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SEVENTH EDITION

James Gerber



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# International Economics

**James Gerber**

San Diego State University

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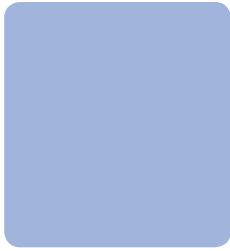
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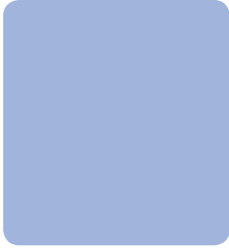
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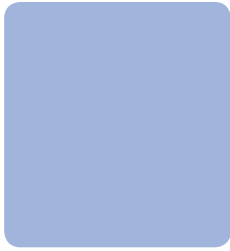
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# PREFACE

*International Economics* is designed for a one-semester course covering both the micro and macro components of international economics. The Seventh Edition continues the approach of the first six editions by offering a principles-level introduction to the core theories, together with policy analysis and the institutional and historical contexts of international economic relations. My goal is to make economic reasoning about the international economy accessible to a diverse group of students, including both economics majors and nonmajors. My intention is to present the consensus of economic opinion, when one exists, and to describe the differences when one does not. In general, however, economists are more often in agreement than not.

## New to the Seventh Edition

This Seventh Edition of *International Economics* preserves the organization and coverage of the Sixth Edition and adds a number of updates and enhancements. New to this edition:

- All tables and graphs have been updated.
- New case studies are added in Chapter 2 on the Asian Infrastructure and Investment Bank; Chapter 5 on industrial policies targeting clean energy technology; and Chapter 16 on the Worldwide Governance Indicators.
- Chapter 9 on the balance of payments has incorporated the accounting revisions of the IMF and the implementation of the revisions by the U.S. Bureau of Economic Analysis. The changes recommended by the IMF are mostly terminology, but also in the presentation of debits and credits. Chapter 9 also adds a new appendix on the terminology of numbers: billions, thousands of millions, millions, and trillions.
- The discussion of financial crises in Chapter 12 is presented in terms of vulnerabilities and triggers, following the terminology used by former Fed Chairman Ben Bernanke, among others.
- Chapter 16 has dropped the World Bank's now-dated terminology and focus on the High Performance Asian Economies in favor of a more empirically determined set of high growth, export oriented East Asian economies.
- Chapter 17 is focused on India and China, exclusively.

- The discussion of trade and jobs in Chapters 4, 13, and 17 is more nuanced and reflects the growing challenge to the consensus that trade is not the cause of manufacturing's decline in high-income countries.

## Hallmarks of International Economics

Several features of *International Economics* distinguish it from the many excellent texts in the field:

- First, the approach is broader than the theoretical apparatus used by economists. Economic theory is covered and its mastery is essential, but most readers grasp theory more completely when it is presented along with real-world applications. To this end, I have supplemented economic theory with case studies and other content ranging from the role of economic institutions and the analysis of international economic policies to the recent history of the world economy and the challenges facing different geographical regions as they become more economically integrated internationally.
- Second, the objective of covering both the micro and macro sides in a one-semester course necessitates paring back the coverage of theory in order to focus on the central concepts. As all instructors are aware, many theoretical topics are of secondary or tertiary importance, which can pose a problem for students who may lack the needed breadth and depth of understanding to rank topics by their relative importance.
- Third, *International Economics* provides richer historical and institutional detail than most other texts. This material illuminates the relationships between economic theory and policy, and between economics and the other social sciences.
- Fourth, I have organized Part 4 of the book into five chapters, each focused on a geographic area as follows: North America with emphasis on the United States, the European Union, Latin America, East Asia, and India and China. These chapters offer students the chance to broaden their understanding of world trends and to observe the intellectual power of economic theory in practice.

## Flexibility of Organization

A text requires a fixed topical sequence because it must order the chapters one after another. This is a potential problem for some instructors, as there is a wide variety of preferences for the order in which topics are taught. The Seventh Edition, like the previous editions, strives for flexibility in allowing instructors to find their own preferred sequence.

Part 1 includes two introductory chapters that are designed to build vocabulary, develop historical perspective, and provide background information about the different international organizations and the roles they play in the world economy. Some instructors prefer to delve into the theory chapters immediately, reserving this material for later in the course. There is no loss of continuity with this approach.

Part 2 presents the micro side of international economics, while Part 3 covers the macro side. These two parts can easily be reversed in sequence if desired.

Part 2 includes six chapters that cover trade models (Chapters 3–5) and commercial policy (Chapters 6–8). A condensed treatment of this section could focus on the Ricardian model in Chapter 3, and the analysis of tariffs and quotas in Chapters 6 and 7. Chapter 8 on labor and environmental standards can stand on its own, although the preceding chapters deepen student understanding of the trade-offs.

Part 3 covers the balance of payments, exchange rates, open-economy macroeconomics, and international financial crises. Chapter 11 on open economy macroeconomics is optional. It is intended for students and instructors who want a review of macroeconomics, including the concepts of fiscal and monetary policy, in a context that includes current accounts and exchange rates. If Chapter 11 is omitted, Chapter 12 (financial crises) remains accessible as long as students have an understanding of the basic concepts of fiscal and monetary policy. Chapter 12 relies most heavily on Chapters 9 (balance of payments) and 10 (exchange rates and exchange rate systems).

Part 4 presents five chapters, each focused on a geographic area. These chapters use theory presented in Chapters 3–12 in a similar fashion to the economics discussion that students find in the business press, congressional testimonies, speeches, and other sources intended for a broad civic audience. Where necessary, concepts such as the real rate of exchange are briefly reviewed. One or more of these chapters can be moved forward to fit the needs of a particular course.

## Supplementary Materials

The following supplementary resources are available to support teaching and learning.

- In recognition of the importance of the Internet as a source of timely information, MyLab Economics offers Web links for each chapter of *International Economics*. These links, complete with descriptions of the content available at each site, provide easy access to relevant, current data sources.

## Other Supplements

Leonie Stone of State University of New York (SUNY) at Geneseo, has revised the TestGen and Instructor's Manual to bring it up to date with the text. The TestGen is available for download on the Instructor's Resource website. The Instructor's Powerpoints are also available online as an additional resource.

## Pearson MyLab Economics

Pearson MyLab Economics has been designed and refined with a single purpose in mind: to create those moments of understanding that transform the difficult into the clear and obvious. With comprehensive homework, quiz, test, and tutorial options, instructors can manage all their assessment needs in one program.

MyLab Economics for *International Economics*, Seventh Edition offers the following resources for students and instructors:

- **Select end-of-chapter questions** from the text are available in MyLab Economics.
- **Personal study plans** are created for each individual student based on performance on assigned and sample exercises.
- **Instant tutorial feedback** on a student's problem and graphing responses to questions.
- **Interactive learning aids**, such as *Help Me Solve This* (a step-by-step tutorial), help the student right when they need it.
- **News articles** are available for classroom and assignment use. Up-to-date news articles and complementary discussion questions are posted weekly to bring today's news into the classroom and course.
- **Real-Time Data Analysis** These exercises allow instructors to assign problems that use up-to-the-minute data. Each RTDA exercise loads the appropriate and most currently available data from FRED, a comprehensive and up-to-date data set maintained by the Federal Reserve Bank of St. Louis. Exercises are graded based on that instance of data, and feedback is provided.
- **Pearson eText** available within the online course materials and offline via an app. The eText allows instructors and students to highlight, bookmark, and take notes.
- **Auto graded problems and graphs** for assignments.
- **A powerful gradebook**, flexible and rich with information, including student and class data on assignment performance and time on task.
- **Advanced communication tools** provides students and instructors the capability to communicate through e-mail, discussion board, chat, and ClassLive.
- **Customization options** provide new and enhanced ways to share documents, add content, and rename menu items.
- **One place for students to access all of their MyLab courses.** Students and instructors can register, create, and access all of their MyLab courses, regardless of discipline, from one convenient online location: [www.pearsonmylab.com](http://www.pearsonmylab.com).

**For more information, please visit [www.myeconlab.com](http://www.myeconlab.com).**

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PART

1

# Introduction and Institutions

## CHAPTER

# 1

# An Introduction to the World Economy

### Learning Objectives

After studying this chapter, students will be able to:

- 1.1** Discuss historical measures of international economic integration with data on trade, capital flows, and migration.
- 1.2** Compute the trade-to-GDP ratio and explain its significance.
- 1.3** Describe three factors in the world economy today that are different from the economy at the end of the first wave of globalization.
- 1.4** List the three types of evidence that trade supports economic growth.

## INTRODUCTION: INTERNATIONAL ECONOMIC INTEGRATION

In August of 2007, a crisis erupted in the housing sector of the United States. At the time, few people realized that the subprime mortgage crisis would become a demonstration of international economic integration or that it would push the world economy to the brink of collapse. The crisis grew through the remainder of 2007 and into 2008, so that by the summer nearly all high-income economies were in deep distress. Contagion from the crisis spread like an epidemic as banks and other financial firms collapsed and solvent firms stopped lending. The scarcity of credit caused difficulties for businesses that could not find financing for their day-to-day operations while, at the same time, consumers cut back on their spending and businesses cut back on new investment. By the end of 2008, economies around the world were in recession, with the notable exceptions of China, India, and the major oil producers.

This episode is the most dramatic instance since the Great Depression of the 1930s of a crisis leading to severe economic recession in many countries around the world. It is, however, only one of several recent examples of crises spilling across national borders. The Russian Crisis of 1998–99, the Asian Crisis of 1997–98, the Mexican Crisis of 1994–95, the Latin American Debt Crisis of 1982–89, and a number of others caused major damage to financial systems, businesses, and households, both in the places where they originated and in many other countries.

The international integration of national economies has brought many benefits to nations across the globe, including technological innovation, less expensive products, and greater investment in regions where local capital is scarce, to name a few. But

it has also made countries vulnerable to economic problems that have become more easily transmitted from one place to another. Given that the benefits and costs of international economic integration are surrounded by controversy, it is worth clarifying what we mean by the term *international economic integration*, or *globalization in the economic sphere*. To help us understand these forces better, a historical perspective is also useful.

## **ELEMENTS OF INTERNATIONAL ECONOMIC INTEGRATION**

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**LO 1.1 Discuss historical measures of international economic integration with data on trade, capital flows, and migration.**

---

**LO 1.2 Compute the trade-to-GDP ratio and explain its significance.**

---

**LO 1.3 Describe three factors in the world economy today that are different from the economy at the end of the first wave of globalization.**

---

**LO 1.4 List the three types of evidence that trade supports economic growth.**

---

Most people would agree that the major economies of the world are more integrated than at any time in history. Given our instantaneous communications, modern transportation, and relatively open trading systems, most goods can move from one country to another without major obstacles and at relatively low cost. For example, most cars today are made in fifteen or more countries after you consider where each part is made, where the advertising originates, who does the accounting, and who transports the components and the final product. Nevertheless, the proposition that today's economies are more integrated than at any other time in history is not simple to demonstrate. It is clear that our current wave of economic integration began in the 1950s, with the reduction of trade barriers after World War II. In the 1970s, many countries began to encourage financial integration by increasing the openness of their capital markets. The advent of the Internet in the 1990s, along with the other elements of the telecommunications revolution, pushed economic integration to new levels as multinational firms developed international production networks and markets became ever more tightly linked.

Today's global economy is not the first instance of a dramatic growth in economic ties between nations, however, as there was another important period between approximately 1870 and 1913. New technologies such as transatlantic cables, steam-powered ships, railroads, and many others led the way, much as they do today. For example, when the first permanent transatlantic cable was completed in 1866, the time it took for a New York businessperson to complete a financial transaction in London fell from approximately three weeks

to one day, and by 1914 it had fallen to one minute as radio telephony became possible.

We have mostly forgotten about this earlier period of economic integration, and that makes it easier to overestimate integration today. Instantaneous communications and rapid transportation, together with the easy availability of foreign products, often cause us to lose sight of the fact that most of what we buy and sell never makes it out of our local or national markets. We rarely pause to think that haircuts, restaurant meals, gardens, health care, education, utilities, and many other goods and services are partially or wholly domestic products. In the United States, for example, about 83.4 percent of goods and services are produced domestically, with imports (16.6 percent) making up the remainder of what we consume (2014). By comparison, in 1890 the United States made about 92 percent of its goods and services, a larger share than today, but not radically different.

The question as to whether we are more economically integrated today or some period in the past is not academic. Between the onset of World War I in 1914 and the end of World War II in 1945, the world economy suffered a series of human-made catastrophes that de-integrated national economies. Two world wars and a global depression caused most countries to close their borders to foreign goods, foreign capital, and foreign people. Since the end of World War II, many of the economic linkages between nations have served to repair the damage done during the first half of the twentieth century, but there is no reason to think that events might not cause a similar decoupling in the future.

Understanding international economic integration requires us to define what we mean by the term. Economists usually point to four criteria or measures for judging the degree of integration, which are trade flows, capital flows, people flows, and the similarity of prices in separate markets. The first three points are relatively self-explanatory, while the similarity of prices refers to the fact that integrated economies have price differences that are relatively small and are due mainly to differences in transportation costs. Goods that can move freely from a low-cost to a high-cost region should experience price convergence as goods move from where they are plentiful and cheap to where they are relatively scarcer and more expensive. All of these indicators—trade flows, factor (labor and capital) movements, and similarity of prices—are measures of the degree of international economic integration.

## The Growth of World Trade

Since the end of World War II, world trade has grown much faster than world output. One way to show this is to estimate the ratio of exports by all countries to total production by all countries. In 1950, total world exports—which are the same as world imports—are estimated to have been 5.5 percent of world **gross domestic product (GDP)**, a measure of total production. Sixty-three years later, in 2013, they were approximately 30 percent of world GDP, nearly six times more important relative to the size of the world economy. One important measure of international trade in a nation's economy is the sum of exports plus imports, divided

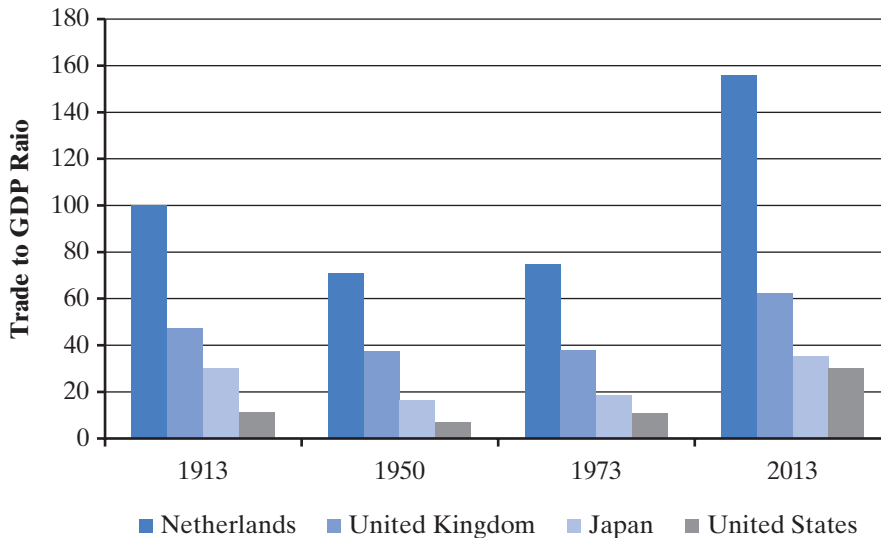
by the GDP. Specifically, it is the value of all final goods and services produced inside a nation during some period, usually one year. The **trade-to-GDP ratio** is represented as follows:

$$\text{Trade to GDP ratio} = (\text{Exports} + \text{Imports}) \div \text{GDP}$$

The ratio does not tell us about a country's trade policies and countries with higher ratios do not necessarily have lower barriers to trade, although that is one possibility. In general, large countries are less dependent on international trade because their firms can reach an optimal production size without having to sell to foreign markets. Consequently, smaller countries tend to have higher ratios of trade-to-GDP.

Figure 1.1 shows the trade-to-GDP ratio for four countries between 1913 and 2013. The decline in trade between the onset of World War I and 1950 is clearly visible in each country, as is the subsequent increase after 1950. Another pattern shown in Figure 1.1 is the smaller ratios for the United States and Japan, which have the largest populations, and the much higher ratio for the Netherlands, which has the smallest population in the sample. In general, smaller countries trade more than larger ones since they cannot efficiently produce a wide range of goods and must depend on trade to a greater extent. For example, if the Netherlands were to produce autos solely for its own market, it would lack economies of scale and could not produce at a competitive cost, whereas the U.S. market can absorb a large share of U.S. output. Hence, the trade-to-GDP ratio measures the relative

**FIGURE 1.1** Trade-to-GDP Ratios for Four Countries, 1913–2013



Data from Maddison, A. (1991). "Dynamic Forces in Capitalist Development" and The World Bank, *World Integrated Trade Solution*, © James Gerber.

importance of international trade in a nation's economy, but it does not provide any direct information about trade policy or trade barriers.

Figure 1.1 gives a historical overview of the decline and subsequent return of international trade after World War II, but it obscures important changes in the composition of trade flows from early in the twentieth century to those at the end of the century. Before World War I most trade consisted of agricultural commodities and raw materials, while current trade is primarily manufactured consumer goods and producer goods (machinery and equipment). Consequently, today's manufacturers are much more exposed to international competition than was the case in 1900. In addition, much of the growth of world trade since 1950 has been accomplished by multinational corporations. With production sites in multiple countries and inputs that pass back and forth between affiliates, multinational corporations have become dramatically important. This trend has been supported and encouraged by the telecommunications revolution and transportation improvements that have lowered the costs of coordinating operations physically separated by oceans and continents. And finally, it has also become possible to coordinate service operations such as accounting and data processing from a great distance. In sum, trade today is qualitatively different than in 1913, and the growth of the trade-to-GDP ratio since 1950 does not tell the whole story.

### Capital and Labor Mobility

In addition to exports and imports, factor movements also are an indicator of economic integration. As national economies become more interdependent, labor and capital should move more easily across international boundaries. Labor, however, is less mobile internationally than it was in 1900. Consider, for example, that in 1890 approximately 14.5 percent of the U.S. population was foreign born, while in 2010, the figure was 12.9 percent. In 1900, many nations had open door immigration policies, and passport controls, immigration visas, and work permits were exceptions rather than rules. The movement of people was severely restricted by the two world wars and the Great Depression of the 1930s. In the 1920s, during the interwar period, the United States sharply restricted immigration with policies that lasted until the 1960s, when changes in immigration laws once again encouraged foreigners to migrate to the United States.

On the capital side, measurement is more difficult, since there are several ways to measure capital flows. The most basic distinction is between flows of financial capital representing paper assets such as stocks, bonds, currencies, bank accounts, and flows of capital representing physical assets such as real estate, factories, and businesses. The latter type of capital flow is called **foreign direct investment (FDI)**. To some extent, the distinction between the two types of capital flows is immaterial because both represent shifts in wealth across national boundaries and both make one nation's savings available to another.

When we compare international capital flows today to a century ago, there are two points to keep in mind. First, savings and investment are highly correlated. That is, countries with high savings tend to have high rates of investment, and low