets; civil society allocates resources via moral suasion; and political society allocates resources via power. The 3-legged stool, we wrote, should be well-balanced. This applies to peacemaking and peacekeeping as well. The peacekeeping-related apparatus of political society includes institutions such as the United Nations (U.N.), the Organization for Security and Cooperation in Europe (OSCE), the North Atlantic Treaty Organization (NATO), the Association of Southeast Asian Nations (ASEAN), the Economic Community of West African States (ECOWAS), the Southern African Development Community (SADC), and other institutions as well. The African Union and the European Union—respectively, the AU and the EU—likewise are animals of political society: All are agreements among equal sovereigns.

Policies of these supranational institutions are constrained by a charter or founding articles that members agree to. The primary purpose of the United Nations as an international body is to prevent war from arising *between* states. Even so, by design the United Nations is constrained by the veto powers of the five permanent members of its 15-member Security Council. As for *internal* armed conflict, U.N. action is mostly postwar as there are no standing peacekeeping forces and each mission is debated on a case-by-case basis and, if approved, is time-limited in nature. Forces and funds for each mission need to be separately found. The U.N.'s program (or regular) budget for the two-year budget cycle 2010-2011 was USD5.16 billion, or about USD2.6 per year. Other, separately funded U.N. activities add about another USD15 billion per year—peacekeeping for instance about USD7.3 billion in fiscal year 2010/11—so that the entirely of the U.N.'s annual budget is around USD20 billion. (In contrast the New York City public school system budget was USD22 billion, in fiscal year 2009/10.)

Headquartered in Vienna, the OSCE (www.osce.org) is a regional security organization under Article VIII of the U.N. Charter, with 56 member states (as of June 2011). It works on early warning, conflict prevention, crisis management, and postconflict rehabilitation. It is organized at the heads of state level, convened for occasional summits, and hosts an annual meeting of foreign ministers. With a budget of about EUR150 million, it employs nearly 3,000 staff members and has 17 field operations, mostly in Southeast and Central Europe and Central Asia. A weekly Forum for Security Cooperation is held (in Vienna, Austria), a talking shop for issues pertaining to arms control and confidence- and security-building measures.

SADC is the Southern African Development Community (www.sadc.int) and has 15 members, as does ECOWAS, the Economic Community of West African States (www.ecowas.int). Ostensibly economic development organizations organized at the political level—in contrast say to the African Development Bank which is a regional development finance body—SADC and ECOWAS both have peace and security-related functions and organs. For instance, SADC, whose origins go back to 1980 and is headquartered in Gaborane, Botswana, has an Organ on Politics, Defence and Security Cooperation, whose "strategic indicative plan" includes political, defense, state security, and public security sectors, and also includes a Regional Peacekeeping Training Center (located, ironically, in Zimbabwe). ECOWAS, with roots going back to 1975, has a peace and security function as well, and is institutionally run through a Commission, a Community Parliament, a Court of Justice, and an investment and development bank. In regard to peace and security, it sports a Peace Exchange Forum, an (Early) Warning and Response Network, a Small Arms Control Program, a Standby Force, and has issued an Election Monitoring Declaration.

In Asia, ASEAN is the primary regional body of interest (www.aseansec.org). Headquartered in Jakarta, Indonesia, it now has ten members and sees itself as a political security, economic, and cultural development organization. Formed by five members in 1967 in Bangkok, Thailand, it has recently been reorganized and is based on a new Charter, entered into force on 15 December 2008. For the first time, the new charter provides legal status and an institutional framework for ASEAN and its work. For implementation by 2015, an ASEAN Political-Security Community (APSC) is planned in which members "pledge to rely exclusively on peaceful processes in the settlement of intra-regional differences and regard their security as fundamentally linked to one another and bound by geographic location, common vision and objectives."[104] A related organization is the ASEAN Regional Forum (www.aseanregionalforum.org) which includes non-ASEAN states. Established in 1993, its two-fold purpose is "to foster constructive dialogue and consultation on political and security issues of common interest and concern; and to make significant contributions to efforts towards confidence-building and preventive diplomacy in the Asia-Pacific region."[105] ASEAN also holds ministerial-level meetings on defense and on transnational crime.

All these organizations recognize that politics (peace and security), economics, and culture are related and linked. But as interstate organizations they usually do not and cannot do much about strife *within* member states. This limitation does not apply to civil society organizations such as the International Committee of the Red Cross (ICRC) and numerous other nongovernmental organizations such as International Alert, the International Business Leaders Forum, Global Witness, or Amnesty International or even to individual negotiators such as Martti Ahtisaari (Nobel Peace Prize laureate, 2008). Nonetheless, the ICRC for instance has struggled to shift its orientation from "old" to "new" wars and threats (Kaldor, 2006). Founded by a businessman in the 1850s, it was astonishingly successful to convene states to agree what became the Geneva Conventions. These laid down rules to guide behavior in interstate war, for example rules regarding the treatment of the wounded and of prisoners of war. But as security threats and wars shifted toward civil war, terrorism, nacro- and human trafficking, the Geneva Conventions do not apply. Into the breech sprang groups such as Médecins Sans Frontières, or MSF (Nobel Peace Prize recipient, 1999). While their humanitarian emergency assistance functions are far removed from economics, it is in part economic matters that makes their existence necessary. Global Witness has played an important whistle-blower function when, in the 1990s, it single-handedly created the topic of conflict diamonds. By sullying producers', distributors', and retailers' carefully cultivated image of diamonds and romantic bliss with a counter-image of having "blood on your hands (or finger)," it put pressure on the entire supply chain such that

all the parties involved—companies, states, and NGOs—eventually agreed to the Kimberley Process Certification Scheme (KPSC), a voluntary organization that certifies the supposedly conflict-free origin of diamonds consumers can purchase.[106]

In terms of the principles of success and failure outlined in section 5.2, the existence of Global Witness points to the principles of information, monitoring, and accountability and, in lesser degree, to that of self-policing enforcement. In contrast, MSF's work does not appear to be related to any of the principles. Its existence—important as it is on its own terms—does not drive conflicting parties toward peace, nor does it increase the chances for peace being stable once reached. The ICRC started out, in a way, as an agency that helped states foster common values (on how to fight) and functions mainly in terms of the information, monitoring, and accountability principles although, like Global Witness, it is a form of media-driven accountability in the court of world opinion, a moral accountability rather than one with consequential bite for war-criminals. At present, only sovereign states can provide for that, for example through the U.N.'s International Criminal Court in The Hague. The political society organizations also are the ones that far more readily than others are able to address the principles of changing payoffs, of creating vested interests and leadership, of graduated reciprocity and clarity, and of fostering and engaging in repeated, small steps. But often they do so only after civil society organizations have put an need or misdeed on the table in the first place. It bears repeating that there is no necessary order of priority or magnitude of importance between and among these principles. They form a package. All are important, and the more of these principles are explicitly recognized in the negotiation and design of peace agreements, the higher the likely probability of stable peace—and vice versa.

As regards commercial society, the stakes and incentives are very different. Businesses like revenue and dislike cost. Unfortunately for them, the cost of complying with rules and regulations across some 200 state entities, and tens of thousands of political entities at subnational and supranational levels is very costly. So is the cost of war, civil war, and crime as suppliers, employees, customers, and markets suffer. Whereas in the past, business and war were associated with terms such as merchants of death, increasingly global companies recognize that their self-interest lies in fostering peace, not war. For example, PepsiCo's CEO Indra Nooyi has been outspoken in this regard: The absence of peace is not a useful business proposition: No markets, no money, no profit.

As business and economic globalization continues to be driven by reductions in transport and communications costs, it is likely that business leaders will take an increasing interest in peace and security, if only to protect and grow markets. Thus, peace negotiators should not overlook the constructive role that consultation with business leaders whose companies operate or might operate in postwar areas or violence-riven zones. In this regard, it is of interest that the International Organization for Standardization (www.iso.org)—whose motto is "International Standards for Business, Government and Society"—is increasingly involved in standard-setting outside of the narrow technical product specification arena in which it started (e.g., ISO film speed standards). For example, ISO9000 sets quality management standards and ISO14000 sets environmental management standards. Now security standards in regard to biometrics, cyber-security, and "societal security" in cases of industrial accidents, and similar security issues pertaining to company operations are in active discussion. While these are mainly risk management-related aspects, and at least in part designed to limit exposure to legal liability that might arise from industrial accidents, it is not inconceivable that, some years into the future, a family of standards may emerge on company behavior in regard to complicity in human rights violations, relations to security forces, and the like that, for now, are restricted to the political and civil society legs of the 3-legged stool. One remarkable aspect of ISO is that it is a commercial society organization. It consists of standards-setting national institutes and these, in turn, in many states are private-sector organizations. Standardization lowers costs, improves product and service quality, and thereby attracts customers that provide revenue. As local, national, and global companies are hurt by violence, ISO may well develop an ISO Security Standard—say, ISO50000—that specifies how companies engage in and deal with public policy issues such as peace and (in)security. In terms of our principles, that of creating vested (commercial) interests beyond the state toward a boundary-free world would apply, as would that of common value-formation (among global business leaders who are becoming ever more divorced from the quaintness

of nationality and national identity), and that of creating conflict resolution mechanisms. The International Chamber of Commerce—not a Chamber of Chambers, but an organization of global corporations—for instance sports its own conflict mediation, arbitration, and court system whose rulings are accepted as binding by many state judicial systems. Thus, the global commercial sector sometimes can and does transcend state boundaries as if it, itself, were a sovereign, rule-setting, and rule-enforcing player.

We conclude by quoting the leaders of three world standards organizations—the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO), and the International Telecommunication Union (ITU)—on the occasion of the year 2000 World Standards Day:

> "Without agreement, there can be no peace. And without peace, there can be no lasting prosperity. International Standards are an essential tool in mankind's continuing efforts to achieve more of both."[107]

That the commercial sector has largely been left out of considerations in peace negotiations is a mistake. Fortunately, it is one that can easily be rectified.

5.5 Policy lessons and tips

Lesson 5.1: The (re)constitution and maintenance of a well-functioning social contract lies at the heart of internally and externally peaceful societies. In the end, societies have to agree on norms, standards, and rules of social behavior.

Lesson 5.2: We do not have principles of peace that guarantee success. But we do have principles that, if not followed, might spell failure. They are: the principle of changing payoffs; of creating vested interests and leadership; of graduated reciprocity and clarity; of engaging in repeated small steps; of common value-formation; of authentic authority; of subsidiarity; of conflict resolution mechanisms; of information and monitoring; of accountability; of self-policing enforcement; and of nesting.

Lesson 5.3: Multilateral third-party intervention is plagued by free-riding behavior. Likely factors determining the net benefit of unilateral third-party intervention include information, noise, distance, relations, din, noise at home, self-interest, and opportunity. This rapid assessment list can help to gauge the sincerity, and desirability, of accepting or not accepting offers of help.

Lesson 5.4: Political, civil, and commercial society all need to be engaged in peacemaking and peacekeeping. To restrict economic (and other) aspects of peace treaty negotiations and postwar reconstruction to political players alone without consultation with civil and commercial society addresses only the short-term immediacy of silencing guns rather than the long-term necessity of rebuilding social foundations for civic and commercial (re)engagement. It risks undermining the social contract.

Figure 5.1: Inflation- and purchasing power-adjusted per capita GDP, consumption, and investment, Nepal, 1960-2009 (base year 2005).
Source: Penn World Table 7.

5.6 Failure and success: Two case studies

Failure: Nepal

Nepal's convoluted post-World War II history is entangled, in part, with China's incorporation of Tibet and India's consequent reaction to counteract this by seeking influence in and through Nepal. King Mahendra (r. 1955-1972) abandoned an incipient

experiment with multiparty democracy in 1959. The data series in Figure 5.1 starts in 1960. King Bihendra (r. 1972-2001) was compelled in 1989 to agree to constitutional changes that led to the seating of a multiparty parliament in 1991. In 1996, a Maoist insurgency movement began a ten-year period of armed violence, attempting to replace the royal parliamentary system with a socialist republic. The figure shows that investment stalled during this period. Following the murder of Bihendra, due to an intra-family squabble, King Gyanendra inherited the throne (r. 2001-2006). In 2005, he dismissed government and parliament, took executive power, and declared rule under martial law. GDP, consumption, and investment fell. By this time a stalemate had developed between Maoist forces and government troops. Also, the king's moves inspired broad opposition. Parliamentary leaders fled to India, formed a seven-party alliance (SPA), and signed a 12-point understanding with the Maoist party. They all agreed to unseat the king and form a democracy with contested elections in which all could compete for votes. Reinstated in 2006, parliament voted to abolish the monarchy. This obtained in May 2008, after an election the prior month resulted in the Maoists obtaining the largest number of seats in a Constituent Assembly. Under Maoist leadership, the assembly voted to end monarchy and declare the country a federal republic. The Maoists formed the new government. This new government, however, was toppled in May 2009 and a Marxist-Leninist party took power. The initial post-Monarchy political transition and peace negotiations were insufficiently inclusive and left various interests disaffected enough to restart violence. At a minimum, the Nepali peace efforts violated the principles of authentic authority and common-values formation. Unrest continues as of June 2011.

Economically, the country's real per capita growth rate in measured economic output was a mere 0.75 percent between 1961 and 1969, then 0.95% in the 1970s, and 1.59%, 1.92%, and 1.64% in the 1980s, 1990s, and 2000s, respectively. The economy is propped up in large part by hundreds of thousands of Nepalis working abroad and remitting funds back home and also by Nepal's foreign exchange earnings for U.N. peacekeeping services rendered. From 1988 to 2000, the share of military expenditure in GDP was one percentage point or less and, since, has at times climbed to over two percentage points, so that Nepal's civilian GDP growth rate is smaller than the 1.64% of the 2000s suggests. Even at that rate, however, the Nepalese economy would need about 43 years to double in size to about I$2,400 per capita—only half of what its more peaceable neighbor Bhutan already achieved in 2009 (I$4,600).

In terms of the lessons of this chapter, Nepal still is waiting for a reconstructed social contract, one inclusive-enough, as the World Bank would call it, to reflect genuine authentic authority vested in government so that it can commence with the business of governing. There were and are plenty of vested outside interest at play, e.g., India and China, but not pulling on the string in the same direction and also entwined with subcontinental power plays (Burma, Kashmir-Pakistan, Afghanistan) and internal problems (Tibet, northeast India). Finally, Nepal being a small economy wedged in-between two giants, the commercial appears not to have been engaged. Big monies are to be made elsewhere, and so business does not have overmuch at stake, especially in regard to the risk of possibly offending Nepal's bigger neighbors.

Figure 5.2: Inflation- and purchasing power-adjusted per capita GDP (pre/post-apartheid), consumption, and investment, South Africa, 1950-2009 (base year 2005). *Source*: Penn World Table 7.

Success: South Africa

South Africa's regime of racial segregation and discrimination collapsed with the end of the Cold War. By April 1994, a wholesale political change—mostly peaceful—had taken place in the country. The African National Congress (ANC) won the elections in April of that year and Nelson Mandela became the country's President.

As may be seen in Figure 5.2, from 1950 to 1980, South Africa experienced steady economic growth along a linear trend line. Undoubtedly, the trend line would have had a steeper slope if the country's nonwhite population had not been suppressed and excluded from accumulating human capital and contribute

more productively to the economy. Growth was uneven: about 1.8% per capita per year in the 1950s, 3.2% in the 1960s, and 1.1% in the 1970s. Following the Soweto uprising and 1976 and, in 1977, the murder of Steve Biko, a student and anti-apartheid activist, black South African labor unions became more active and restive, and the international political community placed economic sanctions on South Africa. By 1980, GDP growth stalled. Investment per person during the decade of the 1980s fell drastically and per capita consumption flattened out. For the remainder of the apartheid years, inflation-adjusted per capita GDP experienced an average annual per capita GDP decline of 1.4% from 1981 to 1993 (inclusive), mostly driven by declining investment. Per capita GDP in 1993 was about equal to what it had been in 1969—that is nearly a quarter century without economic progress.

The domestic business community played an important, but ill-recognized and underreported, role in the political transition. According to International Alert, already in 1985 a delegation of business and media representatives met with African National Congress leaders in Zambia. This meeting, and follow-ups, had a dual effect. White business acknowledged the ANC's political legitimacy long before white politics did, and it also introduced the ANC—which had embraced a "socialist" economy ideology—to "capitalist," free-market economics. A bargain was struck which both parties adhered to: Business pushed for political change, and in time the ANC reciprocated with pursuing economic policies that, while aimed at improving the lot of the poor, nonetheless recognized that private business interests can generate employment, income, and tax revenue. Figure 5.2 shows that following the 1994 transition, the country is moving back toward the growth trend line it left in 1980. From 1994 to 2009, growth averaged nearly 2.6% per person per year. However, the figure also reveals that investment levels did not increase for a period of about ten years post-apartheid and only in 2009 began to reach levels last seen 30 years before.

Whereas the country is a success in terms of managing the political transition peacefully, it may yet turn to failure on account of extraordinarily high unemployment rates and crime levels, abysmal failures in its primary and secondary education system and in its continuing HIV/AIDS health crisis. A relentless focus on asset (re)building to build the economy will be required to secure political stability in years to come.

As regards this chapter's lessons, it would appear that a sense of a broad cross-racial social contract does exist, even as individuals pursue opportunities to engage in deviant behavior (i.e., crime). The difficulty lies not lie with the social contract but with its enforcement. Multilateral third-party intervention, driven by the moral outrage of global civil society, and agreed by global business and global policymakers, helped bring apartheid down, although the final straw did not come until the collapse of the Soviet empire that undermined the last illusory vestiges of self-justification and anti-communist rhetoric within the Boer white community that had held sway over the reins of power. Today, most South Africans appear to share common values and pride in their country, despite difficulties in their daily lives, and democracy (authentic authority), if not problem-free, is deemed to work.

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1. See http://www.usip.org/files/file/resources/collections/peace_agreements/mozambique_1991-92.pdf [accessed 20 July 2009]. A 2006 "World Bank/UNDP-commissioned survey found that provisions related to macroeconomic policies, financial, business, investment and labour-regulatory frameworks and regional wealth allocation increased significantly between the periods 1990-1998 and 1999-2006, as have references to social welfare, education, health, and employment policy" (UNDP, 2008, p. 8).

2. Exceptions such as Israel or the United States notwithstanding, correlations between Global Peace Index scores and a large variety of economic and social performance indicators suggest a strong connection between relative economic achievement and a society's internal and external peacefulness.

3. Stiglitz, Sen, and Fitoussi (2009).

4. On different classifications of violence, see Appendix A.

5. The war periods are: Cambodia, 1970-1991; El Salvador, 1979-1991; Guatemala, 1965-1995; Nicaragua, 1978-1990; Mozambique, 1976-1992; Rwanda, 1990-1994; Uganda, 1979-1991.

6. Stohl, Schroeder, Smith (2007, p. 56).

7. For a review of selected literature and scientific issues and criteria to be used in computing the cost of violence, see Bozzoli, Brück, and Sottsas (2010) and DIW (2008).

8. Dinar and Keck (1997).

9. IMF (2011).

10. See, e.g., Polacheck (2007) and literature cited there.

11. This needs to be qualified. Parents, for instance, might expect to be supported in their old age by their children so that an intergenerational trade might be said to take place over time. And, at least in the past and present and probably so in the future, states rendering assistance might expect some reciprocal trade from recipient states, for example in the

form of certain voting behaviors in international organizations. Political pronouncements notwithstanding, third-party state aid should not be presumed to be made selflessly. Instead, it is safer to assume that third parties have their own interests at stake.

12. Self-love: "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages. Nobody but a beggar chuses to depend chiefly upon the benevolence of his fellow-citizens" [Smith (1776), book I, chapter 2, paragraph I.2.2]. In contrast, Kenneth Boulding (1973) writes about the economics of love and fear. He speaks of three systems: the exchange system, the threat system, and the integrative system. Reactions to threats can take the forms of submission, defiance, counter-threats, fight, or integration of the threatener with the threatened as when, for example, commonalities between them are established that supersede the threat. To him, grants are one-way transfers whether made out of love or out of fear. In contrast, we view grants as one-way "positive" transfers and appropriation as one-way "negative" transfers.

13. The figures are taken from Anderson and Carter (2009, p. 22). The tradeoff can also be drawn for instance as that between (tangible) goods on one axis and (intangible) services on the other. Given limited resources of time, capital, and labor, the more is produced of one type, the more one must give up on the opportunity to produce the other type. Just how one groups all goods and services into two classes—to be represented by the vertical and horizontal axes, respectively—depends on the purpose of the analysis. In our case, we are interested in singling out military or violence goods and services from nonmilitary (civilian, or nonviolence) goods and services.

14. Boulding (1945, p. v).

15. To say that war is "good" for an economy is like saying that cigarette addiction is "good" for the addicted person. Smoking may make one momentarily feel good, but over time it destroys the underlying asset, the smoker. By analogy, people in the United States in World War II sacrificed leisure for work and production of consumption items was sacrificed for production of war items. That this activity led to higher levels of gross domestic product is not equivalent to saying that this improved livelihoods and the average standard of living or quality of life. In fact, both per capita consumption and per capita investment activity declined in the United States during the war years.

16. Boulding (1945, p. 4).

17. E.F. Schumacher in his classic 1973 book *Small is Beautiful* speaks of sufficiency or Buddhist economics, the notion that life-satisfaction may well be had from pleasures requiring immaterial inputs rather than material consumption. (Also see Stiglitz, Sen, and Fitoussi, 2009.) In a similar vein, Kenneth Boulding (1981) is a forerunner of ecological economics which views Earth as a closed physical system in which material production absorbs limited natural resources (input) and converts them into waste streams (output). In this view, the part of GDP that measures the monetary value of material production and consumption is nothing more than throughput. To continuously increase material throughput requires a continuous increase in material inputs and consequently a continuous increase in material waste streams, something that in a closed system is a physical impossibility. It follows that economic growth as measured by increases in GDP must be made consistent with raw material use and disposal so that the integrity of the physical system of Earth as a whole can be maintained. In a word, economic growth must be violence-sensitive in terms of human systems but also resource-sensitive in terms of ecological systems.

18. The theoretical and empirical literature on economics and happiness is large. For a (perhaps surprising) review of sorts, see Bernanke (2010). On a practical level, the Organization for Economic Co-operation and Development (OECD) is championing a major, worldwide effort to collect, process, and analyze alternative measures of well-being and to introduce them into the policy consideration and policymaking process. For a review that delves into policy, see Bok (2010). Also see the aforementioned Stiglitz, Sen, Fitoussi (2009) on the economic (mis)measure of things.

19. On macroeconomics and human rights, see, e.g., Balakrishnan, Elson, Patel (2009).

20. UN A/Res/55/2 of 18 September 2000. Or see http://www.un.org/millennium/declaration/ares552e.pdf [accessed 1 January 2010].

21. "Making Societies more Resilient to Violence: A Conceptual Framework for the Conflict, Crime and Violence Agenda." Undated. Word Bank, Social Development Department, Conflict, Crime & Violence. Washington, DC: World Bank. http://siteresources.worldbank.org/EXTCPR/Resources/CCV_Framework_Note.pdf [accessed 1 January 2010].

22. For examples of early work on GIS and violence, see, Owen and Slaymaker (2005) and Spittaels and Hilgert (2009).

23. Schumpeter (1942).

24. An important paper by Cerra and Saxena (2007), however, shows that developing economies do converge on developed economies so long as they can avoid "wars, [financial] crises, and other negative shocks ... [that] lead to absolute divergence and lower long-run growth ... The output costs of political and financial crises are permanent on average, and long-term growth is negatively linked to volatility" (quoted from the abstract). Nonetheless, even if the failure of convergence can be linked to repetitive, severe crises, it still would be useful to identify the endogenous drivers of positive economic growth.

25. On the mismeasure of GDP and the measurement of well-being, see for example, Stiglitz, Sen, and Fitoussi (2009).

26. Inasmuch as security can be likened to an insurance premium to deal with risk (Brück , 2005), it is probably proper to include security-related expenditure in GDP. But higher risk implies higher premia, and vice versa. Imagine a society consisting of four people, a farmer, a thief, a policeman, and a soldier. In this economy, the farmer feeds all four people. If the thief converted and became a farmer as well, the policeman's services would become unnecessary and he (or she), too, could start farming. And if there were no longer any need for external security, the soldier also could farm. GDP might remain the same—because the expenditure and income streams still involve but four people—but clearly everyone would eat better.

27. To see that this is correct, multiply USD9,091 times EUR1.1 per U.S. dollar. The (rounded) result is USD10,000.

28. UNODC (2007, pp. 83-84); UNDP (2008, pp. 77-78); also see WDR (2011).

29. See, e.g., Dunne (2006) on Mozambique and Rwanda and the literature cited there, especially Brück (2000).

30. To reverse the cumulative losses, country 2 would have to continue to grow each year 40 percent faster than country 1 until the year 2034, nearly 50 years after its five-year war period began.

31. See Brauer and Haywood (2011). An overlap might occur for instance in commercial diplomacy, i.e., joint trade missions by diplomats and business people.

32. Regional non-U.N. bodies related to economic policy include, e.g., the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank (IADB), the Asian Development Bank (ADB), and the African Development Bank (AfDB).

33. For the 22 OECD-DAC members (Development Assistance Committee members of the Organization for Economic Cooperation and Development). See http://www.oecd.org/dataoecd/21/10/40108245.pdf [accessed 9 October 2009].

34. UNDP (2008, p. 86).

35. See http://www.unctad.org/Templates/WebFlyer.asp?intItemID=5037&lang=1[accessed 9 October 2009].

36. For details, see section 4.2.

37. So, now, has the World Bank: See its World Development Report 2011.

38. See www.imf.org and www.worldbank.org, respectively [accessed 21 August 2009].

39. Germany received about US1.4 billion and repaid an agreed-upon USD1.0 billion under the London Debt Agreement.

40. In truth, it must be said that the usual textbook presentation is not in terms of *percentages* on the horizontal and vertical axes but in terms of *levels* of GDP and *levels* of output prices. However, a change from one level of GDP to another level of GDP can be expressed as a percentage change. For example, if GDP increases from I$10,000 to I$11,000, then this is equivalent to a 10% change. Similarly, if average prices increase from an index of 120 to an index of 130, then this amounts to an 8.3% change in prices, or inflation of 8.3%. Thus, although our graph is incorrect in the strict textbook sense, for the purposes that we are interested in little harm is done relative to the benefit of a clearer exposition of the issues at hand.

41. For example, the many hundreds of billions of dollars spent by governments to rein in the world economic crisis of 2009 amount to tax obligations for future taxpayers. Early recognition, intervention, and prevention would have been cheaper for the taxpayers and for the affected populations.

42. No agreement exists in the economics literature on what is or is not a "sustainable" debt burden. In principle—if not in practice—if 99 percent of a government's budget goes to finance interest payments on debt that is fine so long as the remaining 1 percent fully suffices to serve society's other public sector needs.

43. The main international financial institutions, the OECD, the G20, and bilateral donors all have either programmatic or one-time debt-relief facilities. Many global institutions have special borrowing facilities for postwar states.

44. Such public sector accounting, however, is missing even in peaceful, advanced economies.

45. Alternatively, government can raise tax rates or cut spending to throttle the economy when it is growing too fast but a fast-growing economy, so long as output price inflation is kept in check and does not (re)ignite social inequities, can hardly be viewed as a problem.

46. World Bank (1998, p. 3).

47. See http://siteresources.worldbank.org/INTPEAM/Resources/pem98.pdf [accessed 25 August 2009]. The World Bank has many useful public finance management handbooks and manuals available online.

48. "Democratic Republic of the Congo: Lessons from the Ashes of Conflict." *IMF Survey* [7 March 2005], 34(4), pp. 60-62; quote from p. 61.

49. Demekas, McHugh, and Kosma (2002, p. 1). The Dutch Disease refers to the influx of large amounts of foreign aid that can lead to the appreciation of the local currency and make the aid recipient country's exports noncompetitively expensive on foreign markets (see chapter 4).

50. "Democratic Republic of the Congo: Lessons from the Ashes of Conflict." *IMF Survey* [7 March 2005], 34(4), pp. 60-62; quote from pp. 61-62.

51. See, e.g., Murdoch and Sandler (2002); Saleyhan and Gleditsch (2006); and literature cited there.

52. Statistically speaking, an upward-bending exponential function or a polynominal function of order 2 both fit the data slightly better, but upon visual inspection would evidently "overfit" the data.

53. There is one other option: (4) $M^* = (P \times Q) / V^*$. Here, money and velocity are assumed unchanged (M^*; V^*). A increase in prices must come at the expense of a decrease of production (or vice versa).

54. IMF (2009a).

55. Del Castillo (2008, p. 281); UNDP (2008, p. xxiii).

56. See http://www.imf.org/external/np/exr/facts/ecf.htm, an IMF March 2011 factsheet [accessed 6 June 2011].

57. For the case of a dollarized economy like El Salvador's, the U.S. dollars can likewise flow into the United States. We abstract from that possibility here.

58. WTO (2007, pp. 2-3).

59. The UNDP's list is somewhat shorter: "... risk factors include low per capita income, weak economic growth, the presence of socioeconomic horizontal inequalities and abundant high-value natural resources. These risk factors are even more acute in the presence of high unemployment, especially among youth" (UNDP, 2008, p. 17).

60. For a recent substantial review on the economics of natural resources see van der Ploeg (2011).

61. See Anderton and Carter (2009) on the cost of trade-interruption in war; see Polacheck (2007) on the peace-and-trade hypothesis and evidence.

62. Cooper (2006).

63. Cooper (2010). On non-diamond jewelry, especially gold, see Tepper-Marlin (2006).

64. For the 22 OECD-DAC members (Development Assistance Committee members of the Organization for Economic Cooperation and Development). See http://www.oecd.org/dataoecd/21/10/40108245.pdf [accessed 9 October 2009].

65. UNDP (2008, p. 86).

66. See http://www.unctad.org/Templates/WebFlyer.asp?intItemID=5037&lang=1[accessed 9 October 2009].

67. PSEs: WTO (2006) p. 123; United States: p. 128, Table 11; EU-15: p. 131, Table 12.

68. Probability of war-renewal is between 25 and 50 percent: UNDP (2008, p. 16).

69. Currency appreciation that starves a state of export opportunities is often referred to as a **Dutch disease** effect.

70. Alternatively, the exchange rate can be set by law. This amounts to an explicit price control and encourages the development of a black market in which currency is privately traded, albeit illegally.

71. Over the years, a number of other states have joined, left, and rejoined the CFA currency areas. In 2009, in addition to the former French colonies—Cameroon, the Central African Republic, Chad, the Republic of the Congo, and Gabon in Central Africa and Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, and Togo in West Africa—the CFA was also used by the former Portuguese colony of Guinea-Bissau (Central CFA) and the former Spanish colony of Equatorial Guinea (West CFA). Although the exchange value is fixed, the Central and West African CFA's are not mutually recognized.

72. Despite the availability of ample case material, the relation between currency, explicit or implicit (through fixed exchange rates) currency unions, and violence is not well-investigated in the economics literature. The post-World War II Bretton Woods system created a system of fixed exchange rates. The political, cultural, and economic development of today's European Union is strongly tied to currency regimes, including the creation of the euro. Under apartheid, the southern African customs union also included a currency union in which states such as Lesotho and Swaziland handed control over monetary policy and over export and import regimes to South Africa.

73. On the value of the U.S. dollar and U.S. wars through history, see Warburton (2009).

74. See, e.g., Ferguson (2008).

75. "The result [of WTO's existence] is ... a more prosperous, peaceful and accountable economic world. Virtually all decisions in the WTO are taken by consensus among all member countries and they are ratified by members' parliaments. Trade friction is channelled into the WTO's dispute settlement process where the focus is on interpreting agreements and commitments, and how to ensure that countries' trade policies conform with them. That way, the risk of disputes spilling over into political or military conflict is reduced. By lowering trade barriers, the WTO's system also breaks down other barriers between peoples and nations." See http://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr00_e.htm [accessed 5 December 2009].

76. Cerra and Saxena (2007).

77. In the 2000s, for instance, 90 percent of all 39 violent collective conflicts that started during the decade also had conflict in previous decades (World Bank, 2011, p. 58, Table 1.2).

78. The two quotes in this passage are from UNDP (2008, pp. 17, 20).

79. Recent Nobel Prize awards in economics have recognized this, e.g., to Schelling in 2005, Hurwicz, Maskin, and Myerson in 2007, and to Ostrom and Williamson in 2009.

80. McFadden (2006).

81. Thaler and Sunstein (2008).

82. See, e.g., Binmore (2005) on the evolution of fairness norms, moral codes, and notions of justice.

83. There is no presumption that a unique and uniform structure exists. That would be to deny the diversity of cultures. More likely, multiple kinds of structures (solutions) can each result in satisfactory outcomes.

84. Some scholars have noted that social capital can be counterproductive. If it indeed consists of trust and network strength, then criminal networks work the better, the more such social capital they have. Also see Seabright (2004).

85. See http://www.unfetteredmind.org/articles/money.php; but also see http://stonegardeneconomics.com/blog/?p=993 [both accessed 20 June 2011].

86. See Fischer (1993).

87. This section is based on Brauer and Fischer (2003/4) and Brauer (2004; 2006), grounded, in turn, on Alexrod (1984), Ostrom (1990), Sandler (1997), and others.

88. "With the relative lack of easily extractable natural assets in Mozambique (compared to say Angola or Liberia) the end of war was endogenously determined. Neither the government nor RENAMO were able to sustain the fighting financially and the drought of 1991-93 finally forced a settlement" Brück (2006, p. 31). Running out of money is not just a modern-day reason to end war. See, e.g., Marichal (2007) on the difficulty of the Spanish empire to continue war with France and England when its Mexican colony became independent and the flow of bullion stopped. Similarly, Austria, Prussia, and Russia in its squabbles during the reign of Frederick the Great (1740-1786) needed at least periodic breaks from war whenever the tills were exhausted (see, e.g., Oster, 2011). The invention of war bonds was, not least, related to the need to finance war (Ferguson, 2008).

89. A real-world example: "In October 1996, one year after the Dayton peace negotiations, Carl Bildt, the international community's high representative in Bosnia, faced a crisis. Momcilo Krajisnik, a close associate of indicted war criminal Radovan Karadzic, had just been elected to Bosnia's three-person collective presidency, but in a gesture of continuing Bosnian Serb defiance toward Dayton's goal of a united Bosnia, he now refused to attend the presidential swearing-in ceremony in Sarajevo. His refusal threatened to undermine the fragile new Bosnian state from its inception. Bildt responded by dispatching his senior deputy for economic reconstruction to the Bosnian Serb headquarters in Pale, accompanied by the resident representatives of the World Bank, the European Bank for Reconstruction and Development, and the European Union, and President Clinton's special envoy for reconstruction. Together they delivered a stern warning: not one penny of reconstruction aid would flow to the Serb Republic if Krajisnik failed to appear. Four days later, Krajisnik was in Sarajevo for the ceremony." (Quoted from Boyce and Pastor, 1998, p. 1.)

90. Only very recently has the literature formally recognized that third-party intervention need not be with the intention of creating peace. For recent literature, see the reviews by Chang, Sanders, and Walia and by Potter and Scott in *The Economics of Peace and Security Journal*, vol. 5, no. 1 (2010). Also see section 5.3.

91. Intervention can also be of an unwitting kind: China's economic ascendance has stimulated its greater participation in world raw materials markets. If only for the security of its own investments, it has been drawn into Africa's squabbles and will need to make at least a marginal contribution to peace and security to safeguard its resource extraction and supply lines.

92. Schelling (1978). In the essay, he backs this up mathematically. Also see many of Amartya Sen's works, e.g., 2006, and Akerlof and Kranton (2000; 2011) on economics of identity.

93. Transcendence can be abused of course as in the common-value formation to arouse one group against another, for example on the *pretext* of religious or other beliefs.

94. Representation requires recognition that those who become part of the negotiation team are chosen by a process that itself is a collective action. One cannot simply assume that party A and party B are unitary actors. Instead, one must often assume that within-party interests play out as well, which may make it impossible for the official party A and party B negotiators to actually negotiate anything at all. See, e.g, Anderton and Carter (2009) and literature cited there.

95. Hirschman (1970); Ostrom (1990).

96. Sandler (1999, pp. 38-40).

97. GCDP (2011).

98. The idea of automaticity was proposed by Brauer (2000), esp. pp. 313-314. On the economics of private military companies, see Brauer and van Tuyll (2008, chapter 8); also see Richemond-Barak (2011).

99. This section is based on Brauer (2006), especially pp. 19-20.

100. Boyce (2003).

101. Kaldor (2006).

102. That is, other than *within* the state of the unilateral intervener. But in the case of the United States, and most other sovereign states, decisionmaking is effectively delegated to the head of state. Thus, Mr. Bush for instance, by avoiding calling his presidential decisions a war, could send armed forces to Afghanistan and Iraq without a formal war vote in U.S. Congress that otherwise would have been required by the U.S. constitution.

103. Historian D. Morton (2003, p. 17) comments:"Peacekeeping might be idealistic, but it also fitted Cold War needs."

104. Quoted from http://www.aseansec.org/18741.htm [accessed 15 June 2011].

105. Quoted from http://www.aseanregionalforum.org/AboutUs/tabid/57/Default.aspx [accessed 15 June 2011]. As of June 2011, the members were Australia, Bangladesh, Brunei Darussalam, Cambodia, Canada, China, Democratic Peoples' Republic of Korea, European Union, India, Indonesia, Japan, Laos, Malaysia, Myanmar, Mongolia, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Russian Federation, Singapore, Sri Lanka, Thailand, Timor Leste, United States, and Viet Nam.

106. For a critique of KPCS, see Cooper (2010).

107. See http://www.iso.org/iso/pressrelease.htm?refid=Ref780 [accessed 23 December 2009].

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Appendices

Appendix A: Examples of classifications of violence and armed actors

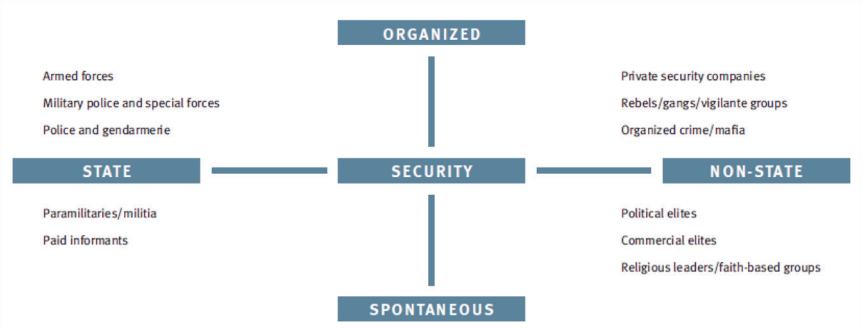


Figure A.1: A typology of armed groups and related actors.
Source: GD (2008, p. 127, Figure 7.1).

The World Health Organization (WHO, 2002) groups violence into the rubrics of *self-harm* (including suicide), *interpersonal violence* (e.g., violence between intimate partners and other forms of family violence, rape and sexual assault by strangers, violence committed in institutional settings such as schools, prisons, and work places), and *collective violence* (e.g., armed conflict within and between states, violent political repression and genocide, violent acts of terror, and organized crime) and speaks of an ecology of violence that progresses from individual to personal relationship-related violence, and on to communal and broad collective levels of violence.

The Geneva Declaration on Armed Violence and Development (GD, for short) notes that violence comes in many forms. Violence against women for instance includes intimate partner violence, sexual violence, honor killing, dowry-related violence, acid attacks, female infanticide and sex-selective abortions (GD, 2008). Organized crime, armed gangs as well as extrajudicial killings, and "disappearances" are forms of violence associated with crime and the miscarriage of justice by officers of law and order institutions. Politically-motivated violence includes mob-violence, lynchings, rebellions, insurrections, and civil war.

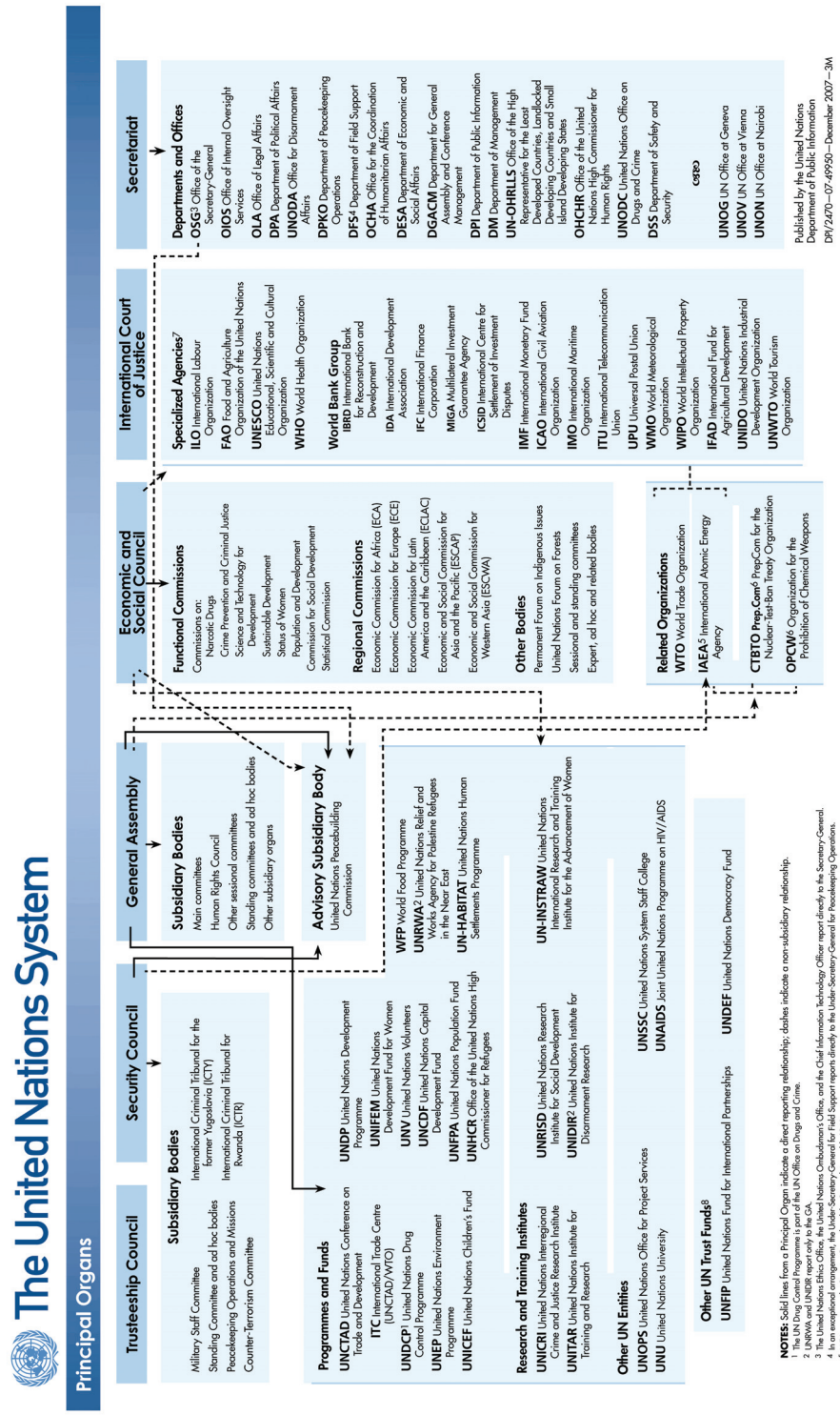
Another typology lists the following forms of violence (with violence indicators in parentheses) [Chaudhary and Suhrke (2008) as cited in GD (2008, p. 65)]:

- *Political violence* (assassinations, bomb attacks, kidnappings, torture, genocide, mass displacements, riots);
- *Routine state violence* (violent law enforcement activities, encounter killings, social cleansing operations, routine torture);
- *Economic and crime-related violence* (armed robbery, extortions, kidnappings for ransom, control of markets through violence);
- *Community and informal justice and policing* (lynching, vigilante action, mob justice); and
- *Postwar displacements and disputes* (clashes over land, revenge killings, small-scale "ethnic cleansing").

Finally, a typology of armed actors rather than of the violence they may engage (see Figure A.1), is based on a forthcoming paper by Muggah and Jüttersonke. It overlays types of armed actors on a vertical grid of organized versus spontaneous violence with a horizontal grid of state versus nonstate actors.

Appendix B: The United Nations System organizational chart

[http://www.un.org/aboutun/chart_en.pdf; accessed 19 July 2009]



Appendix C: General characteristics of the case countries

The ten illustrative cases that accompany the five chapters of this text are structured such that we (1) cover both historical and contemporary cases; (2) war, civil war (grievance-based and greed-based), and postwar criminalization of an economy; and (3) cover all geographic regions: Europe, Africa, the Americas, Asia, and Asia-Pacific. Of course, not every failure is a failure in every respect, and not every success is a success in every respect. Many countries can be placed in either category, depending on what aspect one wishes to emphasize. Although not chosen as a case, Timor Leste (East Timor), for example, suffered massively violent upheavals in the late 1990s and early 2000s. Political independence came in 2002 and violence recurred in 2006. After protracted negotiations, the country now enjoys high revenue flows from offshore oil- and gas-deposits but suffers from utterly inadequate infrastructure, especially roads to connect markets, and very high poverty rates.

We hope that in years to come a large set of case studies will be based on the chapters' lessons and the principles of peacemaking and peacekeeping that we identified. This would help to "test" our views, at least in a qualitative sense, until quantitative measures can be developed to additionally apply formal statistical tests. The more we learn about the structure of peace (and peacemaking), the better.

Chapter distribution of the cases

Ch 1 Violence and economic development
- F: El Salvador
- S: Timor-Leste [East Timor]

Ch 2 The long-run goal: economic growth
- F: European periphery, post-WW II
- S: European core, post-WW II

Ch 3 Dealing with turbulence: macroeconomic stabilization
- F: Zimbabwe [and contrasted to Botswana]
- S: Chile

Ch 4 The global economy: international trade and finance
- F: Fiji
- S: Vietnam

Ch 5 Designing and promoting peace
- F: Nepal
- S: South Africa

Geographic distribution of the cases

Continent	*Failure*	*Success*
Africa	Zimbabwe	South Africa
Asia	Nepal	Vietnam
Americas	El Salvador	Chile
Europe	Periphery	Core
Asia-Pacific	Fiji	Timor-Leste

Other characteristics

There is a limit with what one can with just 10 cases but we have 8 continental states and 2 island states; states with large populations and small populations; densely populated and sparsely populated; and so on, as the preceding paragraph suggests.

Appendix D: Glossary

aggregate demand
consists of the summation of demand by various categories of buyers; usually written as the sum of consumption by private households, investment by firms, government spending at the federal, provincial, and district or municipal levels; the value of exports is added because it represents demand from overseas for domestically produced goods; the value of imports is subtracted because it reflects demand that is realized in another economy

aggregate demand/aggregate supply framework
or AD/AS model; a single visual representation that pulls together virtually all relevant demand and supply-side variables, considers all actors (private and public), integrates domestic and foreign sectors, and simultaneously considers the short and the long-term; although economists do not agree on this framework as an explanatory device, they do agree on it as a heuristic device, the point of departure for agreement and disagreement, of refinements and extensions, and the model in contrast to which alternative representations of economies are constructed; the point of departure for policy debates and recommendations

assets
are needed to produce goods and services; these include natural, physical, human, and social or institutional capital

asset stripping
refers to the depletion of the stock of capital to serve current consumption needs, thereby diminishing society's capacity to produce in future

balance of payments (BoP)
an accounting framework that tracks the monetary value of a country's imports and exports of goods and services as well as the corresponding financial flows; the frameworks consists of credits (inflows) and debits (outflows) which by definition must sum to zero

bathtub theorem
if the inflow of water into a bathtub represents production, and the outflow represents consumption then an excess of the flow of production over the flow of consumption adds to the stock of available goods; conversely, an excess of consumption over production diminishes the stock

capital
includes physical capital such as machinery, equipment, and physical structures or facilities that one may have available to work with; the natural capital of Earth, that is, raw materials that can go into production processes (some of these are renewable, others are nonrenewable); human capital includes peoples's talents, ingenuity, skills, training, education, knowledge, and experience; and social capital, an economic asset consisting of the social and communal networks humans build

classic growth theory
suggested that any production surplus for the current population would, in time, be consumed by population growth; societies would repetitively revert to subsistence levels of existence; in this theory, sustained economic growth per capita was not possible

choice architecture
the self-conscious and deliberate design of incentives that inhibit undesired and promote desired individual behavior such that a social system as a whole moves toward a desired outcome

collective violence
includes armed conflict between, among, and within states, communal-level violence, violent acts of terror, and

organized crime

creative destruction

in pursuit of profit opportunities, entrepreneurs in a competitive economy will bring to market innovative products and processes that on the one hand destroy competing lines of business but that, on the other hand, are so revolutionary as to move the entire economic system forward

currency appreciation

means that one unit of home currency can buy a larger amount of foreign currency than before; the home currency is said to have become "stronger;" an appreciating currency eases imports but hinders exports as foreign products become relatively cheaper to home customers and home products relative more expensive to foreign customers

current account

reflects the monetary value of a country's international trade in goods and services

currency depreciation

opposite of currency appreciation (see currency appreciation)

current cost of violence

is the direct and indirect cost in a given time period across a given geographic space

dynamic peace dividend

results when, e.g., security spending can be cut and be applied to productivity-enhancing physical, human, institutional, and social capital

economic growth

is usually measured as the percentage increase in economic output from one year to the next; it does not inform us about income distribution or other aspects of well-being

economic growth policy

focuses primarily on asset productivity growth and long-term opportunities for production and income generation, less on distribution and consumption; it assumes more of a constitutional and quantitative character

economic development policy

is somewhat more concerned with qualitative and equity aspects, such as rural development, the well-being of women, youth, and the elderly, and that of minority or disadvantaged population segments; some also include measures of personal happiness and community vitality and resilience in this category

economics

deals with the production, distribution, and consumption of the means to livelihood with the aim of continual betterment of life; three types of economy are the exchange economy, the grants economy, and the appropriation economy

enabling policy conditions

refer to well-functioning, transparent policymaking and policy implementing institutions, to well-trained and accountable officials, and to a predictable regulatory framework

endogenous

reasons for economic growth refer to causes that arise from within an economic system and may be amenable to change by policy

exogenous

reasons for economic growth refers to causes seemingly beyond policymakers' ability to influence

financial and capital account, the

records nontrade flows in the balance of payments

fiscal policy

concerns how public sector revenue is raised and how that revenue is spent; it is not a crisis management tool; its primary function is to promote society's orderly development and well-being, that is, its economic growth and

continual betterment; although sometimes necessary, to spend fiscal resources on macroeconomic stabilization is a costly distraction from its primary purpose

flexible exchange rate regime, a

means that a country's monetary authorities normally will not intervene in the private markets that determine the value of the home country's currency

government net worth

government assets (e.g., formal ownership of infrastructure such as public highways, seaports, airports, marine and land resources) minus government liabilities (e.g., pension liabilities, public debt obligations)

gross domestic product (GDP)

is the monetary value (and hence income) of all goods and services legally produced by residents of a country within one calendar year

gross world product (GWP)

is the sum of gross domestic product across all countries

horizontal tax equity

persons who are equal in every respect should be treated equally in taxation as well (also see vertical tax equity)

inflation

is the change in average prices of goods and services produced, or consumed, from one time period to the next

international dollars (I$)

an artificial, mathematical currency created to make the purchasing power of different currencies comparable across countries

international financial institutions (IFIs)

a phrase that refers in the main to the International Monetary Fund (IMF) and the World Bank Group (WBG) at the global level but also to regional development banks, that is, the African Development Bank (AfDB), the Asian Development Bank (ABD), the Inter-American Development Bank (IADB), and the European Bank for Reconstruction and Development (EBRD)

interpersonal violence

includes intimate partner and other family violence, assault and homicide, and violence committed in institutional settings

institutional and evolutionary economics

tend to study economies as social systems; among the institutions, which may be formal or informally constituted, are free trade, a minimal regulatory system, sound money, good law and order, secure property rights, corruption-free government, and a panoply of other good governance factors that together provide economic framework conditions

leader

an external actor able to organize changes in the payoff structure and/or the rules of the game

legacy cost of violence

is the cost of past violence that carries over to the present

long-run aggregate supply (LRAS)

refers to an economy's inherent productive capacity—its sheer potential to generate output—regardless of whether or not that capacity is productively employed or lies idle

macroeconomic stabilization

has the purpose of moderating erratic swings in the business cycle; tools include fiscal and monetary policy even though macroeconomic stabilization is not their primary purpose and may in fact detract from that purpose

monetary policy

deals with the internal and external (foreign exchange) value of a state's currency, the determination of interest rates,

and the regulation and supervision of the banking system

monitoring

refers to the ability to collect, process, and verify information; the ability to effectively monitor the actions of another player

money demand

demand for currency (cash and bank deposits)

money supply

is variously defined, e.g., as the sum of cash and bank deposits (checking and saving); available for the purpose of conducting purchases now or in future (present consumption or, via saving, future consumption)

national saving

private domestic saving plus government sector saving amount to national saving (this, plus foreign sector saving finances private domestic investment)

natural resource rents

earnings from the sale of natural resources

neoclassical growth theory

focuses on the causal relations between and among factors such as labor, savings, capital, investment, and technological change to predict output and output growth

new classical growth theory

emphasizes understanding the institutional conditions that must be in place in order to encourage entrepreneurship and make technological change and human capital formation possible

nominal GDP

gross domestic product not adjusted for the effects of price inflation

policy

a set of rules, directions, or guidelines to be followed for a particular issue area

production possibilities frontier (PPF)

the maximum possible production levels of a set of goods and services, given currently available levels of labor, capital, and other requisite production inputs

purchasing power

refers to the buying power of a unit of currency from one year to the next; for example, in the year 2000, ten euros may have bought one haircut at the barbershop but perhaps only "half a haircut" in 2010; loss of purchasingpower results from inflation

purchasing power parity

a statistical way to estimate the comparative purchasing power of different currency units, e.g., Indian rupees to New Zealand dollars; on the presumption that "a haircut is a haircut," what matters is the service rendered, not the monetary unit used to pay for it; this permits comparisons across countries regardless of the value of their respective currencies formal exchange rate values

purchasing power parity dollars

see international dollars (I$)

quantity theory of money, the

argues that overly rapid increases in money supply will eventually result in correspondingly increases in inflation

real GDP

gross domestic product adjusted for price inflation so that GDP values are comparable across years

rent-seeking

generating unearned income by seeking to rewrite political, economic, and cultural rules in one's favor rather than earning income through fair competitive and productive effort

rule of 70, the
a handy guide to compute the approximate number of years it takes for an economy to double in size

self-harm
refers to self-directed violence, including suicide

short-run aggregate suppy (SRAS)
refers to the business sector supplying goods and services to the economy in response to changes in the market price that can be obtained

social contract
a framework of widely agreed rules, of social cohesion, of trust, along with external or self-policing enforcing institution

spill-over cost of violence
accounts for costs imposed on bystanders (e.g., refugees from state A that flee to and impose a cost on state B)

statistical discrepancy
in the balance of payments is the difference between the current account and the financial and capital account

static peace dividend
refers to a redistribution of economic activity from violence-related to nonviolence-related spending (e.g., from criminal to civil law for lawyers' activities)

sustainable developmental growth
growth without development is dangerous; development without growth infeasible; growth must serve developmental purposes; it must also be ecologically sustainable

velocity
is the turn-over rate of money; any specific unit of currency (dollar, euro, or yen, etc.) is used several times during the course of a time period such as a year; how often each currency unit is used is the turn-over rate or velocity

vertical tax equity
those capable of paying more should pay more (also see horizontal tax equity)

Index

[To be completed by USIP? (It seems to make little sense for me to do this with my WordPerfect program when, I suspect, USIP Press works with MS Word.) I already **bolded** (some) relevant terms in the text, primarily those are also appear in the glossay.]