Study Guide

for

International Economics
A Heterodox Approach

SECOND EDITION

Hendrik Van den Berg

Prepared by Hendrik Van den Berg
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*Answer Key*  
pp. 141-185
Welcome to the Study Guide

This Study Guide to accompany my International Economics: A Heterodox Approach is designed to maximize your learning experience by systematically reviewing the material in the textbook. In the chapters that follow, you will find a summary of each textbook chapter. Each Study Guide chapter also contains a Self-Test with a large number and a great variety of questions. The chapter summary and Self-Test guide your studying by distinguishing the important issues in each textbook chapter, and they also help you gauge your understanding of the material.

Key features of this Study Guide are:

- A summary of each chapter that emphasizes the main points of each chapter.
- A Match the Terms exercise that reviews the key definitions and concepts.
- Multiple-choice and true-false questions to practice for exams.
- Longer questions and problems to more thoroughly test your understanding of models and concepts.

This Study Guide is obviously not a substitute for the textbook, but it can greatly assist in guiding your study of International economics. Where the textbook is indispensable for gaining the broad picture and many important interrelationships that shape the global economy, this Study Guide ensures that you remember the key details, concepts, and issues that make up the global economy.

How to Get the Most Out of the Self-Tests

You will benefit the most from taking the Self-Test if you do not look up the answers until you have completed the entire test. Only by taking the Self-Test as you would a normal exam can you get a good indication of how well you know the material and where you need to concentrate your review of the textbook material. Then, when you have completed the Self-Test and you have compared your answers to the answers provided at the end of this Study Guide, you should
spend some time correcting your mistakes and omissions by going back to the textbook to find the correct answers.

Answers to all of the Self-Test questions are provided at the end of this Study Guide. They are provided on a chapter-by-chapter basis in exactly the same order that the problems appear in the Self-Tests.

**A Final Warning**

This Study Guide will best enhance your learning international economics if you keep in mind that it is not designed to substitute your reading of the textbook. This is a “guide,” not a substitute for the thorough presentation provided by the textbook. Only the textbook can give you the broad understanding of globalization and the appreciation for the importance of international economic activities for human welfare. You should, therefore, always read the assigned chapters of the textbook before you read the corresponding chapters of this Study Guide.

Enjoy your international economic course.

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Chapter Summary:

This introductory chapter begins by defining international economic integration as consisting of four main components: (1) international trade, (2) international investment, (3) international migration, and (4) international finance. All four of these international economic activities have expanded rapidly since the close of World War II. Of course, international economic integration has been occurring, off and on, for at least 10,000 years, when the discovery of agriculture led humans to build more complex societies with expanded interaction with strangers.

This chapter introduces the concept of complexity, which justifies the scientific and holistic approaches embraced by this textbook. Holistic perspectives are necessary because international economic integration is not exclusively an economic process, nor is economic behavior exclusively determined by economic variables. International economic integration occurs within the broader social and natural spheres, which surround the economic sphere observed by traditional economic analysis.

The complexity and holistic nature of international economic integration are reflected in the fact that globalization has been stopped or reversed many times throughout history. The full economic, social, and environmental effects of international trade, international finance, international investment, and immigration are not as straightforward as orthodox neoclassical economic models suggest. While international economic integration offers many benefits, unfettered globalization advocated by many mainstream economists almost certainly is not politically feasible or welfare maximizing from a long-run social perspective.
### I. Match the Terms and Definitions

*In the space after each of the 27 terms, note the matching definition from among A through AA:*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1. Abstract reasoning</td>
<td>A. The post-1960s changes in energy-using agricultural technologies that are sometimes credited for enabling the world to avoid famine in the face of accelerating population growth.</td>
</tr>
<tr>
<td>2. Central American Free Trade Agreement (CAFTA)</td>
<td>B. The phenomenon in which average costs fall as the volume of production increases.</td>
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<td>3. Cross-section data</td>
<td>C. The concept that the longer one performs a task, the more productive one gets at performing it.</td>
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<tr>
<td>5. Economies of scale</td>
<td>E. The process whereby people increasingly concentrate on a few tasks rather than performing every job necessary for their existence, which, when combined with exchange, permits them to produce greater amounts of real output.</td>
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<td>6. Ecosystem</td>
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<td>7. Empirical evidence</td>
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<td>8. Green Revolution</td>
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<td>9. Greenhouse gas (GHG) emissions</td>
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<tr>
<td>10. Heterodoxy</td>
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<td>11. Heterodox economics</td>
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<td>12. Institutions</td>
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<td>13. immigration</td>
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<td>15. Learning by doing</td>
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<td>16. Model</td>
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<td>17. Monoculture</td>
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<td>18. Neoclassical paradigm</td>
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<td>20. Orthodox economics</td>
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<td>21. Outsourcing</td>
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<td>22. Paradigm</td>
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<td>23. Risk</td>
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<td>24. Schumpeterian model</td>
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<td>25. Specialization</td>
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<tr>
<td>26. Time-series data</td>
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<tr>
<td>27. Uncertainty</td>
<td></td>
</tr>
</tbody>
</table>
F. An approach to economic analysis that advocates the use of a wide range of paradigms and models, and fundamentally embraces the principle of holism.

G. A set of observations made at a given point in time of a set of diverse people, firms, countries, et cetera.

H. The large-scale, capital-intense production of single crops covering vast tracts of land formerly divided into much smaller-scale and more varied agricultural production.

I. The situation where future outcomes cannot be predicted, nor is the distribution of possible outcomes understood well enough to be able to attribute probabilities to the potential outcomes.

J. Actual observations and quantitative data representing real-world activity that can be used to design scientific hypotheses or test those hypotheses.

K. A consistent, logical conceptual framework of beliefs, philosophies, practices, and accepted patterns for organizing thought in an intellectual discipline.

L. The process of thinking logically about some complex issue or problem.

M. The natural sphere of human existence that provides the resources on which humanity depends for its survival.

N. A framework of economic analysis that generally sees the economic sphere as consisting of a complete set of stable markets that efficiently set prices in a competitive environment so that prices provide accurate signals that lead rational individuals to behave in ways that result in socially optimal economic outcomes.

O. The free trade agreement, which went into effect in 2010, between the Dominican Republic, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the United States.

P. The chemical gases that contribute to the atmosphere’s ability absorb the heat of the sun and thus cause atmospheric temperatures to rise.

Q. A set of informal ideas, beliefs, conventions, habits, and customs that dominates the thinking of a specific group of people.

R. A set of observations of a specific phenomenon taken at a series of consecutive points in time or periods of time.

S. The variation in outcomes that can be described with a known distribution function, so that the mean, median, and spread of outcomes are reasonably well understood.

T. The migration of people across political boundaries.

U. The process of contracting business services and manufacturing services out to other businesses in order to focus a firm’s activities on its most profitable activities.

V. A set of growth models in which technological progress is the result of a creative destruction process whereby entrepreneurs intentionally apply resources to develop new products and processes in order to better their competitors and gain monopoly profits.

W. A simplified representation of a hypothesized or proven real phenomenon that is specific enough to be scientifically tested using real observations, experiments, or empirical data.

X. A set of ideas, perspectives, and models that are different from the orthodox perspective of an issue or an intellectual field.

Y. The mainstream economics paradigm embraced by the majority of economists.

Z. The expansion of human interactions, such as trade, investment, financing, and migration, over greater distances, and among more countries.

AA. The laws, social norms, traditions, religious beliefs, and many other established rules of behavior that provide the incentives that guide behavior.
II. Problems and Essay Questions

1. What are the three main benefits that humanity gains from expanding human interaction by dealing with more “strangers”?

2. Seabright writes that “…almost all of the institutions of modern society can be understood as dedicated to an utterly unnatural division of labor between strangers.” [Seabright (2004), p. 244.] Discuss the role of institutions in a modern economy. Specifically, explain why institutions are needed to translate individual actions into outcomes that optimize outcomes for the entire group and society as a whole. Give examples of institutions that have served to enable people to capture the gains from dealing with strangers.

3. Explain exactly what we mean by the scientific method. What are the precise steps under the scientific method? Why has this method been instrumental in accelerating the process of technological change? Also, why do people behave “unscientifically”?

4. Explain the three spheres of human existence, as shown in Figure 1.1 in the textbook. What problems would you face if you analyzed economic activity from only the perspective of the economic sphere under the assumption that everything remains the same in the other spheres? Would your conclusions be biased? How?

5. The nineteenth-century French economist Frédéric Bastiat wrote: Between a good and a bad economist this constitutes the whole difference—the one takes account of the visible effect; the other takes account both of the effects which are seen, and also those which it is necessary to foresee.” Explain the meaning of Bastiat’s words.

III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

___ 1. Not included in the field of international economics is:
   a. international trade.
   b. immigration.
   c. international investment.
   d. None of the above; all are included in international economics.

___ 2. The process of international economic integration is reflected in:
   a. the increase in trade as a percentage of world output.
   b. the increase in international investment as a percentage of total world investment.
   c. the increase in the proportion of people living in countries other than their country of birth.
   d. the increase in international economic activity relative to overall world economic activity.
   e. All of the above.
3. Which of the following statements is true?
   a. In 1820, only about 10 percent of world output was exported to foreign markets.
   b. Economies were more closed at the beginning of the twentieth century than they were halfway through the century, in 1950.
   c. Over the past 200 years, international trade throughout the world has grown more rapidly than world output.
   d. In the late 1990s, the United States exported less than it did 500 years earlier.

4. In modern terms, Adam Smith’s “division of labour” is commonly referred to as:
   a. economic growth.
   b. specialization.
   c. unemployment.
   d. economic independence.

5. Which of the following statements is closest to the truth?:
   a. As percentage of world output (GDP), international investment was at its all-time high in the years 1820-1870.
   b. As percentage of world output (GDP), international investment was never been higher than it has been each year since 2000.
   c. As percentage of world output (GDP), international investment fell to near zero during most years of the 1930s.
   d. International investment has never been a substantial part of international economic activity.

6. Immigration is:
   a. a phenomenon that only became possible with the invention of modern transportation.
   b. an important economic phenomenon in very few countries.
   c. has occurred throughout human history.
   d. still declining from its high levels of 100 years ago.

7. The discussion of the North American Free Trade Agreement in this first chapter makes it clear that the United States government’s subsidies to U.S. farmers:
   a. reduced immigration from Mexico to the U.S..
   b. raised immigration from Mexico to the U.S.
   c. had absolutely no effect on immigration from Mexico to the U.S.
   d. increased incomes for Mexican farmers too.

8. Paul Seabright, the author of *The Company of Strangers*, points to several fundamental advantages to expanding the number of people that humans interact with; these include:
   a. higher levels of specialization.
   b. reduced uncertainty and risks from unpredictable adverse outcomes.
   c. faster accumulation of knowledge.
   d. All of the above.
   e. None of the above.

9. What does Paul Seabright consider a “hard wired” human behavior?
   a. Difficulty in interacting with strangers in large groups as opposed to familiar friends in smaller groups.
   b. Human beings’ capacity for rational and abstract reasoning.
   c. Human’s propensity to seek to interact with strangers.
   d. All of the above.
   e. None of the above.
10. An economic model:
   a. is a simplified logical representation of a real economic activity.
   b. explicitly highlights key relationships that are important to understanding and analyzing certain economic issues.
   c. intentionally omits many details deemed to be irrelevant to the problem at hand.
   d. All of the above.
   e. None of the above.

11. Dynamic models:
   a. describe how the model’s equilibrium changes as the result of a change in one variable.
   b. are not appropriate for analyzing globalization’s effects on economic growth.
   c. trace the economy’s path of adjustment as it moves from one equilibrium to another.
   d. describe the one-time changes that result from some outside variable’s one-time change.

12. The World Wildlife Fund defines humanity’s global ecological footprint in terms of global hectares (gha), where the former includes
   a. all forest, grazing land, cropland, and fishing grounds required to produce the food, fibre, and timber humanity consumes.
   b. all land and water to absorb the wastes emitted when humans uses energy.
   c. all land and water required for humanity’s living space, production, transportation, and storage.
   d. All of the above.
   e. None of the above.
Chapter 2

The Heterodox Approach

Chapter summary:

In the United States today, the *orthodox* paradigm in the social science discipline of economics is the neoclassical paradigm. All other paradigms, such as those advanced by institutionalists, Marxists, Keynesians, behavioralists, libertarians, Austrians, structuralists, dependency theorists, and other social scientists are assigned to heterodox economics.

This chapter explains heterodoxy, the approach taken by this textbook. Heterodox economics embraces alternative paradigms, plus the neoclassical paradigm, because it recognizes the limits of any particular model; it applies different models under different circumstances and to compare the results of different models for any given set of circumstances. The concept of holism underlies all of heterodox economics because, like holism, it embraces models that are *systemic, dynamic, and multi-disciplinary*. Holism explicitly addresses the complexity of human existence within the interdependent economic, social, and natural systems.

Holism clashes directly with neoclassical economics and its scientific reductionism, its limited focus on only “economic” issues, and its widespread use of the “all other things equal” assumption to justify its static equilibrium models. A reading of the heterodox economics literature reveals at least 20 more fundamental ideas that persistently guide the thinking of most heterodox economists, and this chapter details these ideas. Because heterodox analysis uses alternative models, dynamic analytical frameworks, and recognizes the complexity of systems, heterodox economists’ policy prescriptions are usually much less specific than the policy prescriptions suggested by orthodox economists. In recognition of uncertainty within a complex system, such as our economic, social, and natural system, heterodox economists are likely to invoke the *precautionary principle* in a case such as this where some of the possible outcomes are truly catastrophic.

This chapter also contains a sociological examination of the culture of the field of international economics reveals why the intellectual bias of international economics often causes it to fail to provide relevant and convincing analyses of our internationally integrated economy. The discussion of the three spheres of human existence and economic modeling in the previous chapter, plus this chapter’s discussions of holism and Bourdieu’s sociological analysis of culture complete the justification for our heterodox approach to international economics.
I. Match the Terms and Definitions

In the space after each of the 37 terms, note the matching definition from among A through KK:

1. Community  
2. Cultural capital  
3. Culture  
4. Doxa  
5. Externalities  
6. Fallacy of composition  
7. Field  
8. Gaia hypothesis  
9. Habitus  
10. Heterodox economics  
11. Heterodoxy  
12. Heuristics  
13. Holism  
14. Holistic science  
15. Homeostasis  
16. Hypothesis  
17. Inherited cultural capital  
18. Institutionalized cultural capital  
19. Medea hypothesis  
20. Microfoundations  
21. Multi-paradigmic approach  
22. Neoclassical paradigm  
23. Normative economics  
24. Objectified cultural capital  
25. Positive economics  
26. Orthodox economics  
27. Orthodoxy  
28. Paradigm  
29. Precautionary principle  
30. Scientific hypothesis  
31. Scientific method  
32. Scientific observation  
33. Scientific reductionism  
34. Scientific theory  
35. Social scientist  
36. Symbolic violence  
37. Theory

Definitions:

A. An economic consequence of one person’s or firm’s activity that raises or decreases others’ welfare but is not taken into consideration by those undertaking the activity.
B. The attitudes and dispositions that identifies a person as belonging to a specific subculture.
C. A systemic, dynamic, and inter-disciplinary approach towards applying the scientific method.  
D. Symbols and certifications of cultural capital held by individuals, such as diplomas, titles, awards, certifications, and other official credentials.  
E. The study of economics from a judgmental perspective that examines whether the economic system is generating the best possible outcomes.  
F. Consistent model that systematically links the economy’s individual consumers, workers, producers, bankers, and investors to the economy’s aggregate performance.  
G. Refers to mainstream or culturally sanctioned thinking, as opposed to heterodoxy, which refers to alternative viewpoints that fall outside the accepted mainstream culture.  
H. The acquired behavioral characteristics, material goods, and formal institutional certifications that give a person status in a specific field or in society in general.  
I. The set of procedures, or steps, that must be followed if one is to be a scientist. Science is defined as a set of phenomena that are studied in accordance with the scientific method.  
J. In a complex process where some of the possible outcomes are truly catastrophic, but the complexity does not permit a precise calculation of probabilities for such outcomes, it can be prudent to take action to minimize the chances of having to face such outcomes.  
K. Similar to a heterodox aproach.  
L. Economic analysis that attempts to analyze issues and circumstances without bias or judgments.  
M. Useful life rules and other behavioral guidelines that have proven beneficial for humanity in the past and are widely advocated even though their accuracy has not been scientifically proven.  
N. A falsifiable hypothesis that has been overwhelmingly confirmed and reproduced by scientific tests, experiments, and observations.  
O. An approach to economic analysis that advocates the use of a wide range of paradigms and models, and fundamentally embraces the principle of holism.  
P. A practitioner who analyzes a set of social issues using the scientific method.  
Q. The hypothesis that the planet Earth functions as a large homeostatic organism that actively adjusts its “internal” natural conditions.  
R. The use of cultural capital to impose power over others.  
S. The parts of culture that can take considerable time for parents and communities to transfer to new members, such as habits developed during years of training and education, specific terminology and models, social behavior and professional procedures, and, of course, personal relationships.  
T. A carefully thought-out probe into the space between what we know and what we don’t know.  
U. A term adopted by French sociologist Pierre Bourdieu to describe the complex set of beliefs and narratives that effectively explain the reality of one’s field.  
V. A falsifiable construct or model that accurately and logically explains the facts you observe.  
W. A precise conceptual framework that consistently explains existing facts and accurately predicts future facts.  
X. A social group of any size that shares certain geographic, cultural, and/or institutional characteristics.  
Y. Tools, equipment, clothing, and other objects whose possession define a member of a subculture or field, such as a musical instrument, an office, a wardrobe, or an intellectual’s library of books.  
Z. A consistent, logical conceptual framework of beliefs, philosophies, practices, and accepted patterns for organizing thought in an intellectual discipline.
AA. The analytical approach that assumes that we can understand the whole by learning about its parts, one part at a time.
BB. A paradigm that views the economic system as a complete set of efficient markets that set prices that lead rational individuals to behave in ways that generate socially optimal economic outcomes.
CC. The social or intellectual arena within which people spend much of their working hours and within which they focus their efforts to advance their primary social interests.
DD. An objectively observed and described phenomenon or fact, which is then built into a scientific hypothesis.
EE. The characteristic of an organism that automatically or instinctively regulates its internal environment so as to survive within variable external environments.
FF. A set of informal ideas, beliefs, conventions, habits, and customs that dominates the thinking of a specific group of people.
GG. The mainstream economics paradigm embraced by the majority of economists. In current economics textbooks.
HH. A set of ideas, perspectives, and models that are different from the orthodox perspective or approach to economic analysis.
II. Just like complex economic and social systems, the ecosystem is also subject to booms and busts.
JJ. The choices that change an individual’s well-being if no one else acts similarly, but one’s welfare effects are different if everyone does the same.
KK. The explicit recognition that the component parts of a whole cannot be understood in isolation and their functions cannot be predicted without knowing the whole environment in which they exist.

II. Questions and Problems

1. What is the purpose of replication in science?

2. Explain the difference between orthodoxy and heterodoxy.

3. Can you explain why anyone would want to pursue new knowledge while restricting themselves to proceed within a very restricted framework of analysis based on a well-defined pre-approved set of ideas and beliefs? Hint: Explain the role of culture in human behavior, including the behavior of scientists.

4. Should heterodox economists use orthodox neoclassical economic analysis when they think it adds to their understanding of an issue? Explain.

5. Explain and contrast the Gaia Hypothesis and the Medea Hypothesis. Which do you think is more realistic with regard to the international financial system? Which more accurately describes human society in general?

6. Provide some examples people’s adherence to the precautionary principle. Provide examples of economic/social policies that follow the precautionary principle.
7. What are some of the biases that contribute to the failure of international economics to provide relevant and convincing analyses of our internationally integrated economy?

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**III. Multiple-Choice Questions**

*For each question, select the statement that best answers the question or completes the sentence:*

____ 1. Heterodox economics is best characterized as:
   a. an anti-scientific approach to social science.
   b. a form of scientific reductionism.
   c. a belief-based framework of social analysis.
   d. A multi-paradigmatic approach to social analysis.

____ 2. Holism applied to the field of international economics suggests that:
   a. international trade can be analyzed separately from international finance or international migration.
   b. international trade is purely a function of economic variables.
   c. international investment does not influence, or is influenced by, international trade.
   d. the overall economic, social, and natural outcomes are a function of both the international economic system’s parts and their interactions.

____ 3. Léon Walras, the late nineteenth century French-Swiss economist, effectively ended up encouraging economists:
   a. to view the economy from a scientific reductionist perspective.
   b. to embrace Marxism.
   c. to look at economies from a macroeconomic perspective.
   d. to focus on the economy as an ever-evolving complex system.
   e. All of the above.

____ 4. Neoclassical economists:
   a. emphasize Adam Smith’s writing about the failures of markets and the potential breakdown of market competition.
   b. reject the idea that an economy consists of a fixed set of resources and unlimited human wants.
   c. effectively assume that the economy consists of a complete system of markets.
   d. All of the above.
   e. None of the above

____ 5. Holism calls for models that are:
   a. systemic.
   b. dynamic.
   c. multi-disciplinary.
   d. All of the above.
   e. None of the above
6. In their detailed model of the economy, Kenneth Arrow and Gerard Debreu:
   a. found the solution to their model using topology, a branch of mathematics not available to Walras.
   b. ignored uncertainty by assuming financial markets only face risk defined by known probability distributions
   c. assumed uncertainty rather than risk, which made it impossible for them to actually apply their model.
   d. All of the above.
   e. None of the above.

7. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. Human society continually evolves; it is not static
   b. Social and economic institutions are fundamental to economic outcomes
   c. Feminist perspectives contribute greatly to economic understanding
   d. All of the above.
   e. None of the above

8. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. Economic transactions all take place in markets
   b. Small government is generally better than a larger government
   c. Humans simultaneously live in economic, social, and natural spheres
   d. All of the above.
   e. None of the above

9. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. The analysis of economic activity requires an interdisciplinary approach.
   b. Objectivity requires that the scientific method be respected.
   c. Economists must know the history of economic thought.
   d. All of the above.
   e. None of the above

10. The French sociologist Pierre Bourdieu:
    a. provided a coherent framework for analyzing isolated cultures.
    b. called for a “sociology of economics.”
    c. developed a conceptual framework for breaking down the components of the cultures and subcultures according to the influence they have on the behavior of an individual.
    d. did not present a relevant framework for analyzing how the subculture of international economics evolved within the broader cultures of economics, social science, the workplace, and society as a whole.

11. The French sociologist Pierre Bourdieu defined doxa as:
    a. the facts people know to be true.
    b. the formal institutions that government established in order to guide human behavior.
    c. the stories and shared unsubstantiated beliefs that effectively justify the patterns of human thinking and action that people come to accept as normal and appropriate
    d. All of the above.
    e. None of the above
12. Pierre Bourdieu argued that when people embrace the subculture that permeates the *field* they identify with, they:
   a. adopt certain attitudes and dispositions.
   b. embrace a specific *habitus*.
   c. develop a complex set of beliefs that seem to explain the reality of one’s field
   d. All of the above.
   e. None of the above

13. Bourdieu defines symbolic violence as the:
   a. use of cultural capital to gain an advantage over someone.
   b. combat sports such as rugby or American football.
   c. violence in movies or television.
   d. games that children play that simulate real world violence.

14. Holistic models:
   a. are always stated in both mathematical and graphic forms.
   b. only deal with “economic” issues while assuming all other things remain equal.
   c. rely almost exclusively on neoclassical reasoning to arrive at static equilibria.
   d. All of the above.
   e. None of the above.

15. Which of the following is (are) true about models?
   a. Graphic models are limited to only one dimension.
   b. Only mathematical models have restrictive assumptions.
   c. Verbal models do not have to exhibit the logic rigor of mathematical models.
   d. Verbal models can often more accurately and consistently describe observations of complex phenomena.

16. Which of the following include fundamental ideas of heterodox economics?
   a. Complex systems are probably linear.
   b. Economists must accept the influence of their cultures in reaching conclusions.
   c. The culture of one’s own discipline can influence the conclusions of one’s analysis.
   d. Complexity must be assumed away if economists are to reach practical conclusions.

17. A holistic perspective to understanding human existence:
   a. suggests that the complexity of the real world makes it impossible to add to knowledge by developing and testing simple hypotheses.
   b. leads one to embrace scientific reductionism.
   c. recognizes that the component parts of the whole cannot be understood in isolation.
   d. is not scientific.
   e. None of the above.
Chapter 3

Orthodox International Trade Theory:

Why Mainstream Economists Like Free Trade

Chapter Summary:

This chapter begins with a simple “small country” version of the Heckscher-Ohlin (HO) general equilibrium model of international trade that, under a large set of strong assumptions about consumer and producer behavior, shows how international trade increases welfare. The model is also used to show how trade leads producers to specialize by producing the products for which their economy enjoys a comparative advantage. The gains from exchange are explicitly separated from the gains from specialization to show that an economy can enjoy the gains from exchange without specializing, but it cannot enjoy the gains from specialization without trading with foreigners.

The two-country general equilibrium, or HO, model illustrates that all nations gain from international trade. The two-country general equilibrium model also shows that international trade changes production and consumption patterns in both the domestic and the foreign economies.

The partial equilibrium model of international trade is developed next. This model explicitly focuses on individual markets, producers, and consumers to detail how each of these are affected by trade. Students are shown how the model is used to calculate the gains from trade. The partial equilibrium model of trade exploits the concepts of producer surplus and consumer surplus, which are used to derive measures of the net gains to producers and consumers from being able to trade with foreigners.
### I. Match the Terms and Definitions

In the space after each of the 27 terms, note the matching definition from among A through AA:

1. absolute advantage  
2. aggregate indifference curves  
3. capital intensive  
4. comparative advantage  
5. consumer surplus  
6. consumption possibilities line  
7. demand side  
8. economic problem  
9. factor price equalization theorem  
10. general equilibrium model  
11. Heckscher-Ohlin (HO) model  
12. Heckscher-Ohlin theorem  
13. human capital  
14. increasing costs  
15. indifference curves  
16. labor intensive  
17. neoclassical general equilibrium  
18. opportunity cost  
19. partial equilibrium model  
20. positive-sum game  
21. producer surplus  
22. production possibilities frontier (PPF)  
23. Stolper-Samuelson theorem  
24. supply side  
25. terms of trade (ToT)  
26. trade triangle  
27. welfare function  

**Definitions:**

A. The set of all combinations of available products that leave a welfare-maximizing consumer equally well off and, therefore, “indifferent” among them.
B. The fundamental problem addressed by neoclassical economics, namely that the economy has limited resources with which to satisfy unlimited wants.
C. The amount of exports that a country needs to supply to the international market in exchange for a given amount of imports; the rate at which countries can exchange exports for imports.
D. In the case of two countries, two products, and two factors, plus a large set of other simplifying assumptions, free trade will result in each country exporting the product whose industry intensively uses the country’s relatively abundant factor.
E. The knowledge acquired by workers through education, training, and self-learning.
F. A game where total winnings can exceed the stakes put in by the individual players.
G. The net gains for consumers of a product, equal to the sum of all successive marginal gains minus the market price paid for the products.
H. The activity or activities for which the economy’s opportunity costs are the lowest and, therefore, the activities the economy should specialize in and whose products it should export.
I. A model that describes an equilibrium relationship between certain variables in just one market or one sector of the economy while assuming that all other things elsewhere in the economy remain unchanged.
J. The combinations of products an economy can produce given its resources and technology.
K. The net gains to producers of a product, equal to the total revenue minus the sum of marginal (variable) costs.
L. The set of indifference curves often used in general equilibrium models to represent a population’s tastes and preferences.
M. For a simple two-factor, two-good general equilibrium model of trade, when the economy moves to free trade the return to the factor used intensively in the growing export industry rises and the return to the factor used intensively in the shrinking import-competing industry falls.
N. A function relates individual or group welfare to some set of inputs.
O. The general equilibrium model of trade consisting of the production possibilities frontier and indifference curves, which was first developed in the 1920s.
P. A fundamental concept in economics, which states the cost of doing one thing in terms of the other things that could have been done had the economy’s resources not been employed to perform the first task.
Q. The description of an industry in the Heckscher-Ohlin model of trade whose capital/labor ratio is relatively low compared to other industries.
R. The economy’s total capacity, assumed to be determined by the available factors of production, natural resources, and the level of technology with which factors and resources can be transformed into products. In mainstream microeconomics, the supply side is normally represented by a production possibilities frontier.
S. In macroeconomic modeling, this refers to the structure of aggregate demand for the economy’s production.
T. The case of rising opportunity costs—the more of a certain product is produced, the greater the value of other products that must be foregone.
U. The theorem predicts that, under a set of assumptions that includes free trade, not only will the price of each of the final products be equalized across countries, but the price of each factor of production will also be the same in every country.
V. The description of an industry in the Heckscher-Ohlin model of trade whose capital/labor ratio is relatively high compared to other industries.
W. The graphic depiction of international trade in the two-dimensional graphic Heckscher-Ohlin model, which shows how much domestically produced production, measured along one axis, is exported in exchange for imports of a product measured along the other axis.
X. A model of trade consisting of a production possibilities frontier and indifference curves.
Y. The principle that reflects the idea, popularized by Adam Smith (1776), that countries should specialize in producing what they can produce more cheaply and importing those things others produce more cheaply.
Z. The stable equilibrium that an economy tends toward, one where human welfare is maximized and the economy is at full employment.
AA. The set of all combinations of products that consumers can select from, given their real income and the relative prices of goods.
II. Questions and Problems

1. Suppose that the Homeland and Abroad markets for widgets are given in Figure 1 below. Prices are in dollars and quantities are given in millions of widgets. Note that the supply and demand curves are straight lines, so it is easy to calculate the slopes and find the intersections points.

   A. Draw the international demand and supply curves in the center diagram.

   B. Calculate the gains from trade in widgets in Homeland and Abroad, distinguishing among the gains and losses in consumer surplus and producer surplus.

2. Discuss the specific differences between a general equilibrium model of international trade and a partial equilibrium model of international trade.

3. Beginning with the two-product, two-country model with production possibilities frontiers (notice that they differ for each country) and the indifference curves (identical in both countries) given below, draw the trade triangles that reflect the trade that could increase welfare in both countries if there were completely free trade:
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

____ 1. The production-possibilities frontier is typically drawn so that it has a bowed-out shape, or concave to the origin. This shape implies that:
   a. it becomes less and less costly to expand production of one good the more of society’s resources are taken from other sectors of the economy.
   b. the more of a product is produced, the more costly it becomes.
   c. production is characterized by increasing costs.
   d. Both b and c above.
   e. None of the above.

____ 2. The following is a property of indifference curves?
   a. They cannot intersect.
   b. They slope upward from left to right.
   c. Their slope is always constant.
   d. They are concave to (they bow out from) the origin.
   e. None of the above.

____ 3. Which of the following could cause a country’s production possibility frontier to shift?
   a. A change in the mix of products produced.
   b. A change in tastes.
   c. The commencement of international trade.
   d. An improvement in technology.

____ 4. The economy of Littletania is depicted using a typical production possibilities frontier, with product A on the horizontal axis and product B on the vertical axis, and the world price of A is higher in the rest of the world relative to the price of B than it would be in Littletania in the absence of trade. In this case, with free trade the production point in Littletania lies:
   a. to the northwest of the no-trade production point.
   b. to the southeast of the no-trade production point.
   c. at the intersection of the PPF and the vertical axis.
   d. at the intersection of the PPF and the horizontal axis.
   e. at a point that is not correctly described by any of the above.

____ 5. The PPF/indifference curve (Heckscher-Ohlin) model of international trade brings out a number of important points, among which is/are:
   a. after international trade is carried out to its fullest potential, domestic relative prices become the same as international relative prices.
   b. the gains from exchange are the result of domestic consumers substituting relatively cheaper foreign products for more expensive domestic products.
   c. the shift from self-sufficiency and economic isolation to free trade increases the amount of real output the economy provides its citizens with its available resources and production technology.
   d. All of the above.
   e. None of the above.
6. The two-country Heckscher-Ohlin model of trade shows that when two countries open their economies and trade freely:
   a. one country gains welfare and the other suffers a welfare loss.
   b. consumers in only one country reach a higher indifference curve.
   c. consumers in both countries enjoy combinations of products that are simply not attainable without trade.
   d. only one country will have a comparative advantage.

7. The Heckscher-Ohlin model of trade suggests that:
   a. most trade should occur between countries with the most different resource endowments and tastes.
   b. countries should export similar products to each other.
   c. the greatest increases in welfare will result from trade between those countries that have the most similar production possibilities frontiers.
   d. countries’ comparative advantage may be a historical accident because it depends on whoever exploits economies of scale first.

8. Producer surplus is represented in the typical supply and demand diagram as:
   a. the product of the equilibrium price and the equilibrium quantity.
   b. the area below the supply curve up to the equilibrium price and quantity.
   c. the area above the demand curve but below the equilibrium price.
   d. the area above the supply curve and below the equilibrium price.

9. Consumer surplus is:
   a. the area between the supply curve and the demand curve.
   b. the difference between welfare gained from consuming the equilibrium level of output and the total revenue paid to producers.
   c. the welfare gain to consumers from being able to buy extra products below the equilibrium price.
   d. All of the above.
   e. None of the above.

10. In the market for cowboy hats shown in the figure on the right, producer surplus is equal to:
    a. $6,000.
    b. $60.
    c. $1,250.
    d. $2,500.
    e. None of the above.

11. The two-country supply and demand (partial equilibrium) model of international trade shows that when the two countries open their mutual borders to free trade:
    a. everyone in each country improves their welfare.
    b. the net welfare gains are positive in each country.
    c. the exporting country gains welfare but the importing country loses welfare.
    d. consumers gain welfare in both countries and producers lose welfare in both countries as trade reduces the price of the traded good.
12. According to the partial equilibrium model of international trade, in the market for a good in which a country has a comparative advantage, in that country free trade will lead to:
   a. welfare gains for producers that exceed the gains for domestic consumers of the good.
   b. welfare losses for producers that are smaller than the gains to domestic consumers.
   c. welfare losses for producers that are greater than the gains to domestic consumers.
   d. welfare gains for producers that are greater than the losses to domestic consumers.
   e. welfare gains for producers that are equal to the losses to domestic consumers.

12. All other things equal, the partial equilibrium model shows that depreciation of a country’s currency will:
   a. increase the volume of imports.
   b. decrease the price of the country’s imports.
   c. increase the volume of exports.
   d. decrease the price of the country’s imports.

13. The many studies that have attempted to measure the net welfare gains from international trade throughout the world have usually concluded that trade increases annual real income in the world by:
   a. about 10 percent of GDP.
   b. about 28 percent of GDP.
   c. about 1 percent of GDP.
   d. about 100 percent of GDP.
Chapter 4

International Trade: Beyond the Neoclassical Perspective

Chapter Summary:

This chapter examines how some of the HO model’s predictions change when we drop some of the model’s strong assumptions. The first section of this chapter drops the assumption that there are no transport or other transactions costs related to the export and import of goods and services. When transport costs are explicitly accounted for, the volume of and the gains from trade are reduced, all other things equal. Note that transportation costs and contract enforcement costs are but two examples of what we generally call transactions costs, which are all the explicit costs, the time, and the preparation necessary in order to carry out the exchange of goods and services. Transactions costs include business activities such as marketing. Since Jan Tinbergen’s (1962) first use of the gravity model to explain international trade patterns, economists have consistently found that a model such as equation (4.3) statistically “explains” almost all of the variation in international trade flows between countries. In short, distance is an important determinant of international trade.

Another assumption that seems to be very unrealistic is that the economy quickly and costlessly adjusts to shifts in trade. Realistically, a sudden shift in international trade is likely to cause unemployment and closed factories. An economy that suddenly faces a new set of relative prices after opening its borders to international trade may not only find it very costly to shift resources; it may not be able to shift resources at all.

This chapter also looks at the welfare function commonly used by neoclassical models like the Heckscher-Ohlin model. Studies that have looked at a large sample of different countries at a given point in time do seem to suggest that life satisfaction or happiness is positively related to income. However, the relationship is not linear. Also, happiness research reveals that average human happiness does not change very much as real average per capita income grows over time, and people are much more conscious of their relative income and status. The conclusions of the HO model must be adjusted to reflect the fact that continued increases in material consumption do not provide a useful measure of human progress.

Imperfect competition and the lack of markets further undermines the HO model. Producers do not always pay the full costs of the resources used in production, nor do buyers pay a price that exactly represents benefits provided by a product, which means there are important externalities to international trade that are not accounted for. Economists should measure the gains and losses from trade after duly taking into account the costs of adapting to new jobs, losing investment incomes, or changing relative incomes and social status.
Match the Terms and Definitions

In the space after each of the 22 terms, note the matching definition from among A through V:

1. Automatic brain processes
2. Cabotage
3. Carbon tax
4. Cocagne
5. Convention on International Civil Aviation
6. Deliberative brain processes
7. Emotional brain processes
8. Enclosure
9. Fixed-factors model
10. Gravity model of trade
11. Greenhouse gas (GHG)
12. Happiness studies
13. Happiness surveys
14. Homeostasis
15. Just-in-time supply systems
16. Maghribi traders
17. Neuroscience
18. Shrinkage
19. Silk Road
20. Static model
21. Territoriality
22. Transactions costs

Definitions:

A. The mythical, utopian place that existed in the minds of medieval European writers and artists.
B. The brain processes are capable of abstract thought as well as logical reasoning.
C. The chemical gases that contribute to the atmosphere’s ability absorb the heat of the sun.
D. A wide variety of statistical and analytical studies of the state of human happiness or satisfaction with life using data from surveys that directly ask people to express their opinion on their perceived well-being. See also happiness surveys.
E. The characteristics of a living organism that automatically or instinctively regulates its internal environment so as to survive within variable external environments.
F. The breaking up of communal lands into separate private land holdings in Britain during the seventeenth and eighteenth centuries, which effectively drove those without the means to secure ownership of enclosed land out of rural areas and into cities and towns to seek work in England’s new industries.
G. A network of Jewish traders that connected the commercial cities around the Mediterranean Sea for several centuries after the fall of the Roman Empire.
H. The losses to international trade due to damage and theft of goods while in transit.
I. the explicit costs, the time, and the preparation necessary in order to carry out the exchange of goods and services. Transactions costs include business activities such as marketing.

J. A 1944 agreement that, among other things, established that fuel for international air travel and transport of goods, including food, is exempt from national taxes.

K. The brain processes that occur in a part of the human brain that is of relatively recent evolution, often described as instinctive processes.

L. Also known as transshipment costs, which are incurred when goods have to be transferred from one mode of transportation to another for them to reach their destination.

M. The land trade route through central Asia linking China and the Middle East and Europe at the time of the Roman Empire, over which innovative Chinese products were brought to the Mediterranean region.

N. Opinion surveys that ask people how happy or satisfied they are with their lives.

O. A modified version of the Heckscher-Ohlin model of international trade in which not all resources can be shifted between industries in response to changes in relative product prices.

P. The fundamental emotional attachment to their possessions and geographic territory that people, and many other living species, exhibit, which implies that people fight harder to hold on to what they have than to acquire something new.

Q. A tax levied on a product or directly on a producer in order to internalize the external costs of climate change caused by the emission of greenhouse gases like carbon dioxide into the atmosphere.

R. An economic model that describes how key variables will eventually change as a result of a one-time change in policy or economic circumstances, all other things equal (ceteris paribus).

S. A model is based on the equation for gravity from physics, and it thus hypothesizes that the volume of trade between a pair of countries is a negative function of the distance between the countries and a positive function of the “mass,” or size, of the two economies.

T. The processes of the human brain that occur with little or no awareness or feeling of effort, and which do not follow orthodox assumptions about economic behavior.

U. The study of the functions of the brain by scanning neurological functions.

V. The inventory and supply system developed by Japanese manufacturers to reduce manufacturing costs.

II. Problems and Questions

1. Discuss the economic implications of the research on human happiness, human psychology, and neuroscience.

2. Explain what happiness studies show when cross-section data for individual countries are used to explain people’s satisfaction with life. Are rich people really happier than poor people living in the same society?

3. What do the findings of happiness studies, psychology, behavioral economics, and neuroscience mean for the models of international trade?
4. Show what happens to a country’s production possibilities frontier if a law is passed prohibiting workers from ever working in an industry other than the one they are currently employed in. How does this affect the gains from trade?

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**I. Multiple-Choice Questions**

*For each question, select the statement that best answers the question or completes the sentence:*

____ 1. When an economy shifts from no trade to free trade, the adjustment costs in the economy depend on:
   a. how well banks and financial markets can shift the flow of savings from financing investment in shrinking industries to financing investment in the expanding export industries.
   b. how easily the owners of specialized physical and human capital can shift their capital to other industries.
   c. How long it takes to shift physical capital from one sector to another.
   d. All of the above.
   e. None of the above.

____ 2. The lowering of transport costs throughout the 1800s:
   a. shrank the gap between prices of specific products in different parts of the world.
   b. completely eliminated the gap between prices of specific products in different parts of the world, essentially creating perfect product arbitrage.
   c. increased the gap between prices of specific products in different parts of the world.
   d. had little effect on the gap between prices of specific products in different parts of the world because trade barriers rose to offset declines in transportation costs.

____ 3. Data from the 1800s suggests that transport costs as a percentage of the value of goods exported:
   a. fell from 30 percent in 1800 to about 15 percent in 1900, a 50 percent decline over the century.
   b. rose from 20 percent in 1800 to nearly 30 percent in 1900, a 50 percent rise over the century.
   c. fell from 30 percent in 1800 to about 3 percent around 1900, a 90 percent decline over the century.
   d. remained unchanged over the nineteenth century, quite a feat given the larger distances that goods were being carried.

____ 4. Compared to the market equilibrium under free trade without transport costs, transport costs:
   a. cause the price in the importing country to rise.
   b. cause the price in the exporting country to rise.
   c. cause the quantity exported/imported to rise.
   d. increase the net welfare gains from international trade.

____ 5. Among the findings from happiness studies, neuroscience, and psychology are:
   a. People resist change and attempt to preserve the status quo.
   b. People like improvements in their well-being.
   c. People are adaptable and eventually come to accept changed circumstances.
   d. All of the above.
   e. None of the above.
6. Michalos hypothesizes that individual happiness depends on the satisfaction of:
   a. Basic needs and wants.
   b. What one was accustomed to having earlier in life.
   c. What others in society have.
   d. All of the above.
   e. None of the above.

7. Happiness studies show that in both the United Kingdom and the United States, people are more happy, all other things equal, when they are:
   a. employed rather than unemployed.
   b. single rather than married.
   c. retired rather than working.
   d. male rather than female.

8. Happiness studies suggest that, all other things equal, happiness and life satisfaction are positively correlated with:
   a. having higher blood pressure.
   b. practicing religion more seriously.
   c. doing paid work rather than volunteer work.
   d. exercising regularly.

9. Cross-section studies comparing people across different income groups in each country in any given year suggest that rich people are, on average:
   a. less happy than poor people but not as happy as people with average income.
   b. happier than poor people.
   c. about as happy as poor people; money seems to make little difference.
   d. less happy than poor people, but happier than middle class people.

10. Compared to the Heckscher-Ohlin model, all other things equal, the production possibilities frontier in the fixed-factors model is:
    a. more sharply curved.
    b. a straight line.
    c. exactly the same.
    d. less curved.

11. The Heckscher-Ohlin (HO) model of international trade does not explain how international trade:
    a. changes the distribution of income.
    b. changes the industrial structure of the economy.
    c. changes the overall level of welfare in the economy.
    d. All of the above are correct; the HO model does not explain any of these phenomena.
    e. All of the above answers are incorrect; the HO model explains all of these phenomena.

12. All other things equal, the partial equilibrium model shows that a decline in transport costs will:
    a. decrease the volume of trade.
    b. raise the price of imports in the importing country.
    c. increase the volume of trade.
    d. reduce the total gains from trade.
Chapter 5

International Trade:
Imperfect Competition and Transnational Companies

Chapter Summary:

This chapter focuses on the fact that the assumption of perfect competition is not a reasonable approximation of real world market behavior. For one thing, perfect competition breaks down when there are increasing returns to scale, and this means that international trade is conducted by monopolistic producers that charge prices that exceed their production costs. In the early 1980s, several international economists developed models in which production was characterized by increasing returns to scale by assuming that producers become more efficient the larger they become and the more they produce. These models are compatible with the observation that nearly all international trade in manufactured goods and commodities is carried out by large multinational firms rather than large numbers of small competitive firms.

Increasing returns to scale create an interesting conflict in that consumers prefer more variety to less variety, but the cost of each product is lower if consumers opt for less variety by consuming only one of the two goods. Paul Krugman showed that international trade makes possible a one-time gain in welfare from both lower unit costs and increased variety, affectively mitigating the conflict between cost and variety. An interesting theoretical conclusion of the simple economies of scale trade model above is that the direction of specialization by each of the two initially-identical economies is arbitrary, which may justify strategic trade policies that seek to influence which industries develop in a country.

This chapter emphasizes the fact that imperfect competition enables the growth of transnational corporations (TNCs). The dominance of (TNCs) means that international trade is closely linked to international investment, market structures, and institutional factors that are not covered in the Heckscher-Ohlin model of trade. TNCs are built through foreign direct investment (FDI). Vertical FDI occurs when a TNC builds or acquires foreign facilities that comprise one stage of its complete production process. Horizontal FDI consists of FDI that duplicate facilities and operations that the TNC already owns and operates in other countries.

This chapter outlines many reasons for the growth of transnational corporations. Most of the explanations are related to the various advantages of internalizing transactions within a single business organization rather than conducting exchanges at arm’s length with other independent persons or groups of persons. Market segmentation is a common marketing practice that permits firms to enhance profits by charging prices in accordance to the characteristics of different markets; TNCs often segment international markets to maximize their profits. The chapter also addresses some of the controversies surrounding the global dominance of a small number of very large TNCs, many of which are larger than most of the world’s national economies.
I. Match the Terms and Definitions

In the space after each of the 16 terms, note the matching definition from among A through P:

1. Colonialism
2. Competitive advantage
3. Core competencies
4. Dutch East India Company
5. Emerging markets
6. Foreign direct investment (FDI)
7. Hold up problem
8. Horizontal FDI
9. Increasing returns to scale
10. Intra-firm trade
11. Intra-industry trade
12. Market segmentation
13. Marketing
14. Transnational corporations (TNCs)
15. Verenigde Oost-Indische Compagnie (VOC)
16. Vertical FDI

Definitions:

A. Those activities that provide a firm with its highest markup and profit margins.
B. A potential market failure in the situation in which a purchasing firm has a real incentive to induce a supplier to make substantial investment in building capacity and know-how for supplying specialized products, and then to renegotiate the terms of the contract once the supplier is locked into this new supplier capacity.
C. The phenomenon in which average costs fall as the volume of production increases, which leads to a concentration of production in a small number of large firms.
D. A pattern of international trade that shows products from the same industry being both imported and exported.
E. The set of business activities consisting of sales promotion, advertising, and market research.
F. A name often used to describe developing economies that have achieved consistent economic growth in recent decades.
G. Firms or corporations that manage and own production and distribution facilities in more than one country.
H. The conquest and military and administrative occupation of foreign lands by a country for its own economic gain.
I. The Dutch East India Corporation.
J. A common marketing practice of charging different prices in different markets, depending on the elasticity of demand in each market.
K. One of the first transnational corporations, which in 1602 was granted a charter by the Dutch monarch to conduct colonial activities in Asia, and it financed itself by selling stock to wealthy merchants as well as on the Amsterdam Stock Exchange.
L. The breaking up of productive processes so that different stages of production are performed in different plants, which can even be located in different countries.

M. A firm’s advantage in providing customers with a greater value of goods or services than its competitors.

N. Goods and services traded between domestic and foreign affiliates of the same transnational firm, which accounts for over one-third of global merchandise trade.

O. Investment that duplicates facilities and operations that a transnational corporation already owns and operates in other countries.

P. - Investment by businesses and firms in factories, warehouses, sales offices, stores, and other permanent facilities located abroad in which the investing firm has a controlling interest

II. Problems and Questions

1. How does Krugman’s model of international trade help solve the problem of having variety at lower prices?

2. What are the sources of power of the transnational corporations?

3. What is the difference between vertical and horizontal FDI?

4. How does a firm achieve market segmentation and for what purpose?

III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

_____ 1. Which of the following are early examples of multinational enterprises (TNCs)?
   a. The banking houses of Lombard and Medici families.
   b. The Singer Sewing Company.
   c. The Dutch East Indies Company.
   d. P & O shipping lines.
   e. All of the above.

_____ 2. A multinational enterprise (TNC) is most precisely defined as a firm that:
   a. exports more than it imports.
   b. sells in many markets around the globe.
   c. operates and controls production or distribution facilities in more than one country.
   d. has foreign stockholders.
   e. All of the preceding answers are correct.
3. A reason for the growth of TNCs is:
   a. that some transactions are easier to carry out internally within a business organization than externally between different organizations.
   b. the widespread restriction of foreign investment by governments in most countries.
   c. the risk of investing and owning business assets in foreign countries.
   d. the presence of perfect competition in most industries.

4. *Horizontal* foreign direct investment (FDI) refers to TNC facilities in different countries that:
   a. cover the identical stage in the supply chain.
   b. manufacture 100 percent of a product.
   c. cover different stages of the supply chain.
   d. all produce completely different final products from scratch.

5. All other things equal, the creation of multinational firms is most likely to occur when:
   a. it is more costly to *internalize* transactions than to engage in arms’ length transactions with other firms.
   b. firms’ activities are subject to constant returns to scale.
   c. firms’ acquired reputations do not have any value in foreign markets.
   d. firms operate under increasing returns to scale.

6. According to the textbook, there is evidence suggesting that foreign direct investment (FDI):
   a. can drive locally-owned firms out of the market.
   b. creates economic links that reduce an economy’s independence and facilitates the international transmission of economic shocks.
   c. can have an impact on exchange rates.
   d. All of the above.
   e. None of the above.

7. Which of the following statements about foreign direct investment is/are true?
   a. FDI in manufacturing accounts for almost all FDI.
   b. The larger part of FDI is moving manufacturing plants to low-wage countries.
   c. Colonial enterprises such as the Hudson Bay Company, the Dutch East Indies Company, and the Virginia Company can be considered foreign direct investment.
   d. All of the above.
   e. None of the above.

8. Which of the following statements about foreign direct investment is/are true?
   a. TNC investments across developed economies are more often vertical investments.
   b. TNCs production is more likely to be horizontal the higher are transport costs and trade barriers and the lower are scale economies at the plant level.
   c. Horizontal foreign direct investment is most often driven by factor cost differences.
   d. All of the above.
   e. None of the above.
9. Paul Krugman presents an example of gains from trade for two identical economies characterized by increasing returns to scale. The gains from trade for such an economy are derived from:
   a. lower costs.
   b. greater variety.
   c. greater variety that offsets higher costs.
   d. a and b above.
   e. None of the above.

10. In the first decade of the twenty-first century:
    a. the largest recipient of foreign direct investment was the U.S.
    b. foreign direct investment by TNCs from the developing world did not occur.
    c. almost all FDI consisted of new facilities and business organizations built from scratch
    d. All of the above.
    e. None of the above.

11. Which of the following influences TNCs in their decision on where to locate?
    a. Environmental and labor laws.
    b. Labor productivity.
    c. Government services.
    d. All of the above.
    e. None of above.

12. In what way may TNCs have a competitive advantage over national firms?
    a. TNCs always have to pay taxes in their native countries, which lowers their taxes in the foreign countries where they operate.
    b. TNCs understand local markets better than national firms.
    c. TNCs have more options than a purely domestic firm in reaching the most efficient compromise between external and internal proximity in organizing R&D activity.
    d. All of the above.
    e. None of the above.

13. A transnational corporation (TNC) is a firm that:
    a. owns and operates factories in at least four countries other than its home country.
    b. sells in more than one country.
    c. has at least one foreign stockholder.
    d. manages and owns production and distribution facilities in more than one country.

14. Vertical foreign direct investment (FDI) implies that a transnational corporation (TNC) owns facilities in different countries that:
    a. cover the identical stage in the supply chain.
    b. manufacture 100 percent of a product.
    c. cover different stages of the supply chain.
    d. all produce completely different final products from scratch.

15. An example of vertical foreign direct investment is:
    a. the chain of Starbuck’s coffee shops throughout Europe, Japan, and North America.
b. Ford’s automobile engine plant in Brazil that supplies engines to its U.S. automobile plants.
c. Disney World in Orlando, Florida, Disney World Japan, and Disney World Europe.
d. Nestle’s chocolate factories in Switzerland, the U.S., and Brazil.

16. Transnational corporations (TNC) in developed economies tend to:
   a. reflect horizontal foreign direct investment (FDI) while TNCs in developing countries more often reflect vertical FDI.
   b. reflect vertical foreign direct investment (FDI) while TNCs in developing countries more often reflect horizontal FDI.
   c. reflect almost exclusively horizontal foreign direct investment (FDI), just as in the case of FDI activity in developing countries.
   d. reflect neither horizontal or vertical foreign direct investment (FDI); they are something very different in developing economies.

17. The internal prices that firms use to record exchanges between branches of the same firm located in different countries are called:
   a. foreign prices.
   b. intra-industry prices.
   c. transfer prices.
   d. firm prices.

18. Increasing returns to scale in production:
   a. results in perfect competition.
   b. results in imperfect competition.
   c. causes the cost of producing additional units of output to increase.
   d. All of the above.
   e. None of the above.

19. Which of the following statements are true?
   a. The first firm to expand and exploit increasing returns gains the comparative advantage.
   b. Higher demand for a certain product over another puts the country that produces that product in a more favorable position as far as the terms of trade are concerned.
   c. Governments engage in trade intervention that protect and promote industries with the greatest growth potential, which can result in better terms of trade than free trade.
   d. All of the above.
   e. None of the above.

20. Which of the following statement(s) is/are always true?
   a. A product’s value is determined entirely by the consumer.
   b. Value depends on cultural perceptions.
   c. Providing value to overseas customers is not as difficult as marketing in a producer’s home economy.
   d. The perceived benefits of goods and services in export markets are often similar to the perceived benefits of those same goods and producers’ home markets.
Chapter 6

International Trade and Economic Development

Chapter Summary

This chapter examines the dynamic relationship between international trade and economic development. Both per capita output and international trade have grown rapidly over the past two hundred years, suggesting a cause and effect relationship. But, statistical evidence is ambiguous about whether international trade actually causes economic growth.

The importance of economic growth for human well-being is suggested by the power of compounding, which implies that any continuous growth process will always outgrow any one-time gain in welfare, no matter how large the one-time gain may be. Thus, if indeed international trade can raise a country’s growth rate even modestly, the effects on human welfare will eventually be large.

Economic growth and development is a complex process, however. The Solow growth model shows that a constant rate of investment, no matter how high, cannot generate permanent economic growth without being accompanied by technological change. This means that in the absence of technological progress, international trade also cannot cause permanently faster economic growth. International trade can only cause continuous economic development if it, in some way, motivates or enables the creation or adoption of new technologies.

The Schumpeterian model relates innovation to (1) the eventual rewards, (2) the availability of the resources needed to create new knowledge, (3) the efficiency of research and development activity, and (4) the willingness of people to incur short-run costs to generate long-run technological progress. Schumpeter’s concept of creative destruction, which is that continued technological change introduces new technologies at the expense of old ones, illustrates the potential for resistance against new technology, and if international trade facilitates the introduction of new technology, there is likely to be resistance to trade. International trade can accelerate technological change by (1) expanding the market for, and thus increasing the eventual gains from, innovation; (2) facilitating the flow of knowledge across borders and thus making it easier to create new knowledge; and (3) improving the allocation of resources and thus making more resources available to innovation.

The combinatorial and path dependent nature of technological change suggests that international trade can accelerate a country’s technological change by introducing more diverse ideas, the combinatorial process is less likely to bog down or get stuck on a less efficient path. Of course, not all technological changes benefit humanity. This chapter gives the example of increased greenhouse gas emissions that accompany energy use. Still, the very modest estimates of the gains from trade based on the Heckscher-Ohlin model versus some of the statistical estimates of the long-run growth effect of international trade have shifted the justification for free trade policies toward trade’s role as the “engine of growth.” Research continues on whether international trade indeed is an engine of growth.
I. Match the Terms and Definitions

In the space after each of the 36 terms, note the matching definition from among A through HH:

1. agglomeration
2. biological leash
3. combinatorial process
4. compound growth process
5. compounding
6. creative destruction
7. depreciation
8. diminishing returns
9. economically significant
10. entrepreneur
11. evolutionary model of economic change
12. factor accumulation
13. innovation
14. learning curve
15. measurement error
16. medium-run growth
17. meta-ideas
18. natural resource curse
19. neoclassical growth model
20. neutral technological change
21. omitted variable bias
22. open economy
23. ordinary least squares
24. panel studies
25. path-dependent process
26. power of compounding
27. production function
28. Schumpeter model
29. Solow model
30. spurious regression results
31. statistically significant
32. steady state equilibrium
33. structural change
34. technological change
35. technology
36. transitional economic growth

Definitions:

A. Joseph Schumpeter’s term for the process in which firms continually seek profits by means of gaining an advantage in the marketplace through innovation.
B. An alternative name often given for the Solow growth model.
C. An improvement in the efficiency with which an economy uses its resources and factors of production to produce welfare-enhancing output.
D. The surprisingly rapid increase or decrease in size of any initial value that grows at a constant rate over successive periods of time.
E. The graphic relationship between the unit costs of production of a certain product and the experience accumulated in producing the product.
F. The most common regression method used in statistics, which assumes the underlying population is normally distributed so that a mean and standard error can be accurately calculated.
G. A person who innovates by applying new ideas and knowledge in ways never before done.
H. Statistical regressions that simultaneously apply time-series and cross-section data, say ten years of annual observations for a set of 100 countries.
I. A “Schumpeterian” type of model of technological change.
J. Also known as the neoclassical growth model, this model assumes a neoclassical production function, depreciation of capital, and constant savings.
K. A term often used to describe the transitional growth that occurs when there is a one-time shift in the parameters in the Solow model.
L. A model of technological change that assumes innovation is driven by profit-seeking entrepreneurs who must find a way to employ productive resources in the innovative process.
M. The stable equilibrium levels of output and the capital stock described by the Solow growth model.
N. An economy that does not severely restrict international trade, international investment, and international migration and permits these international economic activities to interact with domestic economic activity.
O. The name given to the common finding that countries that export only natural resources do not develop economically.
P. A process in which new outcomes are the result of combinations of previous outcomes.
Q. Regression results that reflect a correlation among data that does not reflect any real causal relationship or even a common economic trend.
R. The behavior of nonhuman living creatures was passed on through genes, so that changes in the way they live, how they interact with each other, and how they deal with their natural environment occur through the slow process of evolution.
S. The relationship between productive inputs and output, which neoclassical economics usually models as a production function. In practice, technology in an economy can have a very broad meaning, and it can include ideas, methods, habits, economic and social institutions, business organization, et cetera.
T. A technical term that describes the probability that statistical analysis will accept as proof that the data confirm a hypothesized relationship.
U. New ideas, innovations, inventions, and abstract concepts that set society on a path to an exceptionally large number of new ideas, inventions, and concepts.
V. The process by which a constant rate of growth of a variable causes ever-larger absolute increases in the variable; an exponential process.
W. The decrease in marginal output as equal amounts of a variable input are added to the production process.
X. The special case where technology changes the marginal productivities of all factors of production by the exact same proportion.
Y. A process that continuously builds on prior outcomes so that later outcomes depend on previous outcomes along a clear progression of outcomes that appears as a continuous path.
Z. The process of creating new technology, new ideas, new institutions, new business structures, and any other changes in the way people live, work, and engage in economic and social activity.
AA. The inaccuracy of regression estimates when a statistical regression model does not include all the variables or explicitly model all the true relationships between all the relevant variables.
BB. The interpretation of statistical results that suggests a certain coefficient is sufficiently large that the effect of the variable will generate a change in an outcome that substantially affects the situation being analyzed.
CC. An increase in productive resources such as labor, capital, and land that enables an economy to produce more welfare-enhancing output.
DD. The dynamic process whereby economic activity is increasingly concentrated in specific geographic regions.
EE. The reduction in the value of capital due to wear and tear or obsolescence.
FF. The relationship between productive inputs and the level of output.
GG. The condition that certain sectors grow relative to others, and thus the relative contributions of each sector change.

FF. If per capita real GDP grows at an annual rate of R, then after T years the level of per capita real GDP will be: \( \text{GDP}_{T} = \text{GDP}_{0}(1 + R)^T \).
HH. The inaccuracies and biases introduced into statistical analysis by the fact that data are inaccurate and incomplete.

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**II. Problems and Questions**

1. Assuming that the initial value of $100 grows at the rate of 7.2 percent, what is the value after:
   a. 1 year?
   b. 10 years?
   c. 20 years?
   d. 100 years?

2. Suppose two economies, A and B, start out with the same very low per capita real incomes of $1,000, but A grows at 1 percent per year and B grows at 2 percent for the next 25 years. What will be the per capita real incomes of A and B after:
   a. 1 year?
   b. 10 years?
   c. 20 years?
   d. 100 years?

3. Use the Solow model to illustrate how international trade causes (a) an immediate increase in output and (b) a secondary increase in output.

4. Explain the “resource curse.”
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

1. The so-called natural resource curse is attributed to:
   a. the transnational firms who dominate trade have the power to suppress prices of natural resources.
   b. the low elasticity of demand for natural resources.
   c. the concentration of ownership of resources that keeps export earnings in the hands of local elite business and resource groups that use their earnings to control political institutions that restrict economic and social change.
   d. All of the above.
   e. None of the above; there is no such thing as a resource curse.

2. The evidence on economic growth makes it clear that:
   a. the acceleration of economic growth over the past 200 years has not been uniform across all parts of the world.
   b. economic growth has been faster over the past 50 years in Africa than in Asia.
   c. once countries fall behind in terms of per capita real GDP they never again catch up.
   d. the differences in per capita incomes across countries have greatly diminished.

3. Which of the following statements about international trade is correct?
   a. In 1820 over 10 percent of the total value of world output was exported.
   b. In 1929 international trade was equal to only 5 percent of the world’s output.
   c. In 2000 exports were still equal to just 5 percent of world GDP.
   d. All of the above.
   e. None of the above.

4. As a percentage of total world GDP, exports:
   a. grew barely at all over the past 100 years.
   b. grew steadily throughout the twentieth century.
   c. increased during the 1990s.
   d. grew during the nineteenth century but declined during the twentieth century.

5. The many statistical studies that have tested the relationship between international trade and economic growth show that, all other things equal, international trade and economic growth:
   a. are always negatively related.
   b. are always positively related.
   c. are never statistically significantly related.
   d. are most often positively related but sometimes negatively related.

6. Economic growth, that is the growth of GDP per capita, can be achieved by means of:
   a. technological change.
   b. factor accumulation.
   c. both a and b.
   d. None of the above.
7. Suppose an economy starts out with the production function \( Y = f(K, L) \), where \( Y \) is total output, \( K \) is the economy’s stock of capital, and \( L \) is the number of workers. Neoclassical analysis defines technological progress as establishing a new production function \( Y = g(K, L) \) so that for fixed amounts of capital, \( K_1 \), and labor, \( L_1 \):

a. \( Y_2 = g(K_1, L_1) = Y_1 = f(K_1, L_1) \).
b. \( Y_2 = g(K_1, L_1) \leq Y_1 = f(K_1, L_1) \).
c. \( Y_2 = g(K_1, L_1) \neq Y_1 = f(K_1, L_1) \).
d. \( Y_2 = g(K_1, L_1) > Y_1 = f(K_1, L_1) \).

8. Robert Solow used his growth model to show that:

a. in the long run, economic growth by means of factor accumulation is impossible.
b. in the long run, economic growth is not possible under any circumstances.
c. in the long run, economic growth can be achieved only through factor accumulation.
d. in the absence of technological progress, growth diminishes but does not cease altogether.

9. If \( Y \) stands for total output, \( K \) for capital, \( I \) for investment, \( \delta \) for the rate of depreciation, and \( \sigma \) for the rate of saving, the change in the stock of capital in an economy in the Solow growth model is given by:

a. \( \Delta K = \sigma Y - \delta K \)
b. \( \Delta K = \sigma f(K) - \delta K \).
c. \( \Delta K = I - \delta K \).
d. All of the above.
e. None of the above.

10. Richard Baldwin introduced the static welfare effect of international trade into the Solow growth model, and he showed that:

a. international trade lets the economy overcome diminishing returns and permanent economic growth becomes possible.
b. international trade has absolutely no effect on economic growth unless there is technological progress.
c. international trade tends to reduce output, all other things equal, although permanent economic growth is never possible.
d. international trade can only affect an economy’s long-run rate of growth if it changes the economy’s long-run rate of technological progress.

11. Joseph Schumpeter’s model of creative destruction was characterized by:

a. perfect competition.
b. temporary profits for successful innovators.
c. externalities.
d. diminishing returns.

12. In the Schumpeterian R&D model of technological progress, the rate of technological progress depends on:

a. the level of production.
b. the benefits that entrepreneurs reap from their innovations.
c. society’s rate of saving.
d. steady state level of investment and the investment externalities generated at that level.

13. According to the Schumpeterian R&D model of technological progress, the rate of technological progress is faster, all other things equal:

a. the smaller is the population.
b. the smaller is the excess profit of corporations.
c. the lower is the cost of factors of production and resources.
d. the higher is the interest rate.

14. The limited evidence that we have on international flows of technology confirms that:
a. technology seldom moves between countries; each country must invent its own.
b. international trade and investment can, but may not, facilitate the international flow of technology.
c. technology never moves between firms located in different countries.
d. All of the above.
e. None of the above.
Chapter 7

International Trade, Human Happiness, and Unequal Economic Development

Chapter Summary:

This chapter asks: Does international trade decrease or increase inequality? This is an important question because there are huge large differences in household income across countries. No matter how you measure it, inequality has grown over the past 200 years, precisely the same period that saw international trade grow from less than 1 percent of world GDP to 25 percent of world GDP.

This chapter discusses the difficulties of analyzing inequality. In practice, there are sharp disagreements about what equal opportunity means or what exactly constitutes an oppressive position of power. We take the view that the popularity of insurance and social safety nets suggests that societies are in favor of collectively assuming responsibility for helping those members who are adversely affected by events beyond their control. The justification for collective action is the social-contractionist philosophy of John Rawls (1971) provides a reasonable definition of a just society. Rawls reasoned that a just society is the one people would define from behind a “veil of ignorance” that hides their own personal characteristics, background, culture, and circumstances. Rawls effectively shows that the basic human rights that underlie social justice are inseparable from basic economic rights.

This chapter points out that the increasing returns to scale that characterize both industrial production and innovation imply that international trade, as part of the more complex processes of international economic integration and the concentration of economic activity in large corporations, may cause global incomes to become less equal rather than more equal. The concentration of innovative activity in a few countries is modeled in Vernon’s model as continuous shifts in comparative advantage, which continuously change the pattern of trade in accordance with products’ life cycles.

Since Alfred Marshall, many economists have suggested hypotheses for why some economic activities agglomerate in specific geographic locations. Fundamentally, most explanations rely on economies of scale and economic growth. There is widespread evidence that innovative activity tends to agglomerate, a finding that, combined with the finding that knowledge moves slowly geographically, seems to explain why income is unequal across countries. Evidence showing that innovative activity is the most agglomerative economic activity means that economies will increasingly agglomerate as they grow and develop.
Within this framework, there is some evidence that international trade helps to spread technology across borders. Because capital goods have technology embedded in them, so trade directly transfers technology from capital-producing countries to capital-importing countries. For example, a neoclassical model by Paul Samuelson shows that trade, by transferring technology overseas, can reduce welfare in the most technologically advanced countries. On the other hand, when embedded in the broader processes of economic development and technological change, trade can contribute to the agglomeration of economic activity and a concentration of income that worsen some countries’ overall welfare.

I. Match the Terms and Definitions

In the space after each of the 21 terms, note the matching definition from among A through U:

1. agglomeration
2. bourgeoisie
3. direct transfers of technology
4. equal opportunity
5. Gini coefficient
6. global Gini coefficient
7. immiserizing growth
8. increasing returns to scale
9. indirect transfers of technology
10. leader-follower models
11. Lorenz curve
12. loss aversion
13. nonrival good
14. outsourcing
15. product cycle model
16. proletariat
17. spillover
18. standardized product
19. tacit knowledge
20. territoriality
21. Vernon’s model

Definitions:

A. The justice that all people have an equal chance to pursue their interests and, thus, achieve comparable well-being for their families.
B. The special case where investment increases a country’s export capacity to such an extent that its rising exports reduce its terms of trade to such an extent that the gains from output growth are more than offset by the terms of trade loss.
C. Models that hypothesize that innovation is concentrated in the more developed economies and that technology flows slowly or with a lag from so-called technology leaders to follower countries.
D. People try harder to hold on to what they have than to acquire something new are said to be loss averse.
E. The social class made up of workers, both employed and unemployed, as well as bankrupt former members of the bourgeoisie.
F. Knowledge that is transferred by example rather than learned through explicit instructions, which means its transfer requires costly and time-consuming person-to-person interactions.
G. A Gini coefficient calculated using a data set that combines income data by income group for all the world’s countries.
H. The process of contracting business services and manufacturing services out to other businesses in order to focus a firm’s activities on its most profitable activities.
I. The transfer of technology at less than the original cost to the inventor.
J. Karl Marx’s term for the capitalist class, the owners of the means of production.
K. A specific version of the product cycle model.
L. The dynamic process whereby economic activity is increasingly concentrated in specific geographic regions.
M. A product whose production technology is widely understood, for which equipment can be easily acquired, and for which not much specialized labor is required.
N. A good for which one person’s use does not prevent another from using it.
O. A model developed by Raymond Vernon that describes how production shifts from developed to developing economies over the life of a product.
P. Technology improvements that are embodied in the products that are imported from abroad.
Q. The curve connecting points showing the cumulative shares of national income listed from the lowest-income groups to the highest.
R. A convenient numerical measure of income inequality derived from the Lorenz curve.
S. The fundamental emotional attachment to their possessions and geographic territory that people, and many other living species, exhibit.
T. The phenomenon in which average costs fall as the volume of production increases.
U. When ideas and knowledge are transferred in the form of designs, directions, instructions, blueprints, or diagrams that are used directly by people in other countries to learn, understand, and apply the ideas and knowledge.

II. Questions and Problems

1. What is meant by the absorptive capability of a country?

2. What is the difference between direct and indirect transfers of technology?

3. How has international trade affected a country’s ability to provide the economic rights listed in either the Universal Declaration of Human Rights or Roosevelt’s 1944 State of the Union address?
4. What is the difference between income and wealth? Which is easier to analyze? Which has most often been equated with economic power?

5. What constitutes a just society according to John Rawls?

6. Why does innovative activity not move more readily across regions, countries, and continents?

7. What are some of the characteristics of immiserizing growth?

Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

_____ 1. The Gini coefficients for income and wealth for those countries for which we have reliable data:
   a. seem to show that income and wealth always become more equal over time.
   b. show income Ginis are substantially lower than the wealth Ginis for the same countries.
   c. prove that the inequality of wealth predicted by Marx seldom happens in the real world.
   d. All of the above.
   e. None of the above.

_____ 2. The Gini coefficient requires that we first estimate the:
   a. rate of economic growth.
   b. Lorenz curve.
   c. economy’s aggregate demand and supply curves.
   d. poverty rate.

_____ 3. Rawls reasoned that a truly unbiased definition of social justice can only be achieved:
   a. by removing the “veil of ignorance” that blinds people to their true circumstances.
   b. using analysis carried out by people who, hypothetically, do not know their actual social class, race, gender, sexual orientation, level of wealth, education, talent, and other personal and social characteristics.
   c. if people focus on the people who are leading the development of the economy.
   d. All of the above.
   e. None of the above.

_____ 4. John Rawls’ analysis of social justice suggests that:
   a. the basic human rights that underlie social justice are inseparable from basic economic rights.
   b. economic rights are separate from human rights; economic rights must be “earned.”
   c. human rights are costly, but human rights are free, which means societies can provide human rights even if they cannot provide economic rights.
   d. All of the above.
   e. None of the above.
5. The Heckscher-Ohlin (HO) model addresses the distributional effects of international trade with its:
   a. Stolper-Samuelson theorem.
   b. factor price dispersion theorem.
   c. comparative advantage theorem.
   d. arbitrage theorem.

6. Among the conclusions of the many studies of technology diffusion is/are:
   a. Developing economies absorb more foreign technology than developing economies, which contradicts the suggestion that technology diffusion depends on a country’s absorptive capacity.
   b. The volume of bilateral trade explains a significant share of the variation in bilateral technology flows.
   c. Developing countries gain no technology from trade with developed economies; they must trade with other developing economies to gain technology transfers.
   d. All of the above.
   e. None of the above.

7. Raymond Vernon is credited with the:
   a. product cycle model.
   b. standardized product model.
   c. outsourcing model.
   d. technology spillover model.

8. The United Nations’ Universal Declaration of Human Rights supplements basic human rights such as political rights, freedom of speech, freedom of assembly, freedom from torture and degrading punishment, a ban on servitude and slavery, and equal rights before the law with a set of specific economic rights, such as:
   a. adequate housing.
   b. free education.
   c. equal pay for equal work.
   d. All of the above.

9. President Roosevelt of the United States in 1944 detailed a set of economic rights he felt were necessary to create the conditions in which people could enjoy human rights such as free speech, freedom of thought, political freedom, or freedom of religion, but he did not include among these economic rights:
   a. the right to adequate medical care and the opportunity to enjoy good health
   b. the right to adequate protection from the economic fears of old age, sickness, accident, and unemployment
   c. the right to free education.
   d. None of the above; he included all of the above.
   e. None of the three, a, b, and c, were included.

10. Human capital and personal skills are determined by
    a. culture.
    b. luck.
    c. individual choices.
    d. All of the above.
    e. None of the above.
11. Which of the following statements are false?
   a. The speed of knowledge and technology transfer has increased.
   b. Patents and copyrights make knowledge and technology increasingly excludable.
   c. There are few costs to the transfer of nonrival technology.
   d. All of the above.
   e. None of the above.

12. Among the reasons why industries agglomerate are:
   a. Increasing returns to scale.
   b. Lowering of transportation costs.
   c. A shift from agriculture society to an industry based society.
   d. All of the above.
   e. None of the above.

13. Which of the following statements about agglomeration are/is false?
   a. New technologies spread very slowly geographically.
   b. There is less agglomeration when transportation and communication costs are very high.
   c. Industrial production is more often characterized by agglomeration than agriculture or personal services.
   d. Increasing returns to scale fosters agglomeration.
Chapter 8

Tariffs, Quotas, and Other Trade Restrictions

Chapter Summary

This chapter begins the discussion of trade policy. Specifically, this chapter uses standard models of international trade to analyze tariffs, imports quota, and other trade restrictions. Specifically, we use the two-country supply and demand model of trade to show that one country’s tariff on the other’s exports changes the prices of all products in both economies, which causes a transfer of welfare from domestic consumers to domestic producers in the importing country and a transfer of welfare from producers to consumers in the exporting country.

A detailed example shows that a tariff also causes a transfer of consumer surplus in the importing country to the government in the form of tariff revenue as well as a transfer of some producer surplus from the exporting country to the government of the importing country. There are deadweight losses in both importing and exporting countries. The orthodox model shows that the net welfare loss of a tariff to the world as a whole is equal to the deadweight losses, but the importing country most likely loses less than its deadweight losses because a tariff tends to change the terms of trade in favor of the importing country.

This chapter details the similarities and differences between tariffs and quotas. There is a discussion of quota rent, and voluntary export restraints (VERs) are also analyzed. Economists do not necessarily view tariffs and quotas as equivalent, however, because the assumption of fixed supply and demand curves is unrealistic in an ever-changing world and lucrative import permits are seldom rationed efficiently. The deadweight losses from tariffs and quotas are probably understated in the supply and demand model of trade because people often engage in rent seeking; that is, they exert considerable effort and incur substantial costs in order to influence their governments’ trade policies.

This chapter also recognizes that there are many other ways in which government can interfere with trade, including export tariffs or quotas, export and import subsidies, “buy domestic” mandates, national security concerns, and simple bureaucratic obstructionism. Antidumping duties have become especially common because they effectively permit countries to restrict imports from specific countries and even specific foreign exporters. The procedures for applying antidumping duties are very imprecise and thus permit countries to apply the duties under a great variety of circumstances. Also discussed are trade sanctions and other temporary trade restrictions that are tolerated under international agreements.
I. Match the Terms and Definitions

In the space after each of the 22 terms, note the matching definition from among A through V:

1. ad valorem tariff
2. auction quota
3. buy domestic regulations
4. countervailing duties
5. deadweight losses
6. effective tariff
7. export subsidy
8. Lerner symmetry theorem
9. prohibitive tariff
10. quantitative trade restriction
11. quota
12. quota rent
13. rent seeking
14. small country assumption
15. smuggling
16. specific tariff
17. tariff
18. terms of trade (ToT)
19. trade policy
20. trade sanctions
21. value added
22. voluntary export restraint (VER)

Definitions:

A. A tax on imports.
B. The arbitrage profit that accrues to importers when an import quota keeps the quantity imported below its free-market equilibrium level.
C. A voluntary limit on the quantity of a certain product that a country exports to another country.
D. A nation’s set of laws, regulations, rules, and procedures that apply to international trade.
E. A limit on the quantity of a certain product that is permitted to enter the domestic market from abroad.
F. The impact of a tariff on the value added of a particular industry.
G. Any restraint on imports also effectively acts as a restraint on exports.
H. The use of society’s scarce productive resources not for productive purposes but for the purpose of causing a transfer of wealth.
I. A tax on imports specified as an exact money amount, per item.
J. A tax on imports specified as a percentage of the value of the product being taxed.
K. The welfare losses due to a distortion such as the imposition of a tariff.
L. Another name for a quantitative import restriction.
M. An import quota for which import permits are auctioned to the highest bidders
N. The illegal evasion of tariffs and other import restrictions.
O. Trade restrictions imposed by one country in order to punish another country or persuade another country to change objectionable policies or behavior.
P. An import tax so high that no one imports anything.
Q. A negative tax on exports.
R. The amount of exports that a country needs to supply to the international market in order to obtain a given amount of imports; the rate at which countries can exchange exports for imports in the world market.
S. Rules or laws that require government agencies and others in the economy to buy from domestic sources rather than from the lowest-cost domestic or foreign supplier.
T. A country is so small that it has no noticeable effect on prices in the rest of the world.
U. The value that a producer adds to the labor, capital, raw materials, and other parts, components, and inputs acquired from other producer.
V. A tariff levied on imports of goods or services that have benefitted from government subsidies in order to cancel the advantage that such subsidies give the foreign exporter.

II. Questions and Problems

1. Explain how tariffs and quotas are (a) similar and (b) different.

2. The following diagram illustrates the world market for jet aircraft, which consists of the Homeland and Abroad markets (the prices are in millions of dollars). In the case of free trade, Homeland imports 80 jets from Abroad, and the world price settles at $8 million per airplane. Suppose that Homeland producers of aircraft lobby their government and convince it to impose an import tariff of $2 million per aircraft. Use the two-country partial equilibrium model shown below to illustrate exactly what are the consequences of such a tariff on imported jet aircraft. (Hint: Use the numerical example in Chapter 6 of the textbook as a guide.)

3. In each of the following cases, calculate the effective rate of protection of the final product, assuming that markets are competitive and all other things remain the same:
a. A tariff on intermediate inputs raises the price of intermediate inputs by 10 percent in a market where, prior to the tariff, intermediate inputs accounted for 50 percent of the total cost of the final product.

b. A quota on intermediate inputs raises the price of intermediate inputs by 50 percent in a market where, prior to the quota, intermediate inputs accounted for 20 percent of the total cost of the final product.

4. Explain why oil-producing nations often tax oil exports. *Hint: Use the model of export taxes and be sure to focus your explanation on the elasticities of demand and supply for a product such as oil.*

III. Multiple-Choice Questions

*For each question, select the statement that best answers the question or completes the sentence:*

___ 1. In this chapter, a tariff is defined as:
   a. a fee for performing a service.
   b. a tax on exports.
   c. a tax on any type of economic activity.
   d. All of the above.
   e. None of the above.

___ 2. Ad valorem tariffs are preferable to specific tariffs because:
   a. ad valorem tariffs raise more revenue.
   b. ad valorem tariffs can be more easily changed as trade flows change.
   c. ad valorem tariffs reward low-cost foreign suppliers by in effect charging a lower absolute tax on their products than is charged on more expensive products in the same category.
   d. specific tariffs become more restrictive when inflation occurs.

___ 3. An ad valorem tariff of 30 percent on a widget that costs $300 is equivalent to a specific tariff on widgets of:
   a. $30.
   b. $300.
   c. $60.
   d. $90.
   e. None of the above.

___ 4. A specific tariff would be preferred over an ad valorem tariff by:
   a. a high price foreign supplier.
   b. a low cost foreign supplier.
   c. a government in a high inflation world.
   d. import-competing firms whose foreign competitors produce higher-priced, better-quality products.
5. According to the two-country partial equilibrium model of trade, the imposition of a tariff on imports by the importing country:
   a. definitely raises net welfare in the importing country.
   b. definitely raises net welfare in the exporting country.
   c. definitely reduces net welfare in the world as a whole.
   d. definitely reduces net welfare in the importing country but raises net welfare in the exporting country.

6. The two-country model of a tariff shows that a tariff causes:
   a. a transfer of welfare from domestic producers to domestic consumers in the importing country.
   b. a transfer of welfare from consumers to producers in the exporting country.
   c. a transfer of consumer surplus in the importing country to the government in the form of tariff revenue.
   d. All of the above.
   e. None of the above.

7. Who effectively pays at least part of a tariff?
   a. Domestic producers.
   b. Foreign producers.
   c. Domestic consumers.
   d. None of the above.
   e. b and c only.

8. The Lerner symmetry theorem says that:
   a. any restraint on imports also effectively acts as a stimulus for exports.
   b. any promotion of exports will cause a decrease in imports as well.
   c. any restraint on imports also causes exports to decrease.
   d. None of the above.
   e. Both a and b above.

9. An effective tariff is:
   a. always larger than the ad valorem tariff officially charged by the government on the good in question.
   b. the percentage that a tariff raises the price of a good relative to the value added of the industry that produced the good on which the tariff is levied.
   c. always less than the rate actually levied on the good in question.
   d. the portion of the tariff effectively paid by foreigners.

10. The two-country partial equilibrium model shows that, in the importing country, the elimination of an import quota:
   a. reduces producer surplus.
   b. reduces consumer surplus.
   c. reduces government revenue.
   d. All of the above.
   e. None of the above.

11. The difference between a tariff and an “equivalent” VER is that the equivalent VER:
   a. results in a higher domestic price.
   b. generates rent instead of government revenue.
   c. is an export tax.
   d. causes larger deadweight losses.
12. An import quota is most similar to:
   a. a VER.
   b. a tariff.
   c. an import tax.
   d. an export tax.

13. Economists often favor tariffs over quotas as the lesser of two evils because:
   a. quotas can never be “equivalent” to tariffs.
   b. quotas tend to become less restrictive of trade than tariffs as demand grows.
   c. quotas are less efficient in allocating restricted trade among those who stand to gain the most from trade.
   d. quotas provide government revenue while tariffs do not.

14. Antidumping duties:
   a. were permitted by the GATT after 1947, but they were banned by the WTO in 1994.
   b. were sanctioned by the GATT and continue to be allowed by the WTO.
   c. have never been used as other trade barriers have been erected in their place.
   d. are nearly impossible to apply given the current GATT/WTO rules.

15. Under WTO regulations, dumping is defined as:
   a. selling a product overseas at a price higher than that product sells for in the home market.
   b. selling a product below cost.
   c. selling a product below the price of competing products in the foreign market.
   d. All of the above.
   e. None of the above.
Chapter 9

The History of Trade Policy

Chapter Summary

This chapter presents the recent history of trade policy. The chapter begins with a number of models from political science that provide good insight into international trade policy. These models suggest various reasons why tariffs, quotas, and other trade restrictions that we detailed in the previous chapter are actually applied. Especially relevant to modern democracies is the uninformed voter model, which shows that there is likely to always be some trade protection.

History shows that international trade policy has changed directions often as economic, social, political, and technological conditions have changed. From 1500 through the early 1800s, many countries followed mercantilist policies that protected domestic industry and pushed governments to colonize foreign societies. In the nineteenth century, Britain and much of the rest of Europe greatly reduced trade barriers by negotiating bilateral trade agreements that contained most favored nation clauses. The United States, on the other hand, more often protected its new industries throughout the nineteenth century. Around the middle of the nineteenth century, China and Japan were forced by European and U.S. military pressure to open their economies to trade.

After World War I, the world took a more protectionist turn that culminated with the U.S.’s infamous Smoot-Hawley Tariff in 1930, which triggered a trade war that caused international trade to decline drastically. Four years later, the new Roosevelt administration and Democratic Congress reversed course with the Reciprocal Trade Agreements Act (RTAA).

Since World War II, the world has steadily reduced trade restrictions under the institutional rules of the General Agreement on Tariffs and Trade (GATT) and, in 1994, the World Trade Organization (WTO). The details of the United States’ post–World War II trade policy suggest that the country’s commitment to free trade was not always strong; even as major GATT agreements to reduce trade barriers were being successfully negotiated, the United States increasingly used nontariff barriers to protect politically sensitive industries and interest groups.

In 2001 in Doha, Qatar, the 142 members of the WTO agreed to launch a new round of trade negotiations, whose agenda includes further tariff reductions on industrial goods, the liberalization of agricultural trade, the setting of rules for antidumping tariffs, and liberalization of services trade. As of 2011, the Doha Round was dormant, and there was little interest in completing the negotiations.
**I. Match the Terms and Definitions**

*In the space after each of the 43 terms, note the matching definition from among A through QQ:*

1. adding machine model
2. antidumping duty
3. common market (CM)
4. corn laws
5. countervailing duties
6. customs union (CU)
7. Doha Round
8. economic union
9. endogenous tariff model
10. fast-track authority
11. free rider problem
12. free trade area (FTA)
13. General Agreement on Trade and Tariffs (GATT)
14. Hanseatic League
15. intellectual property rights
16. International Trade Organization (ITO)
17. Kennedy Round
18. Long-Term Arrangement on Cotton Textiles (LTA)
19. market segmentation
20. median voter model
21. mercantilism
22. most favored nation principle
23. Multi-Fiber Arrangement (MFA)
24. multilateral trade negotiations
26. political economy
27. preferential trade area
28. Reciprocal Trade Agreements Act (RTAA)
29. rent-evading activities
30. rent-seeking activities
31. retaliatory tariffs
32. Smoot-Hawley Tariff Act
33. Stolper-Samuelson theorem
34. tariff escalation
35. Tokyo Round
36. trade adjustment assistance
37. trade blocs
38. trade creation
39. trade diversion
40. trade sanctions
41. uninformed voter model
42. Uruguay Round
43. World Trade Organization (WTO)
Definitions:

A. The economic system popular in Europe during the 16th, 17th, and 18th centuries, which considered international trade to be a beneficial activity provided that it was regulated by government so that it benefitted domestic merchants, manufacturers, and other groups allied with the central monarch.

B. One of the principles often included in trade agreements, it eliminates discrimination by requiring that any reductions in trade barriers offered to any single country be immediately extended to all other countries.

C. The commitment by the legislature to quickly vote “yes” or “no” on the ratification of a treaty brought to it by the country’s negotiators and to not alter the document in any way through amendments or revisions.

D. The agreement signed by the major market economies after World War II (1947), which set the legal framework within which international trade policy was to be set and trade negotiations were to be conducted.

E. A voluntary export restraint arrangement limiting exports of cotton textiles and clothing from developing countries to the United States that went into effect in 1962.

F. Financial aid to those people who suffer short-run or long-run losses from a country’s policy shift toward freer international trade.

G. The conclusion that, in a simple two-factor, two-good general equilibrium model of trade, free trade causes the return to the factor used intensively in the growing export industry to rise and the return to the factor used intensively in the shrinking import-competing industry to fall.

H. The permanent organization that replaced the General Agreement on Trade and Tariffs.

I. A voluntary export restraint arrangement limiting exports of nearly all textiles and clothing from developing economies to the United States that went into effect in 1973.

J. The GATT Round of trade negotiations that took place during 1974-79 and lowered tariffs for most manufactured goods and some other products by about one third.

K. The practice of levying higher ad valorem tariffs for processed goods than for raw materials, and the higher the value added, the higher the tariffs.

L. The ambitious GATT Round of trade negotiations that took place during 1987-94, which attempted to negotiate trade restrictions that had heretofore been ignored, such as those on agricultural trade, clothing trade, services trade, and intellectual property rights.

M. The sharp increase in U.S. tariffs authorized by the U.S. Congress in 1930 and signed into law by President Hoover after a year of lobbying by special interests and political maneuvering by U.S. politicians.

N. The latest multilateral round of trade negotiations, scheduled to be completed by 2005.

O. The 1934 U.S. law passed by Congress giving the U.S. president fast-track authority to negotiate tariff reductions with other countries, marking the first time that the Congress of the United States gave the executive branch of government the authority to negotiate tariffs without direct Congressional involvement.

P. An institution proposed by the several countries at the close of World War II that was to serve as a permanent international organization to promote trade liberalization and set the rules for international trade.

Q. The GATT trade round held in Geneva during 1964-67, which revived post-World War II tariff reductions by lowering tariffs, on average, by about a third.

Q. The increase in trade that results from a shift in trade policy and is, all other things equal, welfare enhancing.
R. The field of study that combines economics and political science in order to explain the relationship between political activity and its economic effects.

S. Trade negotiations among a large group of countries.

T. A trade restriction imposed by one country in order to punish another country or persuade another country to change objectionable policies or behavior.

U. A trade bloc that establishes completely free trade among member countries, sets common tariffs and other trade restrictions against outside countries, and permits the free movement of factors of production such as capital and labor.

V. Activities that use costly (scarce) resources to obtain transfers but which do not add to output or overall welfare. Included among rent-seeking activities are things like lobbying, bribery, public relations, and political campaign contributions.

W. A common marketing practice of charging different prices in different markets, depending on the elasticity of demand in each market.

X. A trade bloc within which member states completely liberalize trade among themselves but maintain their own trade barriers against outside countries.

Y. A political economy model that suggests that small special interest groups will have a disproportionately large influence on government policies because most voters have little information on most issues that do not directly affect them.

Z. A regional trade area that has all the characteristics of a common market plus members agree to a uniform set of macroeconomic and microeconomic policies. This is the highest form of regional economic integration.

AA. A tariff imposed by an importing country that believes it is the target of foreign dumping in order to offset the margin of dumping and raise the domestic price to where it would fall if the foreign supplier charged a price that reflected true costs and a “fair” profit.

BB. The redirection of a country’s foreign trade away from the world’s low cost suppliers and high-priced markets as a result of a discriminatory regional trade agreement, which, all other things equal, reduces the welfare gains from trade.

CC. A network of cities along the Baltic and North Seas and throughout northern Germany during the fourteenth, fifteenth, and sixteenth centuries that established a type of free trade area.

DD. Tariffs levied on imports of goods or services that have benefitted from government subsidies in order to cancel the advantage that such subsidies give the foreign exporter.

EE. The agreement reached by the major economies after World War II (1947) that established the legal framework within which international trade policy was to be set and trade negotiations were to be conducted. It provides the fundamental rules that govern the World Trade Organization (WTO) today.

FF. A common problem for voluntary organizations, where individuals or groups who stand to benefit from the activities of the organization do not contribute to its operating costs because they figure everyone else will contribute and they will still get to enjoy the benefits.

GG. A key principle included in most trade agreements, which mandates that nations refrain from discriminating in how they treat different trade partners.

HH. A political economy model that links the likelihood of an economic policy being enacted to the absolute number of people directly affected by the policy.

II. An attempt to carry out mutually beneficial transactions in violation of rules, laws, or other institutions that restrict them.

JJ. Tariffs imposed in response to another country’s increase in trade barriers.
KK. A political economy model in which trade policies are the result of the trade-off between politicians’ need to raise campaign funds to influence uninformed voters and their need to minimize the politically unpopular welfare losses from trade restrictions enacted to satisfy campaign contributors seeking protection.

LL. A trade bloc in which the member countries agree not only to allow the free trade of goods between their economies, but also to maintain a set of common tariffs and other trade restrictions against nonmember countries.

MM. A common name for an integrated regional trade area, such as a free trade area, a customs union, a common market, or an economic union.

OO. A regional trade area in which the member countries agree to lower trade barriers within the group to levels below those erected against outside economies.

PP. British seventeenth and eighteenth-century laws that kept wheat prices artificially high in Great Britain.

QQ. Consisting of Canada, Mexico, and the United States, this trade bloc became a true free trade area at the end of the first decade of the 2000s, when virtually all remaining tariffs and trade barriers on goods were eliminated.

II. Problems and Questions

1. Use the endogenous tariff model to explain why there will always be some positive level of protection even though free trade is the income-maximizing policy.

2. Explain why a shift to free trade necessarily implies “injury” to some industries. (Hint: use the general equilibrium model of trade, and Review Case Study 8.3 “Trade without Injury.”)

3. Write in the five types of regional economic integration in order of their degree of integration, from the least integrated to the most integrated. In the space to the right describe the principal features of each category of regional economic integration:

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<th>Type of integration:</th>
<th>Key Features:</th>
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</table>
4. The effects of trade sanctions often seem to fall on countries that are not the targets of the sanctions. Explain how this can happen.

5. List and explain the fundamental principles of the GATT. Has the GATT been successful in satisfying its stated principles?

6. Explain the gradual progression of import controls on clothing and textiles from the initial VER with Japan to the elaborate Multi-Fiber Arrangement. Why do you think the protection grew in steps?

7. Using the political economy models, explain why the United States adopted mostly protectionist policies during the 1800s.

8. Explain the U.S. procedure for handling dumping petitions. Are these procedures sufficient to prevent biased rulings? Discuss.

9. Explain the legal difference between dumping in international markets and predatory dumping in the domestic U.S. market. Why are they interpreted differently?

III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

____ 1. The political economy model that states that the policy favored by slightly more than half the voters will be the one enacted regardless of the intensity of each voter’s preferences is known as the:
   a. majority model.
   b. uninformed voter model.
   c. endogenous tariff model.
   d. median voter model.

____ 2. The political economy model that shows trade policies reflect the number of people that are directly affected by the policy is known as the:
   a. adding machine model.
   b. median voter model.
   c. uninformed voter model.
   d. endogenous tariff model.

____ 3. The political economy model suggesting that there can be a positive level of protectionism even when trade restrictions always cause more harm than good is known as the:
   a. adding machine model.
   b. median voter model.
   c. uninformed voter model.
   d. endogenous tariff model.
4. The United States government has protected the U.S. sugar industry:
   a. only in the last ten years.
   b. nearly every year since independence in 1776.
   c. during periods of wartime only.
   d. since the Great Depression.

5. Rent seeking activities:
   a. are only carried out by producers that face import competition.
   b. can greatly increase the welfare losses associated with trade policies.
   c. are unlikely to have any effect on the costs of protection.
   d. are not wasteful because they merely bring about a redistribution of existing output.

6. Smuggling is:
   a. the intentional evasion of tariffs or quantitative trade restrictions by importers who would
      otherwise bear the cost of providing others with tariff revenue or quota rent.
   b. rent-evading activity intended to avoid the costs imposed as a result of rent-seeking behavior
      by producers.
   c. a common phenomenon in countries that levy high import tariffs.
   d. All of the above.
   e. None of the above.

7. Governments have interfered with foreign trade:
   a. throughout history.
   b. only in the past two centuries as their growing needs for revenue led them to seek new sources
      of tax revenue.
   c. only during times of conflicts when nationalism flared.
   d. only after World War I when rapid globalization triggered opposition to international trade.

8. The mercantilists advocated that:
   a. a country try to import as much as possible without paying for it.
   b. a country restrict imports of manufactured goods that compete with domestic producers.
   c. free trade be extended to cover all goods and services.
   d. trade be restricted entirely in order to eliminate foreign cultural influences.

9. The Most Favored Nation (MFN) principle essentially says that:
   a. countries should use their trade policies to discriminate in favor of neighboring countries.
   b. countries should not discriminate among trade partners when they apply their trade policies.
   c. countries should open their markets more for poorer countries.
   d. regional free trade areas are preferable to multilateral free trade.

10. International trade in the very late 1800s:
    a. stopped growing because previous trade liberalization policies were reversed.
    b. contracted sharply because of increased protectionism.
    c. continued to grow because of improvements in transportation and communications.
    d. grew rapidly because of further trade liberalization.
11. Among the ways in which German reparations payments were to ultimately lead to the repayment of Allied country debts to the United States after the Treaty of Versailles officially ended World War I is:

a. The United States would have to run a large trade surplus in order to earn the foreign exchange that Germany could borrow to repay Britain, France, and Italy.
b. Germany would have to run a large current account surplus with the Allied countries in order to earn the British pounds, French francs, and Italian lira needed to pay war reparations.
c. Germany would have to let the Allied countries run current account surpluses so that they could earn the German marks that they had coming to them under the Treaty of Versailles.
d. The United States would have to isolate itself from the world economy and let Germany and Europe do most of the trading.

12. The Smoot-Hawley tariff was imposed in 1930 by:

a. the United States.
b. Britain.
c. Canada.
d. Germany.

13. The Reciprocal Trade Agreements Act (RTAA) passed by the United States Congress in 1934:

a. gave the executive branch of the U.S. government the authority to actively negotiate tariff reductions with other nations.
b. denied the executive branch of the U.S. government the authority to actively negotiate tariff reductions with other nations.
c. denied the executive branch of the U.S. government fast-track authority.
d. explicitly prohibited the executive branch of the U.S. government from negotiating tariff reductions that would cause “injury” to U.S. industry.

14. Fast-track authority includes the commitment by:

a. the legislature to vote quickly on the ratification of a treaty brought to it by the country’s negotiators and to allow only a very limited time for making amendments.
b. the legislative branch of government to vote “yes” on a trade agreement, although it is given a limited time to make amendments.
c. the trade negotiators to move quickly and avoid lengthy negotiations with other government officials.
d. the legislature to promptly vote “yes” or “no” on ratifying trade agreements without making any changes or amendments to the negotiated agreements.

15. Among the fundamental principles of the General Agreement on Trade and Tariffs (GATT) is the principle that:

a. countries commit to eliminating all trade barriers.
b. if trade is to be restricted, countries should use quotas rather than tariffs or other less visible trade barriers.
c. signatories of the agreement agree to give all other signatories to the GATT most favored nation (MFN) treatment.
d. countries can only trade with other members of the GATT.
16. During the 1950s the U.S. Congress introduced several formal procedures dealing with international trade which served to limit the U.S.’s ability to negotiate reductions in trade barriers, including:
   a. the failure to ratify the GATT.
   b. the National Security Amendment to the Trade Agreements Act in 1955, which called for trade restrictions in order to make the U.S. economy self-sufficient.
   c. the peripet-provision to the 1955 Act, which mandated that the U.S. Tariff Commission determine ahead of trade negotiations the maximum tariff cuts U.S. negotiators could offer in order to avoid “injuring” a U.S. industry.
   d. All of the above.

17. The Kennedy Round:
   a. was much less successful than previous Rounds in reducing tariffs.
   b. produced the Multi-Fiber Arrangement (MFA) in order to prevent the uncontrolled expansion of textile and clothing imports from developing countries.
   c. had fewer participants than earlier Rounds because the European Union withdrew from the GATT.
   d. was more successful in reducing tariffs than earlier Rounds because the United States finally abandoned the “no injury” clause.

18. The World Trade Organization:
   a. was replaced by the GATT after 1994.
   b. administers dispute settlement procedures that can be petitioned by any member country.
   c. was agreed to in 1994 but has been rejected by the United States.
   d. All of the above.
   e. None of the above.

19. Tariff escalation refers to:
   a. the way countries gradually increase their tariffs after agreeing to keep them fixed.
   b. the practice of levying higher ad valorem tariffs for manufactured products than for raw materials, and increasingly higher tariffs the higher the value added.
   c. a tariff war in which each country matches or exceeds the tariffs levied by other countries.
   d. the way the GATT permitted developing countries to impose higher tariffs than the developed countries were permitted to charge.

20. The General Agreement on Trade and Tariffs (GATT):
   a. did not mention the most favored nation principle.
   b. did not permit countries to levy antidumping duties.
   c. permitted economic unions but not free trade areas.
   d. defined dumping.

21. In the case of a free trade area, member countries agree to:
   a. completely eliminate all restrictions on the flow of goods between their economies, while each country maintains its existing restrictions on trade against all outside countries.
   b. completely eliminate all restrictions on the flow of goods between their economies, while also harmonizing their restrictions on trade against all outside countries.
   c. partially eliminate trade restrictions between their economies, while each country maintains its existing restrictions on trade against all outside countries.
   d. permit the free flow of all goods and factors of production.
22. Which of the following is **not** a characteristic of a Common Market (CM)?
   a. All members of the CM apply the exact same tariff rates against outside countries.
   b. All members of the CM eliminate tariffs against other members.
   c. Factors of production move freely among CM member countries.
   d. All CM members decide on their own tariff rates on imports from outside the CM.

23. Among the following forms of regional integration, the highest level of economic integration is the:
   a. economic union.
   b. common market.
   c. bi-lateral free trade area.
   d. preferential trade area.

24. An economic union has all the characteristics of a customs union plus:
   a. the freedom for individual countries to set their own trade policy.
   b. a prohibition on the movement of labor.
   c. close coordination of monetary and fiscal policies.
   d. All of the above.
   e. None of the above.

25. An examples of an economic union includes:
   a. the Roman Empire.
   b. NAFTA.
   c. Mercosur.
   d. All of the above.
   e. None of the above.

26. The following is a member of the European Community:
   a. Russia.
   b. Switzerland.
   c. Denmark.
   d. All of the above are members.
   e. None of the above are members.

27. Trade diversion is possible if a country:
   a. trades freely with all other countries of the world.
   b. joins a free-trade area.
   c. adheres to the most favored nation principle.
   d. All of the preceding statements are true.

28. According to the GATT/WTO, dumping is defined as:
   a. giving away goods overseas in order to gain market share.
   b. selling overseas with too high a profit margin.
   c. selling in foreign markets below the price charged by the domestic firms in those markets.
   d. selling overseas below cost.
Chapter 10

International Trade Policy: A Holistic Perspective

Chapter Summary:

This chapter seeks to bring our understanding of international trade policy in line with heterodox perspectives of international trade in general. For example, the growth of transnational corporations (TNCs) links international trade to international investment, market structures, and institutional factors that are not covered in the HO model of trade.

TNCs have been able to increase profit margins and gain income at the expense of consumers and workers, thus altering the distribution of gains from international trade. Many heterodox economists argue that trade policy and the international institutions that help shape national trade policies have been seriously biased toward assisting the growth of TNCs. The liberal perspective on social policy that emerged from the Enlightenment, and which so strongly influenced thinking in the field of international economics, was fundamentally the rejection of wealth-based politics as usual. The concentration of economic power in the hands of TNCs, and their political influence, suggest that the link between wealth and economic policy is still growing again.

The HO model of trade suggests that the welfare gains from trade are greatest when countries are very different. However, heterodox economists, especially those who favor a historical perspective, find many cases of unequal exchange between dissimilar trade partners—for example, rich and poor countries, or militarily powerful and weak countries—brought about very unequal shares of the gains and losses from international trade.

A mercantilist society is an active rent-seeking society in which commercial interests bid for, and gain control of, government mechanisms that provide them with special privileges and monopoly powers over sectors of the economy. When these alliances between central governments and commercial interests are extended overseas, mercantilism becomes colonialism, which is the joint government-private conquest of foreign territory and resources.

This chapter presents a detailed case study of the colonial and postcolonial trade and economic development of Brazil. Each trade cycle brought different economic effects to different regions of Brazil, which resulted in different gains and losses from international trade. The infant industry argument for trade barriers and Prebisch’s case for import substitution industrialization (ISI) are detailed in this chapter, as are the concepts of dependency theory and structuralism that supported the ISI policies.

This chapter then returns to the issue of agglomeration and the concentration of economic activity in transnational corporations, first discussed in Chapter 7. TNCs represent a modern form of mercantilism, as their concentrated wealth permits them to acquire political power that enables them to shape national and international institutions in their favor.
This chapter also presents an interesting example of *strategic trade policy*, which is the intentional government interference with international trade in order to support locally based TNCs over a small number of foreign-based firms operating in a highly concentrated global market. This chapter shows that trade restrictions can both improve human welfare and decrease it, depending on the circumstances and the interactions of the many dynamic influences of trade.

---

**I. Match the Terms and Definitions**

*In the space after each of the 17 terms, note the matching definition from among A through Q:*

1. agglomeration __________
2. colonialism __________
3. dependency theory __________
4. export orientation __________
5. *Heart of Darkness* __________
6. import substitution industrialization __________
7. infant industry argument for protection __________
8. law of similars __________
9. learning-by-doing __________
10. mercantilism __________
11. strategic trade policy __________
12. structuralism __________
13. structuralist school of economics __________
14. technological follower __________
15. technological leader __________
16. terms of trade __________
17. underdevelopment __________

**Definitions:**

A. An economic strategy that consists of promoting the substitution of domestic production to replace imports by using protectionist trade policies and domestic policies to target selected industries.

B. A school of thought that interpreted colonialism and postcolonial experiences as suggesting that developing countries should sever all economic ties with their former colonial masters or current neocolonial economic powers.

C. The concept based on the idea that the longer one performs a task, the more productive one gets at performing it.

D. Like the philosophical structuralists, who rejected the idea that humans make choices according to their free will, this school of thought explicitly rejected mainstream economics’ fundamental assumption that economic outcomes were the result of free choices made by individuals who sought, rationally, to maximize their individual welfare.

E. The firm or nation with the most advanced technology, which enjoys a comparative advantage in developing and producing new products.
F. A law, often enacted as part of import substitution industrialization policies, that explicitly authorized a complete ban of all imports of similar products as soon as any domestic firm could show it was capable of supplying any specific product to the domestic market.

G. A school of philosophy that maintained that human economic behavior could only be explained and predicted if the basic social, political, natural, and economic structures were understood.

H. The geographic concentration of economic activity that is hypothesized to occur because (1) industrial activity is subject to increasing returns to scale and (2) long-run growth depends in the combinatorial process of technological change, which is highly path dependent on human interactions.

I. The term used by some 1950s and 1960s structuralist and dependency theorists to describe the unique situation of contemporary poor countries, which must co-exist with much more developed economies.

J. The amount of exports that a country needs to supply to the international market in order to obtain a given amount of imports.

K. The late 19th century novel by Joseph Conrad, which described colonialism in the Belgian Congo.

L. Government policies that interfere with the free flow of trade in order to protect or promote industries that are deemed to have exceptional growth prospects or beneficial effects on the country’s economic performance.

M. The conquest and military and administrative occupation of foreign lands by a country for its own economic gain.

N. A firm or country that is not able to profitably innovate and lead in producing new products that use the most advanced technologies, and instead waits for new technologies to become standardized before adopting them for its own use.

O. The active use of government power to further the interests of private commercial interests, including protection from foreign competition, colonial conquest of foreign resources and markets, and the issuance of patents and other exclusive permits to support cartels and favored business groups.

P. Restrictions on foreign imports to give domestic industry time to learn or develop before facing foreign competition.

Q. A set of export-oriented economic policies, consisting of such policies as competitive exchange rates, free trade, and subsidies for exporters.

II. Problems and Questions

1. Explain how Brazil’s reaction to the sudden collapse of export earnings in 1930 led it to effectively adopt Keynesian macroeconomic policies that enabled it to avoid the worst consequences of the Great Depression.

2. A. Describe mercantilism.
   B. Is the global economy today still mercantilistic? Discuss and support your conclusions.
3. Describe exactly why Juan Prebisch concluded that developing countries needed to use protectionist trade policies to stimulate domestic industrialization.

4. Compare and contrast structuralism and neoclassical economics.

5. A. Why does economic activity often agglomerate?
   B. What types of economic activities are most likely to agglomerate?
   C. How does agglomeration in the global economy affect a country’s economic development?

III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

____ 1. Brazil’s import substitution industrialization policies after World War II were motivated by:
   a. its experience during its colonial era, when rapid industrial development occurred.
   b. political pressure for cheaper imports from Brazilian middle class consumers.
   c. the intellectual justifications provided by Raul Prebisch and the United Nations Economic Commission for Latin America.
   d. All of the above.
   e. None of the above.

____ 2. Proponents of import substitution industrialization contended that the orthodox neoclassical Heckscher-Ohlin model is unrealistic because:
   a. humans behaved rationally.
   b. the model was static in nature, while countries had to compete in a dynamic continuously evolving global economy.
   c. production occurred in diminishing returns industries, not increasing returns as the model assumed.
   d. All of the above.
   e. None of the above.

____ 3. Brazil was colonized in 1500 by:
   a. Spain.
   b. Italy.
   c. France.
   d. None of the above.

____ 4. Brazil’s first major export was:
   a. coffee.
   b. wood.
   c. palm oil.
   d. copper.
5. During its colonial era, Brazil:
   a. developed rapidly, as evidenced by the high income levels of its population.
   b. abolished slavery and developed a multicultural society.
   c. restricted imports to spur industrialization.
   d. was a plantation society with unequal wealth.

6. Until the twentieth century, Brazil’s economy was characterized by:
   a. its economic isolation.
   b. various “export cycles,” such as the sugar, gold, and coffee cycles.
   c. a stagnant economy that was never able to shift from its dependence on coffee exports.
   d. a growing middle class based on the growth of local industry.

7. The term that best describes Brazil in the 19th century is:
   a. mercantilism.
   b. free market capitalism.
   c. Marxism.
   d. market socialism.

8. Brazil’s economic policies after the 1930 crash in commodity prices has been compared to:
   a. what we now call an “austerity program.”
   b. a Keynesian economic stimulus.
   c. a “bailout” of its banking sector.
   d. a free market approach.

9. Brazil’s import substitution industrialization policies after World War II were motivated by:
   a. the complete collapse of its economy throughout the 1930’s Great Depression.
   b. political pressure for protection from its agricultural sector.
   c. the intellectual justifications provided by neoclassical economists.
   d. All of the above.
   e. None of the above.

10. Brazil’s import substitution industrialization was supported by
    a. its “Law of Similars.”
    b. import subsidies to force domestic producers to become more efficient.
    c. free trade.
    d. massive foreign aid and IMF loans.

11. An infant industry is a new industry that:
    a. will never become efficient enough to compete in the global economy.
    b. can learn to become competitive if given enough time to “grow up” and become more efficient.
    c. will cost more in terms of protection than it will ever be able to earn in profit.
    d. All of the above.
    e. None of the above.

12. The structuralist school of economics:
    a. was related to philosophical structuralists.
    b. rejected the idea that humans always make choices according to their free will.
    c. hypothesized that economic behavior was shaped by the structure of the economy.
    d. All of the above.
    e. None of the above.
13. Intellectual support of import substitution industrialization was provided by:
   a. dependency theorists.
   b. structuralist economists.
   c. the United Nations Economic Commission for Latin America (ECLA).
   d. All of the above.
   e. None of the above.

14. A strategic trade policy
   a. refers to trade in military equipment for the defense of the country.
   b. protects and promotes increasing returns to scale industries with the greatest growth potential.
   c. avoids making government predict which industries will develop into profitable increasing returns to scale industries after some protection.
   d. All of the above.
   e. None of the above.

15. Which of the following is not an example of an enclave industry?
   a. Mexican maquiladoras.
   b. nitrate mining in northern Chile in the late 1800s.
   c. natural rubber industry in the Amazon.
   d. U.S. automobile manufacturing in Brazil.
International Investment and International Finance

Chapter Summary:

This chapter introduces international investment, which consists of international sales and purchases of physical capital, such as houses, factories, machines, tools, roads, and power plants, and international finance, which includes all international asset sales and purchases that represent intertemporal exchanges.

The second main topic of this chapter is the balance of payments. Essentially, the balance of payments is the international extension of the circular flow of economic activity; each international payment flow connects to an individual economy’s internal flows. The circular flow diagram is related to the standard macroeconomic accounting, which means that it ignores many human activities as well as the critical products provided by our natural environment. The open-economy circular flow diagram in Figure 11.4 highlights the main flows of payments between countries.

Since this chapter discusses assets and finance, this chapter also discusses expectations and uncertainty. The limited information on the future, and the resulting uncertainty, mean that the prices of financial instruments and their derivatives are often driven by emotions and heuristics. Asset prices can diverge from fundamental long-run factors over extended periods of time, and asset price movements can be volatile.

The fundamental economic purpose of the financial sector is to channel savings to economic investment. Financial investment also channels funds to cash-constrained consumers, a process that is economically beneficial if it permits consumers to better allocate their purchases over time. The financial intermediaries, exchanges, and markets are costly to operate, however, and they may introduce new risks and uncertainties that cause default, moral hazard, adverse selection, and numerous other information problems. Instability in financial intermediaries, exchanges, and markets also results from the divergence in purpose of sellers and purchasers of financial assets.

International finance increases opportunities for diversifying asset holdings because assets in different countries are less likely to be closely correlated than assets within a single economy. The diversification motive has been one of the reasons why international investment in stocks and bonds, or what is normally referred to as portfolio investment, has grown so much in the past twenty-five years.

International finance may affect innovation and technological change in several ways, each illustrated by how intertemporal transactions across borders affect the variables in the Schumpeterian model.
1. adverse selection
2. asymmetric information
3. balance of payments
4. cash instruments
5. circular flow
6. collateralized debt obligations (CDOs)
7. credits
8. credit default swaps
9. current account
10. debits
11. default
12. deposit insurance
13. derivatives
14. diversification
15. externalities
16. factor payments
17. financial account
18. financial asset
19. financial depth
20. financial exchanges
21. financial innovation
22. financial market
23. financial sector
24. foreign aid
25. foreign direct investment
27. greenfield investment
28. immigrant remittance
29. intermediate goods
30. international finance
31. international investment
32. merchandise trade balance
33. mergers and acquisitions
34. moral hazard
35. official transactions
36. over-the-counter market
37. portfolio diversification
38. portfolio investment
39. principal-agent problem
40. real assets
41. risk aversion
42. Securities and Exchange Commission
Definitions:

A. The part of the balance of payments that records the value of a country’s international trade of goods and services, factor payments and asset returns.
B. The net value of exports and imports of physical goods only.
C. The acquisition of foreign assets that imply no management interest in the firms and enterprises who issue the stock and the bonds.
D. The consequence of one person’s or firm’s activity that raises or decreases others’ welfare but is not taken into consideration by those undertaking the activity.
E. The account, compiled by nearly all countries, that records all of a country’s international transactions according to a standard format.
F. The part of the balance of payments that lists a country’s international payments related to the sale and purchase of assets.
G. The acquisition of controlling interest in foreign firms and enterprises.
H. The creation of physical capital in one country by an owner in another country.
I. The sector of the economy where assets are exchanged and savings are channeled to investments and borrowers.
J. Depicts the economy as consisting of payments flows that circle from households to producers and back again.
K. The value that a producer adds to the labor, capital, raw materials, and other parts, components, and inputs acquired from other producers.
L. Inputs acquired from other producers.
M. A market made up of individual dealers who maintain stocks of merchandise or assets, and who stand ready to sell or buy upon demand.
N. The decision by producers to acquire materials, parts, components, etc., from other firms or to sell their output to other firms for further processing so that they can concentrate on one stage of production rather than all stages.
O. The balance of payments term for inflows of payments from abroad.
P. The balance of payments term for outflows of payments to foreigners.
Q. Those balance of payments transactions that involve currencies and assets bought and sold by central banks for the purpose of influencing the foreign exchange rate.
R. The establishment of new businesses and production facilities, as opposed to mergers and acquisitions, which consist of absorbing existing businesses into a new firm.
S. This is simply a balancing item that helps to make up the difference between the estimated current account and the estimated asset sales and purchases in the financial account.
T. Behavior that avoids risk in favor of assets and activities with more predictable outcomes.
U. Foreign direct investment that involves acquiring controlling interests in existing foreign firms.
V. Those balance of payments transactions that involve official assets, which are currencies and assets bought and sold by central banks for the purpose of influencing the foreign exchange rate.
W. Options, futures, swaps, and other financial instruments whose values are derived from other assets.
X. The reduction of risk by combining different assets whose returns are not perfectly correlated.
Y. The exchange of payments to be made at different points of time.
Z. Financial assets whose values are determined in markets where these instruments can be easily bought and sold for cash.
AA. An agency created in the United States during the 1930s to oversee financial markets such as the stock and bond markets.
BB. The situation where future outcomes cannot be predicted because the distribution of possible outcomes understood well enough to be able to attribute probabilities to the potential outcomes.
CC. The spreading of risk across many different types of assets, the act of not putting all one’s eggs in one basket.
DD. Physical, tangible assets such as buildings, land, and factories.
EE. Markets where financial and real assets are exchanged, such as stock markets, bond markets, and real estate markets.
FF. The various forms of international borrowing and lending, including bank lending, foreign bond sales and purchases, and other forms of portfolio investment.
GG. John Maynard Keynes’s 1936 work that showed policy makers how to design economic policies aimed at specific groups and sectors of the economy in order to most effectively push the economy back toward full employment.
HH. The failure to meet the terms of an intertemporal transaction.
II. One of the functions of money, namely, its ability to hold value until it is passed on in exchange for something else.
JJ. Banks, money managers, and hedge funds (the agents), among other intermediaries, effectively play with other people’s (the principals) money, and they may have incentives that lead them to treat funds differently from how financial investors would prefer.
KK. Payments by immigrants to their family, relatives, friends, and other groups back in their native countries.
LL. Options that pay out the full value of an asset in the case of default.
MM. Wage payments, dividend payments, interest payments, and other payments to the factors of production.
NN. A real or financial asset in which current income can be stored for future use.
OO. A market failure caused by the fact that the market price changes the types of people who seek to transact in a market.
PP. The creation of new financial institutions and instruments.
QQ. The bundling of a large number of assets into a single security, in which shares can then be sold.
RR. Financial obligations such as loans, bonds, or even simple IOUs written on the back of an envelope and agreed to by a handshake.
SS. The degree of diversity of financial assets provided by the financial sector of the economy.
TT. The situation where those on one side of a transaction have a different information set than those on the other side of the transaction.
UU. Usually a government-supported scheme whereby bank depositors are protected against losses in the case of bank failure.
II. Questions and Problems

1. One of the important ideas presented in this chapter is that open economies make everyone dependent on what others do in the rest of the world. Another important point was that the aggregate economic outcome in a national economy and in the global economy is the result of separate actions carried out by individuals facing a variety of incentives. Use the circular flow diagram to explain how the incentives that drive the actions and decisions of each individual unit in an economy are dependent on the decisions and actions of others.

2. The historical year-to-year changes in the balance of payments and the net international investment position describe how a country’s international transactions have evolved. Use the data on the U.S. balance of payments and net international investment position available from the Bureau of Economic Analysis (BEA) of the United States Department of Commerce (USDOC) at www.bea.doc.gov and describe the general pattern of U.S. international trade, investment, and asset accumulation over the past several decades. What really stands out from the pattern of U.S. international transactions?

3. Explain the relationship between the net flows of asset returns such as interest, dividends, rents, etc. in the current account and the net international investment position. Does the data for the U.S. balance of payments and the net international investment position during the 1980s and 1990s bear out what you describe as the relationship between international flows of asset returns and the net international investment position?

4. Draw a circular flow diagram of an open economy, that is, an economy that engages in international trade, international finance, international investment, and international migration.

5. The diagram below shows the equilibrium in the markets for loanable funds (savings) in two isolated countries, Ecuador and Peru. Describe the international investment that would result if the governments of the two countries permit their citizens and firms to borrow and lend with people and firms in the other country. (Hint: Use the two-country partial equilibrium model of international investment as given in Figure 11.6, with a center diagram describing international investment and specific areas that represent the gains and losses to savers and borrowers in each country.)
Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

1. In the basic circular flow on the right, the right-hand box should be labeled:
   a. Government.
   b. Rest of the World.
   c. Individuals.
   d. Producers.

2. The circular flow diagram for a closed economy highlights:
   a. two distinct sectors of the economy: consumers and producers.
   b. three distinct sectors of the economy: consumers, producers, and the financial sector.
   c. four distinct sectors of the economy: consumers, producers, the financial sector, and government.
   b. five distinct sectors of the economy: consumers, producers, the financial sector, government, and the service sector.

3. In the open-economy circular flow diagram, what does the flow labeled TrF represent?
   a. Wages and salaries paid by domestic producers to foreign laborers.
   b. Loans to foreign borrowers.
   c. Net transfers from foreigners to domestic individuals, firms, or organizations.
   d. Interest payments paid by the domestic government to foreign lenders.

4. According to the definitions of the various payment flows in the open-economy circular flow, total foreign transactions will be in balance when:
   a. \((X - IM) + (S_F + r_F) + Tr_F > 0\)
   b. \((X - IM) = 0\)
   c. \((X - IM) + (S_F + r_F) = -Tr_F\)
   d. \(X = IM\)
5. The balance of payments implies that:
   a. total payments flowing out of the country must be less than total payments flowing into the country.
   b. total credits are greater than total debits.
   c. \((X-IM) = -(S_F + r_F + Tr_F)\)
   d. exports equal imports.

6. The sale of a condominium apartment in a new building in Las Vegas to a retiring Canadian couple will appear in the U.S. balance of payments as a:
   a. credit.
   b. debit.
   c. unilateral transfer.
   d. service import.

7. The purchase of 10,000 shares of a Swiss chemical firm on the Zurich Stock Exchange by an American mutual stock fund will appear in the Swiss balance of payments as a:
   a. credit.
   b. debit.
   c. unilateral transfer.
   d. asset purchase abroad.

8. A $500 gift to his Mexican relatives by a Mexican working in the United States will appear in the Mexican balance of payments as a:
   a. import.
   b. debit.
   c. unilateral transfer.
   d. service import.

9. Which of the following statements is **true**?
   a. A merchandise trade surplus implies \(X - IM > 0\).
   b. A payment outflow shows up as a “+” on the balance of payments.
   c. The reason we list inflows of payments as “+” items is that they are more desirable than outflows.
   d. The sale of U.S. government bonds to foreign pension funds is a debit on the balance of payments.

10. The merchandise trade balance is reported by the U.S. government every:
    a. week.
    b. year.
    c. quarter year.
    d. month.

11. Foreign direct investment (FDI) refers to:
    a. the purchase of a controlling interest in foreign firms.
    b. the acquisition of a small quantity of shares in foreign firms.
    c. the purchase of a small amount of stock by foreign investors and mutual funds.
    d. All of the above.
    e. None of the above.
12. The financial account of the balance of payments is represented using the notation defined in this chapter as:
   a. $S_F$
   b. $(X-IM) - S_F$
   c. $(X-IM) - Tr_F - S_F - r_F$
   d. $(X-IM) - Tr_F$

13. Why is the statistical discrepancy in a country’s balance of payments never zero?
   a. Many international transactions are not reported to the agencies that compile the balance of payments data.
   b. The customs service only spot checks imports and exports.
   c. Some exports and imports are smuggled and thus not recorded.
   d. All of the above.
   e. None of the above.

14. Financial intermediaries can reduce or eliminate which if the following problems:
   a. asymmetric information.
   b. adverse selection.
   c. moral hazard.
   d. All of the above.
   f. None of the above.

15. Banks can mitigate the social consequences of moral hazard by:
   a. monitoring the activities of the borrower.
   b. rationing loans.
   c. securitizing loans.
   d. All of the above.
   e. None of the above.

16. In the financial sector of the economy, the government:
   a. can prevent bank runs by providing deposit insurance.
   b. can reduce adverse selection and moral hazard by supporting legal support of collateral.
   c. can support intertemporal transactions by enforcing contracts.
   d. All of the above.
   e. None of the above.

17. Robert Lucas’ explanations for the lack of foreign investment in countries where capital is scarce include:
   a. Technology is not as advanced in low-income economies.
   b. People have more human capital as well as physical capital in the rich countries.
   c. Intertemporal transactions between countries are risky.
   d. All of the above.
   e. None of the above.

18. The following is a characteristic of international investment in recent years:
   a. foreign direct investment in developing countries grew over the course of the decade.
   b. net bank lending to developing countries was always positive.
   c. foreign portfolio investment in developing countries was almost always negative.
   d. foreign direct investment in developing countries gradually shrank over the course of the decade.
Chapter 12

The Foreign Exchange Market

Chapter Summary

This chapter introduces the foreign exchange market. Because the exchange rates at which the future selling prices and returns are translated back into the investor’s home currency cannot be predicted with certainty, foreign investment and finance are subject to uncertainty.

Markets for exchanging foreign money have operated for nearly three thousand years, ever since there have been distinct national moneys. Foreign exchange markets became more complicated after the development of banking and the introduction of new types of payments to supplement the traditional use of coins made from precious metals. With the invention of paper or fiat money, the price of one fiat money in terms of other fiat moneys reflects only an expectation of the fiat money’s future purchasing power.

Today, nearly all of the US$4 trillion worth of currencies that is exchanged every working day is traded through a worldwide network of dealers that is referred to as the over-the-counter foreign exchange market. The foreign exchange market consists of decentralized over-the-counter markets, which are more costly and less efficient than centralized exchanges would be. Dealers engage in frequent transactions to keep inventories in balance, they take advantage of arbitrage opportunities between segments of the markets, and customers have less information about competing prices.

Foreign exchange markets are characterized by three forms of arbitrage: geographic arbitrage, cross-currency (triangular) arbitrage, and intertemporal arbitrage. The forward market for foreign exchange permits exporters, importers, and international investors to hedge their foreign exchange risk by contractually fixing the future exchange rate for expected future foreign currency receipts or payments. The interest parity condition is often used to represent the intertemporal arbitrage condition, and it shows that the spot exchange rate is determined by the expected future exchange rate, tempered only by the interest rates for the pair of currencies.

De Grauwe argues that, in the absence of overwhelming evidence that some very different exchange rate clearly reflects future values more accurately, exchange rates tend to remain relatively stable around some initial anchor price that people are familiar with. The problem with using an anchor, or what Keynes called convention, to guide decisions is that, inevitably, the anchor comes loose when something upsets the “conventional” world as we know it. Therefore, foreign exchange markets are volatile and, sometimes, unstable.

The huge daily volume of trade on the foreign exchange market cannot be explained by the underlying international trade, international investment, immigrant remittances, and other international payments categorized in the balance of payments of the world’s 200-plus economies, but it can be explained by the over-the-counter market’s need to continually engage in arbitrage and inventory-adjustment transactions.
I. Match the Terms and Definitions

In the space after each of 32 the terms, note the matching definition from among A through FF:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>anchor</td>
<td>A currency that is no worth as much as its nominal value states, as in coins that have had some of their gold content scraped away or paper money whose purchasing power has been undermined by inflation.</td>
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<tr>
<td>arbitrage</td>
<td>B. An exchange rate that is intentionally prevented from changing by means of specific government policies that intervene in the foreign exchange markets.</td>
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<tr>
<td>bills of exchange</td>
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<td>Bretton Woods system</td>
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<td>carry trade</td>
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<td>centralized exchange</td>
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<td>convention</td>
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<td>covered interest parity condition</td>
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<td>debased (currency)</td>
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<td>effective exchange rates</td>
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<td>fiat money</td>
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<td>fixed exchange rate</td>
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<td>foreign exchange market</td>
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<td>foreign exchange risk</td>
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<td>forward transactions</td>
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<td>geographic arbitrage</td>
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<td>hot potato process</td>
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<td>interest parity condition</td>
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<td>over-the-counter market</td>
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<td>purchasing power</td>
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<td>triangular arbitrage</td>
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<td>uncovered interest parity condition</td>
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<td>vehicle currency</td>
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</table>

Definitions:

A. A currency that is no worth as much as its nominal value states, as in coins that have had some of their gold content scraped away or paper money whose purchasing power has been undermined by inflation.

B. An exchange rate that is intentionally prevented from changing by means of specific government policies that intervene in the foreign exchange markets.

C. The ease with which a market can match up market demanders and suppliers.
D. The worldwide set of markets where the many different national currencies are exchanged.
E. Invoices issued by sellers of goods that could be transferred to others for eventual collection.
F. The relationship between the spot exchange rate and the expected future exchange rates under
the assumption of perfect intertemporal arbitrage.
G. Keynes’ term for the beliefs that most participants in a market explained how things work
now and into the future.
H. The purchase and sale of foreign exchange for delivery and payment at some future date.
I. The purchase in one location and sale in another in order to profit from differences in prices
for identical products or assets.
J. The practice of carrying assets denominated in currencies in which interest rates are high and
paying for them by borrowing in currencies with low interest rates.
K. The real amount of goods and services that can be acquired for something such as income,
money, or wages, for example.
L. The price of one currency in terms of another currency for an exchange that is contractually
agreed on today but will be carried out at a determined future date.
M. The large number of transactions in the foreign exchange market needed to rebalance the
inventories of foreign currencies by the over-the-counter dealers.
N. The currency that individuals, firms, and financial firms use to conduct international
transactions.
O. In finance, the term for a reference price that guides expectations and beliefs in the case of
uncertainty and the absence of complete knowledge.
P. Currency that is designated as legal tender by law, or by fiat, but is not redeemable into other
stores of value with intrinsic value, such as gold or silver.
Q. Arbitrage consisting of at least two exchanges of currency to exploit inconsistencies across
different bilateral exchange rates.
R. The price set in the spot market for foreign exchange, it represents the current price for
foreign exchange.
S. Arbitrage between the spot and forward markets, usually stated as the interest parity condition.
T. In the foreign exchange market, the simultaneous spot sale (purchase) and forward purchase
(sale) of an asset.
U. The interest parity condition in which the forward exchange rate is used in place of the
expected future exchange rate, in effect “covering” the exchange risk of the intertemporal
arbitrage.
V. The interest parity condition using the expected value of the future spot rate, not the forward
market rate a in the covered interest parity condition.
W. Centralized markets where large numbers of buyers and sellers interact directly and set asset
prices through some process in which buyers and sellers, that is, those who demand and those
who supply, balance total supply and demand.
X. A weighted average of a set of foreign exchange rates that provides a better indication of the
overall value of a currency in the global economy.
Y. Foreign exchange contracts that involve delivery of some amount of foreign exchange at
some pre-specified future date.
Z. The over-the-counter firms in the foreign exchange market who stand ready to supply and
demand currencies as customers request.
AA. The process that effectively combines distinct markets into a single integrated market by means of profit-seekers buying goods or assets in those segments of the market where prices are low and selling where prices are high.

BB. A market made up of individual dealers who maintain stocks of merchandise or assets, and who stand ready to sell or buy upon demand. Bonds, foreign exchange, and financial derivatives are most often traded in over-the-counter markets. These are less transparent than exchanges because they reveal little information about prices and trading volumes; buyers and sellers only see the price of one particular transaction. The foreign exchange market is an over-the-counter market.

CC. An exchange rate that is determined exclusively by the unhindered forces of supply and demand, and which tends to change whenever demand and supply change.

DD. The gains to the government from its monopoly on creating money, which are equal to the difference between the real purchasing power of newly created money and the cost of creating the new money.

EE. The international financial system that evolved from the order established at the Bretton Woods Monetary Conference, consisting of exchange rates pegged by means of central bank intervention and assistance from the International Monetary Fund (IMF), currency convertibility to facilitate international trade, and emphasis on sound domestic economic policies to promote full employment and economic growth.

FF. The risk that is inherent to all assets denominated in foreign currencies, which is that exchange rate changes will alter the domestic currency value of foreign products and assets.

II. Questions and Problems

1. Describe the three forms of arbitrage that characterize today’s foreign exchange markets.

2. Suppose that the spot exchange rate between Canadian dollars and U.S. dollars is equal to \( e = \text{US}\$0.50 \). The current return on high-quality Canadian financial assets is 13 percent per year while the interest rate in the U.S. for comparable assets is 9 percent per year. Suppose that there is perfectly free asset trade between Canada and the U.S. Use the interest parity condition to calculate what the 360-day forward exchange rate must be.

3. If there are 158 countries with independent currencies, how many exchange rates are there? How many exchange rates would you have to know in order to calculate the rest under the assumption that the interest parity condition holds?

4. Explain the difference between the covered interest parity condition and the uncovered interest parity condition.

5. In the table of cross rates, fill in the missing exchange rates that would prevail in the case of unrestricted triangular arbitrage between the markets for U.S. dollars, Japanese yen, Australian dollars, euros, and Swiss francs.
Table of Exchange Rates for Five Countries

<table>
<thead>
<tr>
<th></th>
<th>US$ per</th>
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<td>SFr per</td>
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</tbody>
</table>

6. Suppose that the rate of return on assets in the United States is 8 percent per year and that the interest rate we can earn on British assets is 4 percent. Suppose also that economic conditions and policies in the two countries lead investors to expect that the exchange rate will be $2.50 = £1 one year from now, that is, \( E_{t+1} = $2.50 \). If all of this information is known, what must the spot rate of exchange be?

7. Suppose that the rate of return on assets in Britain is 13 percent per year and that the interest rate on Canadian assets is 5 percent. Suppose also that the spot exchange rate is CAN$3.23 = £1. If Canadians and British individuals, firms, and financial institutions are free to store wealth in foreign assets, what will the one-year-forward market exchange rate be?

8. Suppose that there are no restrictions on international asset transactions, and people are risk neutral. For each of the following cases, if the values for domestic and foreign interest rates and the expected future exchange rate are as given, find the spot exchange rate \( e_t \):

   a. \( r^* = 2\% \), \( r = 8\% \), and \( E_t e_{t+1} = $2.00 \).
   b. \( r^* = 8\% \), \( r = 2\% \), and \( E_t e_{t+1} = $1.00 \).
   c. \( r^* = 15\% \), \( r = 15\% \), and \( E_t e_{t+1} = $1.50 \).

9. Suppose that there are no restrictions on international asset transactions, and people are risk neutral. For each of the following cases, if the values for domestic and foreign interest rates and the spot exchange rate are as given, determine what the expected next period future exchange rate \( E_t e_{t+1} \) is:

   a. \( r^* = 18\% \), \( r = 4\% \), and \( e_t = $1.00 \).
   b. \( r^* = 7\% \), \( r = 13\% \), and \( e_t = $2.00 \).
   c. \( r^* = 10\% \), \( r = 10\% \), and \( e_t = $0.50 \).
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

____ 1. The markets where different currencies are bought and sold are known collectively as the:
   a. international market.
   b. foreign exchange market.
   c. money market.
   d. All of the above.
   e. b and c above.

____ 2. Which of the following are subject to foreign exchange risk?
   a. Importers who must make future payments in their own currency.
   b. International investors who expect to earn foreign earnings in the future.
   c. Exporters who give their foreign customers credit to be repaid in the exporter’s currency.
   d. All of the above.
   e. None of the above.

____ 3. The earliest foreign exchange markets were operated by:
   a. commercial banks over 500 years ago.
   b. by government officials during the Sung Dynasty of China 1,000 years ago.
   c. by merchants from Venice during the Renaissance.
   d. by money changers over 2,000 years ago.

____ 4. Fiat money:
   a. means expectations of future purchasing power of money determines the exchange rate.
   b. is currency redeemable into gold or silver by law.
   c. makes it much easier to determine the relative values of national currencies than was the case
      for gold and silver coins.
   d. is no longer in use anywhere in the world today.

____ 5. The foreign exchange rate:
   a. is always stated as the foreign currency price of the domestic money.
   b. is always stated as the domestic currency price of foreign money.
   c. can be stated as either the foreign currency price of the domestic money or as the domestic
      currency price of foreign money.
   d. is always given in terms of U.S. dollars.

____ 6. If you know the price of Canadian dollars in Japan is ¥50, then in Canada one yen costs:
   a. CAN$0.50.
   b. CAN$0.02.
   c. CAN$2.00.
   d. CAN$0.05.

____ 7. If the dollar is valued at four Swiss francs, what is the dollar price of Swiss francs?
   a. $4.00.
   b. $0.25.
   c. $0.04.
   d. $2.00.
8. If the U.S dollar is valued at five Chilean pesos, what is the U.S. dollar price of a peso?
   a. $5.00.
   b. $.20.
   c. $.05.
   d. $.50.

9. The forward exchange rate is the price of one currency in terms of another currency that is:
   a. expected to prevail at some time in the future.
   b. contractually agreed on today for an exchange that will be completed at a specific future date.
   c. known only by the seller of the currency but will be revealed to the buyer at some agreed-to later date.
   d. just the spot exchange rate seen from the other side of the border.

10. You do not know the rate at which Bolivian sucre is traded for Mexican pesos, but if you do
    know that sucre and pesos are traded for U.S. dollars at US$1.00 = BOL$100 and US$1.00 = MEX$25,
    then you know that sucre and pesos must trade at:
    a. 1 sucre = 4 pesos.
    b. 4 sucre = 1 peso.
    c. 1 sucre = 25 pesos.
    d. there is no way of knowing from the information given.

11. In Mexico, the exchange rate expressed as the Mexican peso price of a foreign currency is
described as an exchange rate given in:
    a. foreign terms.
    b. certain terms.
    c. domestic terms.
    d. international terms.

12. Arbitrage:
    a. is the simultaneous purchase and sale of goods or assets in two distinct markets with identical
       prices.
    b. provides the arbitrageur with profits from capturing the difference in prices for a certain
       commodity or asset across different market segments.
    c. tends to increase price differences across different market segments.
    d. has nothing to do with foreign exchange markets.

13. Geographic arbitrage implies that:
    a. a government need only manipulate supply and demand in the n−1 foreign exchange markets
       where its currency trades to keep its exchange rates fixed.
    b. the exchange rate between two currencies at any moment is identical in all world markets.
    c. if the exchange rate between any two currencies changes, the exchange rates between all other
       pairs of currencies will likely be affected as well.
    d. international traders and investors should check exchange rates in more than one location
       before changing money.

14. Triangular arbitrage implies that if US$1.00 = ¥125 (Japanese yen) and US$1.00 = SFr5.00
    (Swiss francs), then:
    a. SFr1.00 = ¥25.00.
    b. ¥1.00 = SFr25.00.
    c. SFr1.00 = ¥5.00.
    d. None of the above.
15. Among the forms of arbitrage that are characteristic of unrestricted foreign exchange markets are:
   a. triangular arbitrage.
   b. intertemporal arbitrage.
   c. geographic arbitrage.
   d. All of the above.
   e. None of the above.

16. In general, triangular arbitrage ensures us that in the case of n different currencies, there are:
   a. n independently determined exchange rates.
   b. \( \frac{n(n - 1)}{2} \) independently determined exchange rates.
   c. \( n - 1 \) independently determined exchange rates.
   d. just two different exchange rates, \( e \) and its reciprocal \( 1/e \).

17. If there are 10 countries in the world, each with its own currency, then there are:
   a. 45 different foreign exchange markets.
   b. 10 different foreign exchange markets.
   c. 100 different foreign exchange markets.
   d. 9 different foreign exchange markets.

18. The forward foreign exchange markets:
   a. are operated by the same dealers who operate the spot markets.
   b. permit traders to engage in intertemporal arbitrage.
   c. are useful for hedging against foreign exchange risk.
   d. All of the above.
   e. None of the above.

19. If we denote the forward exchange rate as \( f_{t+1} \), the expected future exchange rate as \( E_{t+1} \), the spot exchange rate as \( e_t \), \( r \) as the domestic rate of return on assets, and \( r^* \) as the foreign rate of return on assets, then the uncovered interest parity condition can be represented by:
   a. \( e_t = \frac{1 + r^*}{1 + r}(E_{t+1}) \).
   b. \( e_t = \frac{(1 + r^*)(1 + r)}{(1 + r)}(f_{t+1}) \).
   c. either \( e_t = \frac{(1 + r^*)(1 + r)}{(1 + r)}(f_{t+1}) \) or \( e_t = \frac{(1 + r^*)(1 + r)}{(1 + r)}(E_{t+1}) \).
   d. neither \( e_t = \frac{(1 + r^*)(1 + r)}{(1 + r)}(f_{t+1}) \) or \( e_t = \frac{(1 + r^*)(1 + r)}{(1 + r)}(E_{t+1}) \).

20. In the absence of restrictions on international asset exchanges and if people are not risk averse, then the difference between the spot and forward exchange rates for the currencies of countries A and B depends on:
   a. the level of international trade between countries A and B.
   b. the difference between the rates of return on assets in countries A and B.
   c. the volume of international investment.
   d. the difference between last year’s exchange rate and the spot rate.

21. If expectations are rationally set and international investment is not restricted, future changes in the exchange rate:
   a. are predictable using the interest parity condition.
   b. follow a predictable path.
   c. are unpredictable because rational people use their full information set to determine their expectations of future exchange rates.
   d. are predictable provided government policy makers do not interfere with the foreign exchange market.
22. The effective exchange rate:
   a. is the reciprocal of the normal exchange rate.
   b. is no longer published by any country because it is thought to be too confusing.
   c. is a weighted average of a set of exchange rates and often provides a better indication of the overall value of a currency in the global economy.
   d. is a theoretical concept that is of little practical use.

23. The foreign exchange rate:
   a. is always stated as the foreign currency price of the domestic money.
   b. is always stated as the domestic currency price of foreign money.
   c. can be stated as either the foreign currency price of the domestic money or as the domestic currency price of foreign money.
   d. is always given in terms of U.S. dollars.
International Financial Markets

Chapter Summary

This chapter opens with a discussion of the international investment position of a country, which measures how many foreign assets are owned by private citizens, firms, and government agencies of a country versus how many of its private and public assets are owned by foreign citizens, foreign firms, and foreign governments. This material is intended to illustrate the importance of international finance.

The international financial system has changed with the opening and expansion of stock markets, bond markets, overnight money markets, and over-the-counter markets for derivatives such as collateralized debt obligations (CDOs) and credit default swaps (CDSs). Traditional banks have responded by consolidating and expanding into investment banking, brokerage, and other financial services. The growth of international banking has included the growth of Eurocurrency markets, which consist of a growing network of transnational banking firms that accept deposits of many currencies in banks they operate in countries other than those where each currency was issued.

The term financial innovation generally refers to new financial institutions and instruments, but the consolidation of financial services into ever-larger conglomerates and the spread of these transnational banking and financial firms across borders also constitute a form of financial innovation, one that may be more significant than any other recent innovation. It is still very much an open question whether financial innovation has improved the performance of the world’s economies; there is no convincing evidence that banks have in recent years improved their service to humanity, especially since the innovation of securitization destabilized the global financial system and in 2009 caused world economic output to fall for the first time since World War II. The 2008 financial crisis shows how the failure of a financial market caused most other financial intermediation to cease, which, in turn, caused real economic activity and employment to fall. This is not the first time such a sequence of events has occurred.

This chapter also discusses why economists did not foresee the 2007-2008 Great Recession. They relied on their neoclassical economic models, which were based on assumptions that effectively ruled out financial market failures and biased asset prices. As Keynes argued seventy-five years ago, finance operates under uncertainty, not predictable risk. Keynes further argued that under uncertainty people base their expectations on conventions built up during recent experience, not long-run historical evidence.

The writing of Hyman Minsky is featured in this chapter. Minsky built on Keynes’s thinking to develop his financial instability hypothesis, which says that in the absence of strong regulation to keep expectations based on short-term experience from pushing asset prices away from their long-term trends, every extended period of exceptional growth will ultimately cause a financial collapse and a long economic recession. Minsky argued that when unpredictable events
differ from conventions developed during tranquil times or an above-average growth period, as they eventually do, finance shifts from hedge finance to speculative and Ponzi finance, and defaults and failures drive the economy into financial instability. Had economists not been influenced by neoclassical models whose parameters reflected recent economic trends times, they would have seen that in the early 2000s U.S. housing prices were rising to well above sustainable levels in a bubble sustained by upwardly revised expectations and were likely to fall eventually.

I. Match the Terms and Definitions

In the space after each of 28 the terms, note the matching definition from among A through B:


Definitions:

A. A 1933 law that banned commercial banks from engaging in investment banking.
B. Credit default swaps purchased by buyers who did not actually own the covered assets.
C. Investment by businesses and firms in factories, warehouses, sales offices, stores, and other permanent facilities located abroad in which the investing firm has a controlling interest.
D. The term used by Hyman Minsky to describe the case where revenues and cash inflows are more than sufficient to meet debt service, including principal payments when they are scheduled to come due.
E. Purchases and sales of stocks and bonds, in amounts that do not imply any type of management control.
F. Currency deposited in banks located in countries other than those where the currency was issued.
G. The situation faced by a central bank during a severe economic recession, when increasing the money supply has no effect on the interest rate and, therefore, does not stimulate aggregate demand.
H. Commodities and assets that are available to be purchased or sold only when certain pre-specified conditions are met.
I. A term used by Hyman P. Minsky to describe the case in which, explicitly or implicitly, earnings and other revenues cover interest payments but not the full repayment of principle when it comes due.
J. Banks located in one country and provide services to customers located in other countries.
K. The net value of (1) foreign assets that are owned by a country’s own citizens, firms, and government agencies and (2) domestic assets that are owned by foreign citizens, firms, and governments.
L. A “portion” of a collateralized debt obligation consisting of a bundle that is given a certain priority status in the payment of returns.
M. Receipts for foreign equity shares deposited with a reputable financial institution that are then traded on U.S. stock markets, thus enabling U.S. savers to acquire foreign assets without having to buy them on foreign exchanges.
N. The precursor to the more general term Eurocurrency, from the 1950s and 1960s when U.S. dollars were almost exclusively used for non-national currency accounts in the major money center banks.
O. A mortgage given to a customer with a below-average probability of servicing the debt according to the contractual terms.
P. These are derivatives consisting of claims to shares of large bundles of financial instruments.
Q. The largely unregulated worldwide market for lending and borrowing Eurocurrencies.
R. Financial instruments such as collateralized debt obligations (CDOs), which are divided into tranches in order to make the underlying set of assets more attractive to the specific needs of potential buyers.
S. The expectations that people are assumed to hold when they use (1) all available information plus (2) their best understanding of how markets and the economy function, and they also use (3) logical reasoning to reach their conclusions about the future.
T. National laws mandating that banks do not reveal the names of their depositors to anyone, including the government.
U. A term often used in the financial industry to refer to regulatory barriers between different segments of the industry.
V. A hypothesis that is assumed by many neoclassical models, namely that that externalities will not necessarily cause markets to fail because people and firms are motivated to find ways to negotiate some mutually beneficial sharing of the external costs or benefits.
W. A term used by Hyman P. Minsky to describe any project that requires new borrowing to service its interest and principal.

X. The bundling of a large number of assets into a single security, in which shares can then be sold.

Y. The hiding of the trail of financial transactions in order to prevent illegal economic activities from being traced and discovered.

Z. A legal entity specifically designed to house a new financial asset or set of assets so that they do not appear on the books of the financial firm that created or structured the asset(s).

AA. Options that pay out the full value of an asset in the case of default.

BB. Neoclassical analysis followed in the footsteps of Léon Walras by seeking a consistent model that systematically links the economy’s individual consumers, workers, producers, bankers, and investors to the economy’s aggregate performance.

II. Questions and Problems

10. Is the increasingly negative net international investment position of the U.S., and accumulation of foreign debt, sustainable? When will the U.S. economy have to undergo a fundamental shift toward trade surpluses in order to reduce its collective foreign debt?

This is an open-ended question, but you should at least recognize that current account deficits today imply payments by the United States to foreigners in the future in the form of interest, dividends, profits, rents, etc., so sustainability of the deficit implies that the future net payments must be sustainable. Your essay should, therefore, address whether United States will be able to generate enough payment inflows to cover all of the payment outflows including the returns on the assets sold to foreigners to cover the present current account deficits.

2. How accurate is the estimated international investment position of any country?


III. Multiple-Choice Questions

*For each question, select the statement that best answers the question or completes the sentence:*

1. Which of the following accurately describes the net international investment position?
   a. It is a measure of the country’s net stock of overseas assets, measured at a certain moment in time.
   b. It is a compilation of flows of payments over a period of time, usually a year.
   c. It is a measure of the stock of domestically-owned assets located abroad.
   d. All of the above describe the international investment position.
2. American depository receipts (ADRs):
   a. account for nearly half of all U.S. investment in foreign stocks.
   b. are used exclusively by foreign investors to buy U.S. stocks.
   c. were a popular means for buying foreign stocks before the development of foreign stock markets in the 1980s.
   d. were used by Argentine citizens to sell dollars and acquire pesos when the foreign exchange markets closed in late 2001.

3. American depository receipts (ADRs) are:
   a. stocks issued directly by foreign corporations but traded on U.S. stock exchanges.
   b. bonds issued by the U.S. government on behalf of foreign governments.
   c. receipts for actual foreign stocks deposited in U.S. banks that are traded on a U.S. stock exchange such as the New York Stock Exchange or the NASDAQ.
   d. illegal but still often used by Americans seeking to hide money overseas.

4. International portfolio investment consists of purchases and sales of:
   a. stocks and bonds in amounts that do not imply any degree of management control of the businesses issuing the securities.
   b. bank deposits in more than one country.
   c. controlling stock in corporations operating in more than one country.
   d. All of the above.
   e. None of the above.

5. International banking:
   a. accounts for nearly all international investment today.
   b. has grown to be the largest category of international investment.
   c. was the largest category of international investment three decades ago but now ranks behind portfolio and direct investment.
   d. developed only recently, taking the place of direct investment as the largest category of international investment.

6. Of the following, which bank deposit that would be termed a eurocurrency deposit?
   b. A euro account in Frankfurt.
   c. A euro account in Tokyo.
   d. A pound account in Liverpool.

7. The eurocurrency market first appeared in:
   a. London in the late 1800s.
   b. New York after World War II.
   c. London during the 1950s.
   d. Paris during the 1980s.

8. The eurocurrency markets developed because:
   a. governments provided incentives for banks to do foreign banking business.
   b. bank customers sought to evade government restrictions on international investment.
   c. some countries holding dollars preferred to hold them outside the U.S.
   d. All of the above.
   e. None of the above.
9. The collateralized debt obligations (CDOs) that were popular in the early 2000s were often split into tranches:
   a. each with different interest rates and a different priority status.
   b. that were individually rated by one of the principal ratings firms.
   c. designed to just barely warrant a specific rating under the conditions at the time the CDO was issued.
   d. All of the above.
   e. None of the above.

10. Which of the following contributed to the 2008 global financial crisis?
    b. Fraudulent banking practices.
    c. Excessive caution in holding reserves for the risk underlying insurance contracts.
    d. All of the above.
    e. None of the above.

11. The 1933 Glass-Steagall Act:
    a. Limited savings banks to taking deposits and making mortgages.
    b. Limited commercial banks to making business and consumer loans.
    c. prohibited investment banks from soliciting deposits from the general public.
    d. All of the above.
    e. None of the above.

12. John Maynard Keynes and Hyman Minsky offer models and hypotheses that show
    a. an unregulated financial system is inherently unstable.
    b. unrestrained capitalism was superior to communism or socialism.
    c. the U.S. financial system can generate endless rises in asset values and corporate profits.
    d. All of the above.
    e. None of the above.

13. According to Hyman Minsky, when a project’s cash flow from operations are not sufficient to meet even interest or dividend payments, much less cut into the outstanding debt, the project is categorized as:
    a. hedge financing.
    b. speculative financing.
    c. Ponzi financing.
    d. roll-over financing.

14. According to Hyman Minsky, when a project’s cash flow from operations are sufficient to meet interest and dividend payments, as well as to accumulate funds to fully repay all debt when it comes due, is categorized as:
    a. hedge financing.
    b. speculative financing.
    c. Ponzi financing.
    d. roll-over financing.
Chapter 14

Exchange Rate Crises

Chapter Summary:

International financial flows are subject to sudden reversals that sharply shift the supply and demand curves for currencies and thus change exchange rates. Exchange rate depreciations proportionately increase the burden of debt denominated in foreign currencies like the dollar or euro, and such exchange rate crises can trigger financial crises, which, in turn, tend to drive economies into deep and lengthy recession.

In general, foreign exchange market intervention is not a reliable tool for preventing long-run movements in exchange rates. One weakness of intervention is that, in the case of a fundamental disequilibrium in the foreign exchange market, central banks are unable to supply the necessary amounts of foreign exchange for long periods of time. Conventional monetary policy may seem like a more viable long-run policy than using the limited reserves to support a currency, but monetary policy is not an unlimited tool either because it has effects on the economy that often run counter to other economic priorities.

The trilemma implies that policy makers cannot simultaneously maintain fixed exchange rates and an open capital market while pursuing a monetary policy oriented toward domestic goals; governments may choose only two of the above. The trilemma makes it clear how difficult it is to keep exchange rates fixed when policy makers are faced with domestic political pressures to deal with a variety of macroeconomic issues as well as pressure from business to keep the border open to international trade, investment, and financial flows.

The international monetary system suffered a huge shock in 1982, when some forty developing economies were forced to reschedule debt payments, renegotiate terms, or simply default on their foreign debt. This debt crisis followed a period of increasing international financial flows that seemed to have successfully offset the growing trade imbalances after the oil price hikes during the 1970s. Solving the 1982 debt crisis proved to be very difficult because not only was the size of the debt very large, but the conflicting interests and incentives led to an extended period of posturing and negotiation to settle the long list of questions involved. The 1982 debt crisis was eventually solved under the 
*Brady Plan*, which consisted of a combination of debt write-offs by the creditors, substantial policy changes to improve the likelihood of debt repayment by debtor governments, lending and oversight of policy changes by the IMF, and subsidies by developed-country governments in the form of loan guarantees.

After the Brady Plan, there were many more exchange rate crises during the 1990s and early 2000s, suggesting that the Washington consensus reforms did little to stabilize the international monetary system. Each of these subsequent crises began as reversals in financial flows triggered by a variety of changes in economic circumstances, each of which caused exchange rate collapses that then produced financial crises and, finally, deep recessions.
The examples in this chapter show that debt crises are, fundamentally, caused by international financial integration, the accumulation of private and public foreign debt, and sudden collapses of exchange rates that were intentionally held fixed or were managed to remain at unsustainable levels. Policies to avoid debt crises, therefore, include setting more realistic exchange rates, avoiding foreign debt, and limiting financial flows between countries.

I. Match the Terms and Definitions

In the space after each of 21 the terms, note the matching definition from among A through U:

1. 1982 debt crisis
2. absorption
3. Asian tigers
4. Brady bonds
5. Brady Plan
6. capital flight
7. crony capitalism
8. debt burden
9. debt repudiation
10. debt service
11. exchange rate crisis
12. financial flow reversal
13. foreign exchange market intervention
14. open market operations
15. primary budget surplus
16. recycled petrodollars
17. rollovers
18. three-person game
19. trade credits
20. trilemma
21. Washington consensus

Definitions:

A. The central bank purchases and sales of assets such as government bonds in open asset markets with the express purpose of changing the supply of money in circulation.
B. The case where a country’s financial account suddenly shifts from positive to negative, or vice-versa.
C. Discriminatory lending by banks that favors certain business firms or groups over other potential borrowers.
D. New debt instruments issued by developing-country governments in the late 1980s and early 1990s that effectively constituted a rescheduling and partial write-off of earlier loan obligations.
E. The petrodollars deposite in the eurocurrency market during the 1970s that were, in turn, lent to oil-importing countries, who thus gained access to the dollars needed to pay for the more expensive oil without reducing economic growth.
F. The flow of interest payments and principal repayments related to debt.
G. A country’s total domestic expenditures on final goods and services, which is equal to total output minus net exports.
H. The set of economic policies pushed by the IMF and World Bank after 1982, which included free trade, a realistic foreign exchange rate, tight monetary policies to reduce inflation, balanced government budgets, privatization of government assets, reduced labor market regulation, and diminished financial regulation.
I. The new financing required in the cases that Hyman P. Minsky calls speculative or Ponzi financing, in which cash inflows do not fully cover debt servicing and principle repayment.
J. A game in which three players compete, which makes it substantially more complex than a two-person game because coalitions are possible.
K. The group of East Asian countries consisting of Hong Kong, South Korea, Singapore, and Taiwan that grew very rapidly during the second half of the twentieth century.
L. Lending provide to cover the costs of trade, most often to cover the short-term period that goods are in transit or to permit exporters to offer foreign buyers competitive terms of payment.
M. Policy makers cannot simultaneously fix the exchange rate, set economic policies with only domestic goals in mind, and permit the free flow of goods and assets across national borders; they can only pursue two of those options simultaneously.
N. The intentional default based on fundamental reasons such as fairness or the national welfare rather than the ability to pay.
O. The agreements after the 1982 debt crisis that consisted of debt write-offs by creditors, debtor country policy changes, IMF oversight according to Washington consensus, and subsidies by developed-country governments in the form of loan guarantees for the private creditor banks.
P. Government receipts minus all expenditures except for interest payments on accumulated debt.
Q. The debt default in 1982 by some forty developing economies, which triggered a financial crises that effectively marked the end of an unprecedented period of economic growth in most developing countries in Africa, Asia, and Latin America that had stretched over the 1950s, 1960s, and 1970s.
R. The buying and selling of foreign exchange by a government agency, usually the central bank, to keep the intersection of supply and demand from deviating from the targeted exchange rate.
S. A sudden fall in the international price of a country’s currency that causes widespread bankruptcies and a deep recession as that country’s debtors are forced to default on their foreign currency debt.
T. The movement of a large amount of wealth out of a country, usually against the laws or wishes of the country’s government, because wealth holders fear confiscation, inflation, or just poor economic conditions.
U. Some measure of a country’s debt in terms of national income or export earnings.
II. Questions and Problems

1. Use the diagram below to explain how the European central bank could keep the euro at $0.80 when the supply and demand curves for euros intersect at the dollar/euro exchange rate of $1.00 per euro.

![Diagram of Foreign Exchange Market Intervention]

2. Why is exchange rate intervention not always a good long-run tool for keeping the exchange rate fixed?

3. Explain how the interest parity suggests that in an open economy, the spot exchange rate is a function of the expected future exchange rate (Hint: derive the interest parity condition and shift terms so that the spot rate is on one side of the equation and all other terms are on the other side). Then use the equation to explain what it would take to keep the exchange rate fixed.

4. Explain the similarities between the 1994 Mexican crisis, 1997 Asian crisis, and the 2001 Argentine crisis. (Hint: use the trilemma to explain the incompatibilities of policy, free international financial flows, and fixed exchange rates)
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

1. If the interest parity condition holds and people rationally use all available information to set their expectations about the future, then:
   a. the spot exchange rate and the expected future exchange rate are unrelated.
   b. the spot exchange rate will no longer change every time news arrives.
   c. the spot exchange rate will change whenever “news” about future aggregate demand and supply arrives.
   d. it becomes much easier to accurately predict future changes in the exchange rate.

2. When international investment is not restricted, a commitment to fixing the exchange rate requires policy makers to:
   a. choose policies that address specific domestic economic goals over policies that focus on exchange rate expectations.
   b. keep rates of return on assets, aggregate demand, and economic growth compatible with other countries’ returns on assets, aggregate demand, and economic growth.
   c. always adjust economic policies to satisfy domestic political interests in order to prevent political upheavals that could upset expectations.
   d. always permit people to freely move their wealth into and out of the country.

3. The trilemma implies that:
   a. a nation’s policy makers can avoid difficult choices.
   b. no country can permanently fix its exchange rate.
   c. a government is able to set economic policies with only domestic political interests in mind while also letting wealth flow freely across national borders, provided it keeps its exchange rate fixed.
   d. fixed exchange rates are difficult to maintain in an open economy when domestic political interests are politically powerful and world economic conditions are volatile.

4. Brazil was able to avoid a financial crisis in the early 2000s because:
   a. it abolished its central bank in favor of a currency board.
   b. it generated a positive primary budget surplus.
   c. it repudiated its foreign debts.
   d. its economy fell into a deep recession, thus improving its trade balance.

5. In the 1990s:
   a. there were financial crises in Mexico, Thailand, and Indonesia, among other countries.
   b. there were financial crises in India, Pakistan, and Bangladesh.
   c. the international capital markets functioned smoothly everywhere.
   d. only the United States suffered a financial crisis in 1991.

6. The Asian crisis in the 1990s is often blamed on:
   a. anti-trade policies of many East Asian countries.
   b. policies that inhibited economic growth.
   c. fixed exchange rates and a fragile banking system with many non-performing investments on bank balance sheets.
   d. excessively large government budget deficits.
7. Contributing to Asia’s 1997 financial crash was:
   a. heavy borrowing overseas in dollars by banks and firms whose earnings were in local currency.
   b. the weak balance sheets of many Asian banks whose customers were often not solvent either.
   c. the fact that in Thailand, Malaysia, and Indonesia foreign loans were often used to finance real estate speculation.
   d. All of the above.
   e. None of the above.

8. If a country “absorbs” just 95 percent of its national product, then it:
   a. must have a trade surplus.
   b. must be a net borrower from the rest of the world.
   c. must have a trade deficit.
   d. probably has a financial account surplus.

9. How were petrodollars “recycled”? 
   a. Oil exporting countries deposited dollars in world banks who then loaned to oil importing countries.
   b. Oil exporting countries invested heavily in their own countries.
   c. Oil exporting countries invested heavily in oil importing countries.
   d. Petrodollars were exchanged for oil importing countries’ currencies.

10. The “three persons” in the three-person game of debt resolution after the 1982 debt crisis were:
    a. developing country governments, private banks, and developed country governments.
    b. the International Monetary Fund, the World Bank, and the Washington Consensus.
    c. the private banks in developed countries, the IMF, and the United States.
    d. the World Trade Organization, the World Bank, and the International Monetary Fund.

11. After the 1982 default on their foreign debts by over 40 developing countries:
    a. the problem debtors were eventually able to use the secondary market to refinance their loans.
    b. the creditors refused to accept writing off any debt, and ultimately debtors were forced to repay their entire debt.
    c. the debtor nations suffered severe economic recessions that lasted for much of the 1980s and beyond.
    d. All of the above.
    e. None of the above.

12. How can a country generate income with which to service its debt?
    a. increase tax revenue.
    b. borrow even more
    c. sell public assets
    d. All of the above.
    e. None of the above.

13. When we state a country’s domestic expenditures as a percentage of the net income of its citizens, firms, and governments, we call this term:
    a. gross expenditures.
    b. absorption.
    c. accumulation.
    d. disbursement.
14. Crony capitalism is:
   a. a form of mercantilism.
   b. never a factor in financial crises.
   c. common to dictatorships, never to democracies.
   d. effectively an efficient allocation of an economy’s savings to investment and innovative projects.

15. The Mexican and Asian debt crises were different in which of the following ways?
   a. Asian countries had much more foreign debt than Mexico.
   b. Mexico was inward oriented but Asian countries had greatly expanded foreign trade.
   c. Mexico’s export income was greater, relative to its GDP, than was the case for Asian countries.
   d. Mexico’s economy never experienced an economic recession, whereas Asian economies remained mired in recession for a decade.

16. Which of the following is among the reasons for the Mexican peso crisis of 1994?
   a. Trade restrictions required by the North American Free Trade Agreement.
   b. Rising government budget deficit caused by pre-election spending.
   c. A freely floating exchange rate.
   d. Increasing use of hedging to cover exchange rate risk.

17. Which of the following occurred after the devaluation of the Mexican peso in 1994?
   a. The depreciation of the peso that spurred Mexican exports and stimulated economic growth.
   b. Most Mexican banks were bankrupted by the exchange rate collapse.
   c. Mexico’s real per capita GDP only fell by one percent in 1995.
   d. A massive bank bailout quickly led banks to resume lending.

18. Which of the following statements about exchange rate crises is true?
   a. Exchange rate crises seldom lead to financial crises and economic downturns, unlike government budget crises.
   b. Countries that default usually can begin borrowing again after previous debts are in some way settled.
   c. Exchange rate crises are exclusively a twentieth century phenomenon.
   d. Exchange rate crises are less likely in today’s global economy, in which economies are more closely linked and more open to capital flows.

IV. Extra Materials

Government Debt Mechanics: When Is Debt Sustainable?

A country’s public sector debt is sustainable if the country can meet service its debt without major policy shifts or serious economic costs. Sustainability of its debt load depends on:

1. the country’s capacity to generate revenue,
2. the terms of the debt service,
3. and the amount of debt accumulated.
A country’s ability to generate revenue depends, in turn, on the economy’s rate of growths. Fundamental to the calculations of the sustainability of debt is the debt-to-GDP ratio. The debt-to-GDP ratio clearly cannot rise indefinitely.

The change in a country’s real total government debt at time \( t \), \( \Delta D_t \), is, the difference between real total government debt at time \( t \), \( D_t \), and at time \( t-1 \), \( D_{t-1} \). This difference depends on the real interest rate at time \( t \), \( r_t \), and the real government’s primary budget surplus (government receipts minus non-interest expenditures) at time \( t \), which we denote as \( S_t \). In short:

\[
\Delta D_t = D_t - D_{t-1} = r_t \cdot D_{t-1} - S_t
\]

Dividing equation (11-1) by GDP\(_t\) gives us

\[
\frac{D_t}{GDP_t} = \frac{D_{t-1}}{GDP_t} + (r_t \cdot D_{t-1})/GDP_t - S_t/GDP_t
\]

Since GDP\(_t\) = \((1+g_t)GDP_{t-1}\), where \( g_t \) is the annual growth rate of real GDP in period \( t \), we can rewrite equation (11-2) as

\[
\frac{D_t}{GDP_t} = [(1 + r_t)D_{t-1}] / [(1+g_t)GDP_{t-1}] - S_t/GDP_t
\]

By shuffling terms, this equation can be more clearly written as:

\[
\frac{D_t}{GDP_t} = [(1 + r_t) / (1 + g_t)] (D_{t-1} / GDP_{t-1}) - S_t/GDP_t
\]

Then, if we write the ratios of each of the variables to GDP as their lower case equivalents, we end up with

\[
d_t = [(1 + r_t) / (1 + g_t)] d_{t-1} - s_t
\]

This is the relationship you can use to estimate how much, for a given primary budget surplus and initial debt burden, the debt-to-GDP ratio \( d_t \) will continue to rise or fall over time. If \( d_t > d_{t-1} \), the debt burden grows, for example, and the situation is not sustainable.
Chapter 15

Early Monetary History

Chapter summary:

This chapter begins the history of the international monetary system, covering ancient times through the demise of the gold standard. The narrative is intended to give students an appreciation for how complex systems evolve and how human institutions can shape that evolutionary process.

In ancient times, the international monetary system consisted of the minting of coins by various governments and an informal network of money changers. The Roman Empire, which constituted a large free trade area with a single currency that was used throughout a large region, was an early example of an economic union. By the end of the 1870s, most governments had adopted similar laws that made their currencies freely convertible into gold at specific gold parities, and the world in effect had the monetary system that came to be called the international gold standard.

The gold standard was an order built on the faith that money could always be converted to pure gold at any time without restrictions. The gold standard’s rules of the game included the requirement that (1) each national currency be fixed to gold according to an official gold parity, (2) there be no restrictions on converting gold into domestic money and domestic money into gold at the parity price, (3) there be no restrictions on foreign exchange transactions, and (4) gold imports and exports remain completely unrestricted.

The chapter highlights the 1896 election in the United States, in which William Jennings Bryan openly campaigned on abandoning the gold standard, shows that there was popular discontent with the rigid monetary system that seemed to favor creditors over debtors. The example also gives students the opportunity to think about how the monetary system might have changed if the election results had been different.

The chapter concludes with the inter-war period, when a return to the classic gold standard became impossible but no other options were readily acceptable or available. The 1926 gold standard was really a gold-exchange standard because many countries held currencies rather than gold as reserves, which implied the global money supply was a large multiple of the actual gold supply. The onset of the Great Depression led most central banks to shrink their money supplies in misplaced efforts to maintain gold convertibility even though unemployment soared and economic growth turned sharply negative.

The economic historians Barry Eichengreen and Peter Temin (1997) contend that the fundamental cause of the Great Depression was the “ideology” of the gold standard, which led policy makers to continue following the rules of the game well after it should have become obvious that the consequences of rigid monetary policies were causing economic devastation. Once the link to gold was cut, however, some governments resorted to excessive devaluations in order to boost their exports as a stimulative macroeconomic measure, and “competitive devaluations” became a major international issue.
I. Match the Terms and Definitions

In the space after each of the 21 terms, note the matching definition from among A through U:

1. Bagehot’s rule  
2. bimetalism  
3. Coinage Act of 1816  
4. Dawes Plan  
5. exchange rate stabilization funds  
6. fiat money  
7. Fordney-McCumber Tariff  
8. gold parity  
9. gold standard  
10. gold-exchange standard  
11. hyperinflation  
12. international monetary order  
13. international monetary system  
14. investment houses  
15. Latin Monetary Union  
16. managed exchange rates  
17. purchasing power  
18. reparations payments  
19. rules of the game  
20. Treaty of Versailles  
21. Tripartite Monetary Agreement  

Definitions:

A. The rules, laws, and regulations that govern international transactions and the foreign exchange markets.
B. The descriptive term often used for the order that guides the international monetary system.
C. Established in 1926, this was a type of fractional reserve monetary system that increased the world money supply relative to the gold base by letting countries back their currencies with other currencies backed by gold.
D. The simultaneous circulation of coins made of silver and gold and paper money convertible to both silver and gold.
E. The international monetary order that prevailed over the period 1880-1913, under which countries made their currencies fully convertible to gold at fixed parities so that all exchange rates were effectively fixed.
F. The actual international monetary arrangements and procedures carried out in response to the underlying international monetary order.
G. The rate, in terms of ounces of gold per unit of currency, at which a currency could be converted to gold under the 1880-1913 gold standard.
H. Currency that is designated as legal tender by law, or by fiat, but is not redeemable into other stores of value with intrinsic value, such as gold or silver.
I. The agreement signed by the United States, Great Britain, and France in 1936, which established a new financial order consisting of fixed exchange rates maintained through continual central bank intervention. J. The 1922 U.S. law that nearly doubled U.S. import tariffs. K. An agency or office established by many governments during the Great Depression to use accumulated foreign exchange reserves to intervene in the foreign exchange market. L. An exchange rate regime characterized by widespread government interference with exchange rates, from exchange market intervention to direct restrictions on international trade and financial flows. M. Transfer payments as compensation for damage caused. Specifically, Germany was required to pay reparations payments after World War I. N. The 1924-1929 U.S. plan to provide loans to the German Weimar Republic in order to enable it to meet its World War I reparations payments as demanded in the Versailles Treaty. O. A monetary union among France, Belgium, and Switzerland during the 1870s, in which each of the four countries was authorized to issue identical silver and gold coins that were legal means of payment throughout the region. P. The agreement that formally ended World War I in 1919, which among other things determined that Germany and its allies had to compensate the Allied countries for their war losses. Q. The real amount of goods and services that can be acquired for something. R. A name given to London’s investment banks during the eighteenth and nineteenth centuries. S. Very high inflation that is usually characterized by a general unwillingness to hold a currency as a way to store wealth. T. The central bank rule that stated that if the central bank must serve as a lender of last resort in the case of short-term credit crises in the domestic banking sector, it should always charge interest rates well above those charged in the markets in order to keep such lending to a minimum. U. The law passed by the British Parliament establishing a permanent parity between gold and the British pound.

II. Questions and Problems

1. Describe the order of the gold standard and explain why each of the “rules of the game” were important for keeping the exchange rate fixed and payments flowing between countries.

2. Explain how the “gold points” were established in the foreign exchange markets under the gold standard.
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

1. History reveals that over the past 100 years:
   a. fixed exchange rates were the norm, and other arrangements lasted for only very brief periods of time.
   b. there were both orders that mandated fixed exchange rates and orders that permitted exchange rates to float.
   c. exchange rates were almost always permitted to float because fixing exchange rates was difficult.
   d. governments continually tried, but failed, to let exchange rates float.

2. The performance of the international financial system under a particular order should be judged according to:
   a. how well the economies were able to maintain full employment in the short run.
   b. how fast they grew and raised people’s standards of living in the long run.
   c. whether the system enhances or diminishes a government’s ability to address what it sees as its country’s economic, social, political, and institutional problems.
   d. All of the above.
   e. None of the above.

3. Britain chose to link its currency, the pound, to gold rather than silver in the early 1800s because:
   a. its mint had mostly gold and little silver.
   b. gold was worth more than silver.
   c. there was more gold in the world than there was silver.
   d. Isaac Newton decided that the mint should only make gold coins.

4. If country A offers to convert its dollars at a rate of two dollars per ounce of gold and country B stands ready to buy or sell lira at 12 lira per ounce of gold, then the exchange rate between A and B’s currencies must be:
   a. 1 dollar = 12 lira.
   b. 12 dollars = 1 lira.
   c. 12 dollars = 2 lira.
   d. 6 lira = 1 dollar.

5. The gold standard period was characterized by:
   a. fixed exchange rates.
   b. large movements of capital from Europe to then-developing countries.
   c. growing trade and investment flows between countries.
   d. All of the above.
   e. None of the above.

6. The gold points were:
   a. the locations where currency was traded for gold during the gold standard period.
   b. the upper and lower bounds within which the exchange could fluctuate as determined by transport and transactions costs.
   c. the parity exchange rates determined by the gold parities of currencies as set by governments.
   d. the locations farthest from London where pounds could still be exchanged for gold.
7. In terms of the trilemma, the Gold Standard effectively implied the choice of:
   a. capital mobility and a fixed exchange rate over policy independence.
   b. capital mobility and policy independence over a fixed exchange rate.
   c. policy independence and a fixed exchange rate over capital mobility.
   d. a fixed exchange rate over capital mobility and policy independence.

8. The ideas in the Tripartite Accord of 1936 eventually served as the basis of the:
   a. gold standard.
   b. Bretton Woods system.
   c. European Monetary Union.
   d. post-World War I financial order.

9. Some governments intervene in the foreign exchange markets to intentionally suppress the values of their currencies. Among the reasons why a government keeps its currency undervalued is:
   a. the desire to help exporters.
   b. the desire to help domestic firms with foreign debt.
   c. the desire to make important imports less expensive.
   d. the desire to make it less expensive for domestic citizens to acquire foreign assets.
   e. none of the above.

10. One of the many “rules of the game” of the gold standard order was:
    a. all countries prohibit the movement of gold out of the country.
    b. citizens be forced to sell all gold to the central bank, which would then issue new currency to pay for the gold and keep the gold in the vault to “back” the money in circulation.
    c. silver be exchangeable for gold at a set ratio of the value of gold.
    d. countries maintain money supplies that reflect the quantities of gold held by the central bank.

11. The gold standard:
    a. had no effect on the Great Depression.
    b. has a major role in causing the Great Depression.
    c. helped most of the world’s economies recover from the Great Depression.
    d. would have prevented the Great Depression if it had still been in effect in 1929.

12. During the interwar years, the following happened:
    a. There was a widely-shared return to economic prosperity.
    b. Social and political upheavals resulted in some countries in Europe and Latin America adopting fascism or communism.
    c. The classic Gold Standard was firmly reinstituted.
    d. There period ended with very low levels of unemployment.

13. Which of the following is a result of the Treaty of Versailles?
    a. Middle Eastern borders were redrawn, with Turkey, Syria, Iraq, Palestine, and other countries created out of the former Ottoman Empire.
    b. The Gold Standard was immediately restored.
    c. The U.S. opened its market to European countries in order to facilitate post-war reconstruction.
    d. Germany and its allies were freed from having to pay war reparations in accordance with an International Court of Justice ruling.
14. Which of the following statements is true about the reparations that Germany had to pay?
   a. Germany was able to offset the transfers to the Allies with a trade surplus.
   b. German citizens and banks purchased government bonds to eliminate the budget deficits.
   c. The German government’s inability to tax its citizens or borrow from them forced it to print money, and by 1922 prices were rising by several thousand percent per month.
   d. Even though Germany had to pay reparations to the United States and Britain, these same countries immediately loaned money to Germany to make these very reparations payments.

15. Which of the following statements about the interwar financial system is false?
   a. The Gold Standard’s rules of the game caused the U.S. recession to quickly spread to the rest of the world.
   b. Many central banks held foreign currencies rather than gold to support their currencies under the Gold Standard.
   c. The fractional reserve monetary system or gold-reserve system was more stable in times of uncertainty than a full gold reserve system.
   d. Countries’ commitments to gold convertibility were not as credible as their pre-World War I commitments to full convertibility to gold.

16. During the interwar period:
   a. Britain was among the very last countries to abandon the Gold Standard.
   b. The gold-exchange standard was definitively abandoned in favor of a pure gold-based system, which central bankers felt would better enable them to maintain credibility.
   c. The Gold Standard continued to influence policy long after its welfare effects were evident.
   d. All of the above were true.

17. Which corner of the trilemma did policymakers in most countries pick during the second decade of the interwar period?
   a. policy independence and globalization over fixed exchange rates.
   b. globalization and fixed exchange rates over policy independence.
   c. fixed exchange rates over policy independence and globalization.
   d. None of the above, as the trilemma did not apply during this period.
Chapter 16

The International Monetary System: Bretton Woods to the End of the Twenty-first Century

Chapter summary:

This chapter picks up our history of the international monetary system at the 1944 Bretton Woods Monetary Conference. We focus on Harry Dexter White, the chief economist at the U.S. Department of the Treasury who oversaw the negotiations, and the British delegation head John Maynard Keynes, who enjoyed universal respect as an economist and as a statesman. Keynes consistently argued that the international monetary system should give national governments and their policy makers some flexibility to pursue economic policies aimed at maintaining full employment even if it makes exchange rate stability more difficult to achieve. White and Keynes thus agreed on adjustable pegs.

But White and Keynes disagreed on other matters. Keynes, as a representative of the United Kingdom, sought a financial system in which Britain and the United States would enjoy equal stature; White represented U.S. financial interests, and he pushed for a system that appeared multilateral but was designed to make the U.S. dollar the dominant currency in which international trade and financial assets were priced so it would become the world’s reserve currency. Few people remember that Keynes had argued in advance of the conference “that control of capital movements, both inward and outward, should be a permanent feature of the postwar system,” but he was overruled by White, who represented the U.S. financial industry that wanted open financial markets. Keynes also wanted to create a neutral reserve currency, which he called bancor, and an International Clearing Union to force both surplus and deficit nationals to balance trade, was never considered at Bretton Woods.

This chapter also emphasizes the important role of the Marshall Plan in restoring the international monetary system by giving countries the foreign reserves they needed to open their countries to trade and international payments.

Toward the end of the 1960s, after expansionary monetary policy in the United States raised U.S. inflation above the world average, speculative pressure against the dollar grew to where constant intervention in the foreign exchange markets was necessary to prevent dollar depreciation. France also began demanding gold in exchange for its growing holdings of U.S. dollars. Robert Triffin (1960) warned that there was a fundamental inconsistency in the Bretton Woods order: As the owner of the world’s reserve currency, the United States was obligated to run trade deficits so that the rest of the world could “earn” dollars for their reserves, but the more dollars were held by foreigners, the more likely that the dollar could come under speculative attack and the less foreigners would want to hold dollars as reserves.

When pegged exchange rates were altered in 1971 and then abandoned altogether in 1973 in favor of a mixed system, there was little consensus on what to do next: Should the world shift to floating, dirty floating, or otherwise manipulated exchange rates? Or should every country be
allowed to determine its own exchange rate policy? No cohesive system like Bretton Woods, under which all countries played by the same rules of the game, has emerged to date.

The latter part of the chapter focuses on the European countries that resisted the shift to floating exchange rates. The European Monetary System (EMS) was established in 1979 to keep exchange rates pegged within narrow bands, but this system failed in similar fashion to the Bretton Woods system when the monetary and fiscal policies of Germany, its largest member (accounting for over 25 percent of EU GDP), became incompatible with those of the rest of the EMS countries. So, at a meeting in Madrid in December 1995, the European Union reiterated its intent to create a single currency, to be called the euro and denoted by the symbol €.

In 2010, the euro was the currency of sixteen countries, but serious questions had arisen about the group’s viability, especially after the 2008 global financial crisis and global recession had increased government debt to unsustainable levels in Greece, Ireland, Portugal, and several other countries. The trilemma thus continues to haunt pegged exchange rate systems, from Bretton Woods to the EMS and now to the euro area of sixteen European countries; it is impossible to maintain stable exchange rates (or a single currency) if money is free to move across borders and domestic macroeconomic policies need to address a pressing domestic problem such as high unemployment.

I. Match the Terms and Definitions

In the space after each of the 33 terms, note the matching definition from among A through GG:

1. adjustable exchange rate peg ___________
2. bancor _______
3. Bretton Woods Agreement _______
5. customs union _______
6. devaluation _______
7. euro _______
8. European Atomic Energy Community _______
9. European Central Bank _______
10. European Coal and Steel Community _______
11. European Economic Community (EEC) _______
12. European Free Trade Area (EFTA) _______
13. European Monetary System (EMS) _______
14. European Monetary Union (EMU) _______
15. Fiscal free rider _______
16. fundamental disequilibrium _______
17. General Agreement on Trade and Tariffs (GATT) _______
18. International Bank for Reconstruction and Development _______
19. International Clearing Union _______
20. International Monetary Fund (IMF)  
21. Louvre Accord  
22. Maastricht Treaty  
23. Marshall Plan  
24. Monetary order  
25. Paris Peace Conference  
26. pegged exchange rate  
27. Plaza Accord  
28. Rambouillet Summit  
29. Second Amendment (to the Bretton Woods agreement)  
30. Single European Act  
31. snake in the tunnel  
32. Stability and Growth Pact  
33. World Bank  

**Definitions:**

A. The group of European countries that have established a single currency, the euro, to be administered by a single European Central Bank.
B. The agreement signed on July, 1944 that outlines the post-World War II international financial order.
C. An exchange rate that is not compatible with the monetary and fiscal policies necessary to maintain full employment and economic growth.
D. One of the institutions created at the Bretton Woods Conference intended to provide international liquidity and foreign reserves to enable central banks to keep exchange rates pegged.
E. The institution proposed during the Bretton Woods Conference in 1944 to serve as lender for projects to help economies recover from World War II and to foster economic growth.
F. A formal system of fixed exchange rates agreed to by a group of member countries of the European Community in 1979.
G. An intentional one-time lowering of the fixed value of a currency under a fixed exchange rate arrangement.
H. The agreement reached by the major economies after World War II (1947) that established the legal framework within which international trade policy was to be set and trade negotiations were to be conducted.
I. A huge assistance program undertaken by the United States in 1948 to provide the financial means for European countries to recover from World War II.
J. The name of the single currency managed by the European Central Bank and, in 2011, used by over half of the members of the European Union.
K. The meeting in 1975 where the *Bretton Woods* countries worked out a new international monetary order to create a “stable system” of exchange rates, but not a “system of stable exchange rates,” as some countries had urged.
L. The term used to describe the arrangement under the *Bretton Woods order* whereby central banks intervened in the foreign exchange market to keep currencies within a 1 percent band...
around an openly stated target exchange rate except in the case of a fundamental disequilibrium that clashed with the long-run aims of full employment and economic growth.


N. The tighter bands for exchange rates that were maintained between European currencies while the whole group of currencies was permitted to fluctuate more widely against the rest of the world’s currencies.

O. The 1986 agreement among the European Union countries, which set out a precise timetable for completing 275 steps necessary to establish a true common market by the start of 1993.

P. An agreement among major economies of the world to stop the depreciation of the U.S. dollar in 1987.

Q. The economic integration scheme that joined most European countries not in the European Economic Community, this remained essentially a free trade area in contrast to the much more integrated European Union.

R. One of the early agencies created by the six countries what would become the initial members of the European Economic Community (EEC), this organization was designed to reduce fears that former World War II adversaries would develop competing nuclear arsenals as a by-product of broader nuclear research.

S. The criteria adopted in 2002 for members of the euro area to continue to participate in the single currency scheme, which were often ignored and thus did not prevent the crisis in 2010-2011.

T. The treaty signed in 1991 by members of the European Union in which they agreed to establish a single currency to replace members’ individual currencies.

U. The tighter bands for exchange rates that were maintained between European currencies while the whole group of currencies was permitted to fluctuate more widely against the rest of the world’s currencies.

V. The formal name of the common market formed in 1958 by France, Germany, Italy, and the Benelux countries.

W. The international reserve currency suggested by John Maynard Keynes in the early 1940s which would be managed by an International Clearing Union (ICU).

X. The agreement signed in 1985 by France, Germany, Japan, and the United States, which specified the national policies each country would adopt in order to push the value of the U.S. dollar down and enable the United States to balance its trade.

Y. A trade bloc in which the member countries agree not only to allow the free trade of goods between their economies, but also to maintain a set of common tariffs and other trade restrictions against nonmember countries.

Z. The rules, laws, and regulations that govern international transactions and the foreign exchange markets, which together with the public and private institutions that carry out, regulate, and control international financial transactions, defines the international financial system.

AA. The potential for individual countries to borrow at favorable rates, and thus borrow too much, because their borrowing costs reflect those of the whole group rather than their own debt levels and repayment capacity.

BB. The conference of world leaders that met for six months in 1919 to establish international institutions such as the League of Nations and the Bank for International Settlements, as well as draw up the peace treaty to formalize the 1918 armistice that ended World War I.
CC. The exchange rate arrangement under the *Bretton Woods order*, which required central banks to intervene in the foreign exchange market to keep currencies within a narrow band around a target exchange rate, except in the case of a fundamental disequilibrium.

DD. The first step toward European economic integration, this agency sought in 1950 to reduce fears of Germany’s industrial recovery among other European countries.

EE. A joint price-support/regulatory policies adopted in the 1960s by the six members of the European Economic Community, which marked the beginning of the path beyond a simple common market toward a greater economic union in Europe.

FF. The 1978 agreement that officially legalized the floating exchange rates that had been a fact since 1973, which also authorized the IMF to monitor and critique countries’ economic policies on a continual basis.

GG. Proposed by John Maynard Keynes around the time of the *Bretton Woods Monetary Conference*, the ICU would enforce balanced trade by limiting deficit countries’ ability to run persistent trade deficits and by confiscating accumulated reserves of countries that ran persistent surpluses.

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**II. Questions and Problems**

1. Discuss the legacy of Bretton Woods. Was it successful? Was it a step forward for humanity?

2. Discuss how the trilemma was dealt with under each of the following international financial orders:
   - a. The gold standard
   - b. The Bretton Woods system
   - c. The EMS
   - d. The euro

3. Explain the criteria that the European Union set for countries entering the European Monetary Union and adopting the euro as their currency.

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**Multiple-Choice Questions**

*For each question, select the statement that best answers the question or completes the sentence:*

_____ 1. The Bretton Woods Conference took place in:
   - a. 1918.
   - b. 1930.
   - c. 1944.
   - d. 1956.
   - e. 1971.
2. The Bretton Woods agreement lasted:
   a. only a couple of decades before World War I.
   b. for most of the 20th century.
   c. for about 25 years after World War II.
   d. until 2001, when it was replaced by the European Monetary System.
   e. None of the above.

3. The Bretton Woods Conference led to the establishment of:
   a. the World Bank.
   b. the IMF.
   c. pegged exchange rates.
   d. All of the above.
   e. None of the above.

4. Under the Bretton Woods system, foreign exchange market intervention was carried out by:
   a. the International Monetary Fund.
   b. the World Bank.
   c. the Federal Reserve Bank of the United States.
   d. All of the above.
   e. None of the above.

5. The Bretton Woods system was followed by:
   a. the gold standard.
   b. an informal system of floating exchange rates for the major currencies.
   c. an agreement by all countries to intervene to keep currencies within 2.25 percent of parities.
   d. the International Monetary Fund (IMF) system.

6. In the late 1960s the higher U.S. rate of inflation, relative to that of Germany, caused the German central bank to have to:
   a. increase the supply of dollars.
   b. decrease the supply of marks.
   c. increase the supply of marks.
   d. None of the preceding answers is correct.

7. The Bretton Woods system was similar to the gold standard in that:
   a. exchange rates remained fixed.
   b. central banks intervened in the foreign exchange markets.
   c. exchange rates floated.
   d. all currencies were convertible to gold.

8. When exchange rates began to float in 1973, they were:
   a. much less volatile than expected.
   b. much more volatile than expected.
   c. perfectly stable, as if they had been fixed.
   d. about as volatile as expected.

9. The evidence suggests that the floating exchange rates in the 1970s and 1980s:
   a. substantially reduced the volume of international trade.
   b. seemed to actually accelerate the growth of international trade.
   c. had no adverse effect on the rate of growth of trade.
   d. noticeably slowed the rate of growth of international trade.
10. Floating exchange rates were prominent during the period of:
   b. 1880-1913.
   c. 1926-1930.

11. In 1979, a number of European countries formally established a system that fixed exchange rates between their currencies, which was called the:
   a. European Currency Union (ECU).
   b. European Monetary System (EMS).
   c. European Union (EU).
   d. European Commission (EC).

12. In terms of the trilemma, the floating exchange rates of the current international financial system effectively imply the choice of:
   a. capital mobility and a fixed exchange rate over policy independence.
   b. capital mobility and policy independence over a fixed exchange rate.
   c. policy independence and a fixed exchange rate over capital mobility.
   d. a fixed exchange rate over capital mobility and policy independence.

13. Among the criteria that countries had to satisfy before they could join the European Monetary Union in 2002 were:
   a. Total government debt had to be less than 10 percent of GDP.
   b. Inflation had to be less than 1.5 percent above the average inflation rate of the three European countries with the lowest inflation.
   c. Interest rates on openly-traded government bonds had to be less than 5 percentage points above the average rates for the three European countries with the lowest rates.
   d. The government budget deficit had to be less than 10 percent of GDP.

14. In 2002, 12 European countries:
   a. exchanged their national currencies for a single currency called the euro.
   b. inaugurated the European Monetary System (EMS).
   c. began using the U.S. dollar as their currency.
   d. abandoned the European Monetary System (EMS) for a system of floating exchange rates.

15. In 2001, the euro became the official currency of all of the European Union members at that time, except:
   a. Austria, Belgium, Finland,
   b. France, Germany, Greece,
   c. Ireland, Italy, Luxemburg,
   d. Denmark, Sweden, and Britain

16. Among the policies, organizations, or treaties that provided new institutions that eventually resulted in the European Union is:
   a. The European Coal and Steel Community (ECSC)
   b. The 1992 Maastricht Treaty
   c. The 1997 Amsterdam Treaty
   d. All of the above
   e. None of the above.
Another Bretton Woods Conference?

Chapter summary:

Many economists admit to being surprised by the severity of the Great Recession and the 2008 financial crisis. They claimed their models had not predicted such outcomes.

The latest economic and financial crises follow many other failures of the post–World War II international monetary order. The Bretton Woods order and the post–Bretton Woods mixture of orders were characterized by inflation, balance of payments crises, financial instability, and numerous exchange rate crises. Discussion of the current international monetary order’s weaknesses invariably returns to the question of whether a government should seek to peg or float its currency.

In most countries, the policy response to the 2008 financial crash and economic recession consisted of some combination of (a) fiscal expansion in the form of increased government spending and cuts in taxes, (b) monetary expansion, (c) direct infusions of cash into the private banking system in order reverse its sudden seizure in 2008, and (d) beginning discussions on how to change the regulations and government agencies responsible for overseeing the financial sector.

John Maynard Keynes (1936) explained that during a deep economic recession, the economy tends to become stuck in a liquidity trap, in which further monetary expansion will not lower interest rates any further because when the interest rate approaches zero percent no one will acquire long-term assets and banks will not lend for fear of suffering capital losses when the interest rate goes back up in the future. Keynes (1936) also pointed out, creating the conditions under which prospective investors are willing to borrow and invest again is, by itself, not enough to end a financial crisis. We must also take into account the other facet of the state of confidence, namely the confidence of the lending institutions in those who seek to borrow from them, sometimes described as the state of credit.

Yeva Nersisyan and Randall Wray (2010a, 2010b) found no cases of such recessions in countries that let their currencies float and issued debt only in their own currency. In short, financial crises occur only when exchange rates are fixed and foreign borrowing is denominated in foreign currencies.

Two ideas that have been recently revived are Keynes’s bancor and International Clearing Union. The ICU would regulate the exchange of currencies, act as a lender of last resort to national central banks, and force countries to keep their international accounts in balance. The bancor would be a neutral international reserve currency that takes the place of the U.S. dollar in the current international monetary system. Keynes correctly saw foreign debt as the fundamental reason why large exchange rate adjustments cause financial crises and economic recessions, and
he wanted the Bretton Woods order to include rules and institutions to prevent such financial crises. Not only would Keynes’s ICU have limited countries’ trade deficits by restricting foreign borrowing; he also proposed limiting trade surpluses by having the ICU tax a rising percentage of the accumulated bancors. In short, he wanted incentives for both deficit and surplus countries to balance their trade.

An alternative financial network that has been developing for quite a few years is Islamic, or sharia-compliant, finance. Sharia law has been interpreted by Islamic scholars as prohibiting the charging of predetermined, guaranteed interest rates; many Muslims believe that social justice requires borrowers and lenders to share rewards as well as losses. Islamic finance’s insistence on an equal sharing of risk prohibits the exchange of risk common to Western finance; this limits the benefits of financial transactions, but it adds to the stability of the financial system and prevents defaults that require oppressive repayment schemes.

Unlike the neoclassical mind-set that has prevented orthodox economists from anticipating the inevitable and frequent financial crises, heterodox economists such as Hyman Minsky not only accept the possibility of crises, but they also understand that specific measures are needed to prevent them.

I. Match the Terms and Definitions

In the space after each of the 19 terms, note the matching definition from among A through S:

1. anchor
2. bancor
3. Bank for International Settlements (BIS)
4. beggar-thy-neighbor
5. Bourdieu
6. convention
7. doxa
8. European Central Bank
9. field
10. habitus
11. International Clearing Union (ICU)
12. International Monetary Fund (IMF)
13. Islamic finance
14. liquidity trap
15. microfoundations
16. primary budget surplus
17. Stability and Growth Pact
18. Triffin paradox
19. Venture capital
**Definitions:**

A. One of the institutions created at the 1944 *Bretton Woods Monetary Conference*, it was intended to serve as the central banks’ central banker and provide international liquidity and foreign reserves to help national central banks keep exchange rates pegged.

B. A set of attitudes, manerisms, and dispositions that identifies a person as belonging to a specific subculture.

C. The impossibility of the United States to run repeated current account deficits order to supply the growing world economy with sufficient reserves while also maintaining confidence in the value of the dollar as the value of dollars in circulation began to exceed the supply of gold at the parity price of $35, as elaborated by the U.S. financial economist Robert Triffin.

D. Financing groups that lend money but also actively participate in the venture in order to deal with moral hazard and other informational problems.

E. Financial intermediaries, markets, and instruments that are consistent with sharia law.

F. In 1997 European Union members established the accession criteria, and in 2002 these criteria were formally extended into a set of ongoing rules of behavior.

G. The seemingly “normal” course of events as they have been observed recently that serve as an “anchor” that people use to predict future events.

H. Government receipts minus all expenditures except for interest payments on accumulated debt.

I. Located in Frankfurt, Germany, this is the central bank for the euro-area countries.

J. The situation faced by a central bank during a severe economic recession, when increasing the money supply has no effect on the interest rate and, therefore, does not stimulate aggregate demand.

K. Located in Basel, Switzerland, this institution was created after World War I to serve as an international clearing house for central banks, a type of central bank for central banks.

L. Proposed by John Maynard Keynes, an institution for enforcing balanced trade, which would prevent the accumulation of foreign debt by limiting deficit countries’ ability to run persistent trade deficits and by confiscating accumulated reserves of countries that ran persistent surpluses.

M. The social or intellectual arena within which people spend much of their working hours and within which they focus their efforts to advance their primary social interests.

N. In finance, the term for a reference price that guides expectations and beliefs in the case of uncertainty and the absence of complete knowledge.

O. A consistent set of models that systemically link the economy’s individual consumers, workers, producers, bankers, and investors to the economy’s aggregate performance.

P. The French sociologist who provided insight into culture with his concepts of field, habitus, and doxa.

Q. The international monetary unit proposed by John Maynard Keynes, which he intended to serve as the international reserve currency and unit of account.

R. An economic policy, such as an intentional devaluation of a currency, intended to boost the domestic economy at the expense of a foreign economy.

S. The fundamental, deep-seated, but mostly unproven set of beliefs that a person comes to rely on for survival within a particular field.
II. Questions and Problems

1. Explain what Keynes meant by the liquidity trap. Why does a liquidity trap make it difficult for policy makers to deal with a financial crisis?

2. Many politicians in high income countries have accused the governments of developing economies of intentionally keeping their currencies undervalued so that they can export more products and boost their countries’ employment levels. Why else might countries keep their currencies undervalued in order to generate trade surpluses?

3. Explain Keynes’ plan for the bancor and the International Clearing Union. Do you think these proposals are relevant today? Discuss.

4. Do we need another Bretton Woods Conference?

Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

___ 1. Which of the following contributed to the 2008 global financial crisis?
   a. Modern communications
   b. Profit-driven financial innovation
   c. Deregulation of the U.S. financial sector
   d. All of the above.
   e. None of the above.

___ 2. Which of the following did not contribute to the 2008 global financial crisis?
   a. Rejection of Keynesian economics.
   b. Miscalculation of risks associated with financial innovations.
   c. Use of Minsky's financial instability hypothesis to guide policy making.
   d. Implicit government guarantees for large financial conglomerates.

___ 3. Among the consequences of the 2008-2009 global financial crisis is:
   a. increased government debt related to government transfers to financial conglomerates.
   b. the consolidation of the financial sector by means of mergers and take-overs of failing firms.
   c. the widespread application of the “too big to fail” principle in government policy.
   d. All of the above.
   e. None of the above.

___ 4. The immediate cause of the 2008 financial crisis was:
   a. new holistic economic analysis by the Federal Reserve Bank of the United States.
   b. the prohibition of securitization of mortgage loans by a Congress fearful of foreign investment.
   c. The creation of CDOs (Collateral debt obligations) consisting of subprime mortgages issued during the housing bubble in the United States.
   d. The invention of credit default swaps.
5. The Keynesian liquidity trap refers to:
   a. monetary policy’s lack of influence over interest rates when the letter are already very low.
   b. the strong desire by lenders to extend credit to reluctant borrowers because interest rates are likely to rise in the near future.
   c. the unrealistic recovery of both borrower and lender confidence driven by greed to take advantage of low interest rates.
   d. the expansion of securitized loans that channel ever-increasing amounts of money back to lenders, who immediately lend more and sell more securities.

6. Islamic finance is characterized by:
   a. financial firms located in countries where the dominant religion is Islam.
   b. financial intermediaries that offer only accounts with fixed interest rates.
   c. borrowers and lenders who share both the gains and losses of investments.
   d. transactions exclusively among adherents to the religion of Islam.

7. The United Nations commission headed by Joseph Stiglitz studied the global monetary system and concluded that:
   a. the 2008 financial crisis was caused by excessive bank regulation.
   b. the precautionary principle should be applied where uncertainty is great; some financial innovations and products should simply be prohibited.
   c. incentives in the private financial industry cause financial firms to take too little risk and, therefore, lend too little too risky innovative projects.
   d. self-regulation works better than government regulation.

8. The United Nations commission headed by Joseph Stiglitz studied the global monetary system and concluded that:
   a. individual incentives in the private financial industry encourage risky strategic choices that undermine individual financial firms.
   b. financial firms have grown too big, making government bailouts more likely and, thus, giving those firms an incentive to take on excessive risk.
   c. the precautionary principle should be applied where uncertainty is great; some financial innovations and products should simply be prohibited.
   d. All of the above.
   e. None of the above.

9. The United Nations commission report also addresses the concerns of developing nations. For example, the report recommends that the G20 nations agree to immediately implement:
   a. fiscal stimulus policies in developed countries
   b. foreign aid in the form of grants, not loans, to avoid creating more long-run debt
   c. more freedom for developing economies to carry out diverse economic policies that diverge from the mainstream consensus
   d. All of the above.
   e. None of the above.

10. The French sociologist Pierre Bourdieu used the concept of *habitus* to represent:
   a. the government in the economy.
   b. the culture of a particular field that shows up as mannerisms, body language, dispositions, and other observable behavioral characteristics.
   c. a component of culture that consists of unproven beliefs and myths of the cultures and subcultures according to the influence they have on the behavior of an individual.
   d. specifically the culture of economics.
11. The French sociologist Pierre Bourdieu defined doxa as:
   a. the facts people know to be true.
   b. the formal institutions that government established in order to guide human behavior.
   c. the stories and shared unsubstantiated beliefs that effectively justify the patterns of human thinking and action that people come to accept as normal and appropriate
   d. All of the above.
   e. None of the above

12. Pierre Bourdieu argued that when people embrace the subculture of the field they identify with, they:
   a. adopt certain attitudes and dispositions.
   b. embrace a specific habitus.
   c. develop a complex set of beliefs that seem to explain the reality of one’s field
   d. All of the above.
   e. None of the above.
Chapter summary:

This chapter is the first of two covering the last of the four categories of international economic activity: immigration. People have always migrated across the earth; migration is the earliest form of international economic integration.

Most economic models assume that immigrants move from one country to another because they expect to improve their well-being, but there are many other reasons why immigrants move to another country or, on the other hand, decide to stay at home. The labor supply and demand model of immigration, which holds labor demand constant in both the source and destination countries, shows that immigration causes wages to rise in the source country and fall in the destination country. The labor supply and demand model perhaps gives a fairly accurate picture of the immediate effects of immigration as people perceive them, which means the model can be useful for explaining the immediate political pressures that shape immigration policy. But in the long run, all other things do not remain equal when immigrants arrive. The labor supply and demand model ignores, for example, the positive and negative externalities. Immigrants also affect aggregate demand for output in both the source and destination countries because immigrants are consumers as well as workers. And, the gains and losses from immigration are also affected by the size of immigrant remittances to their source countries.

In the long run, immigrants may affect the rate of economic growth in the source and destination countries because they may have human capital that is especially important for R&D activity, they are especially entrepreneurial, they facilitate the spread of technology and knowledge, and the arrival of new people can also reduce the economic and political power of vested interests who have been obstructing the efforts of some members of society to innovate or reform the economic and political systems.

Unauthorized immigrants are not as large a drain on state government coffers as many critics of illegal immigration suggest for the simple reason that unauthorized immigrants do not have access to as many government services and programs as legal immigrants do. Unauthorized immigration is often tolerated in high-income countries because employers reap the benefits of cheaper labor, and they use immigrants’ lack of legal status to exploit them. Illegal status effectively segments the labor market.

Of all the types of international economic activities, immigration seems to be the one that still has the most to grow. Government policies continue to tightly restrict immigration, however.
# I. Match the Terms and Definitions

In the space after each of the 18 terms, note the matching definition from among A through R:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>asylum seekers</td>
<td>A. Economic consequence of one person’s or firm’s activity that raises or decreases others’ welfare but is not taken into consideration by those undertaking the activity.</td>
</tr>
<tr>
<td>brain drain</td>
<td>B. People who go to another country for some limited period of time to perform a specific job.</td>
</tr>
<tr>
<td>contract laborers</td>
<td>C. Workers who perform technical or management jobs, often work for multinational firms, and often move from country to country.</td>
</tr>
<tr>
<td>demand effect of immigration</td>
<td>D. People who immigrate to escape serious threats to their safety and well-being.</td>
</tr>
<tr>
<td>destination country</td>
<td>E. People who immigrate without following the required formal legal procedures to gain entry to another country.</td>
</tr>
<tr>
<td>economies of scale</td>
<td>F. People who are moved from one country to another against their will, such as slaves or trafficked workers.</td>
</tr>
<tr>
<td>externalities</td>
<td>G. The immigration of highly educated people from developing economies where education is scarce to developed countries that already have many educated people.</td>
</tr>
<tr>
<td>guest workers</td>
<td>H. The often-used partial equilibrium model that holds demand for labor constant and only looks at immigration’s effect on the supply of labor.</td>
</tr>
<tr>
<td>illegal (unauthorized) immigrants</td>
<td>I. Payments by immigrants in the destination country back to family and acquaintances in the source country.</td>
</tr>
<tr>
<td>international migration</td>
<td>J. The general movement of people across borders with the intent of taking up residence and seeking employment in another country permanently or for an extended period of time.</td>
</tr>
<tr>
<td>involuntary immigrants</td>
<td>K. Migrants who go to live in another country for some limited amount of time with every intention to return to their native country some time in the future.</td>
</tr>
<tr>
<td>labor supply model of immigration</td>
<td>L. A term used to describe the country where international migrants settle and find employment.</td>
</tr>
<tr>
<td>professional migrants</td>
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<td>refugees</td>
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<td>remittances</td>
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<td>Segmental labor market</td>
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<tr>
<td>settlers</td>
<td></td>
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<tr>
<td>temporary immigrants</td>
<td></td>
</tr>
</tbody>
</table>
M. The increase in demand for a country’s output that results from the immigrants spending their earnings in the country they moved to.
N. Like contract workers, these are usually common laborers who are contracted to work for specified periods of time in another country.
O. A labor market in which different segments of the market are isolated because workers cannot shift from one part of the market to another.
P. The phenomenon in which average costs fall as the volume of production increases.
Q. People who move to another country in order to remain there permanently.
R. People who seek special consideration for legal entry to another country in order to escape some dangerous or perilous situation in their native country.

II. Questions and Problems

1. There are two countries, Guatemala and Mexico. Suppose also that Guatemala’s 100 workers earn a wage of four pesos, and Mexico’s 40 workers earn a wage of 14 pesos.

   A. Assume that 40 Guatemalan workers immigrate to Mexico, and the wage falls to 10 pesos in Mexico and rises to 7 pesos in Guatemala. Use the labor supply model of immigration to illustrate the supply effects of this immigration from Guatemala to Mexico, assuming the demand curves for labor are linear and the supply curve of labor is perfectly vertical.

   B. Calculate the exact gains and losses to workers, immigrants, and other factor owners in Guatemala and Mexico, just as in Table 15.2 in the textbook.

   C. Now, draw a new set of diagrams, repeating the shift in supply from part A of this problem, but also include a shift in the demand curves to reflect the fact that immigrants are consumers as well as workers. Specifically, assume that with the simultaneous shifting of both the supply and demand curves for labor the wage rises to 5.50 pesos in Guatemala and falls to 12 pesos in Mexico. Also, assume that the demand curves for labor shift in such a way that they remain perfectly parallel to the original demand curves (this assumption enables you to find the y-intercept of the new demand curve).

   D. Calculate the gains and losses from immigration in Guatemala and Mexico from the diagram for part C above.

   E. Finally, suppose that the Guatemalan immigrants in Mexico live very frugally and remit a large part of their Mexican income back to family in Guatemala. This makes the demand curves rise in both Mexico and Guatemala; assume that in this case immigration causes the wage to fall to 11 pesos and rise to 8 pesos in Guatemala. Draw the curves to reflect these changes.

   F. Calculate the gains and losses from immigration as drawn in part E above.

2. Show how it is possible for the source country to increase its per capita income after a group of workers immigrates to another economy even though the per capita income of the workers and other factor owners remaining in the country falls.
III. Multiple-Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

____ 1. Immigration would be much less than it actually is today if it were not for:
   a. the increasingly higher costs of transportation between countries.
   b. the elimination of the legal barriers to immigration that nearly all countries used to have in place.
   c. the decreasing income differences between countries.
   d. the improved communications between countries that have made people more aware of living conditions outside their own countries.

____ 2. The movement of people from Europe and Africa to the Western Hemisphere between 1500 and the present:
   a. was but a minor migration compared to other migrations in modern times.
   b. resulted in an estimated 1 million Europeans immigrating to present-day Western Hemisphere countries.
   c. included an estimated 10 million Africans taken as slaves to the Western Hemisphere and the death of many millions more en route.
   d. All of the above.
   e. None of the above.

____ 3. By far the greatest population movement of the post-World War II period:
   a. took place between India and Pakistan in 1947.
   b. occurred after the Korean War when North Korea expelled half its population.
   c. occurred when ten percent of the Cuban population fled to the United States after Fidel Castro came to power.
   d. consisted of the movement of East Germans to West Germany.

____ 4. Among immigrants who enter a country in order to remain there as permanent residents, essentially becoming full-fledged citizens of their new home countries, are:
   a. contract workers.
   b. settlers.
   c. illegal immigrants.
   d. braceros.

____ 5. Immigration:
   a. does not affect the labor-capital ratios in either the source or the destination countries.
   b. does not affect the incomes of factor owners in the source or destination countries.
   c. can be beneficial to the immigrants and the destination country.
   d. cannot cause a loss of total national welfare in the source country.
   e. All of the above.

____ 6. The value of the marginal product curve of labor (VMPL) is:
   a. simply the marginal physical product of labor.
   b. inversely related to price of the output produced by the labor.
   c. upward sloping.
   d. the demand for labor curve in the labor market model of immigration.
7. The shape of the supply curve for labor depends on:
   a. the value of the marginal product of labor.
   b. the strength of the income effect relative to the substitution of leisure effect.
   c. the relative strength of the substitution and trade-off effects.
   d. the price of the output that labor produces.

8. The Heckscher-Ohlin theory assumes that factors of production are not mobile between countries, yet it arrives at the conclusion that factor prices will tend to be equalized among all economies if trade is uninhibited (and other assumptions are met). If we recognize that international factors do also tend to move to where their returns are highest,
   a. factor price equalization is less likely.
   b. the likelihood of factor price equalization is increased.
   c. the likelihood of factor price equalization is unaffected.
   d. factor prices will diverge substantially between countries.

9. Labor migration alters the wages received by workers in:
   a. the source country only.
   b. the destination country only.
   c. both source and destination countries.
   d. neither source nor destination country; wages are not related to migration.

10. According to the simple labor market model for immigration, labor in a low wage country would tend to:
    a. be in favor of unrestricted immigration.
    b. be against unrestricted immigration.
    c. be indifferent as to whether its government restricts immigration or not.
    d. be in favor of restrictions on immigration in higher-income neighboring countries.

11. Income remittances by immigrants are likely to:
    a. reduce the gains from immigration for the destination country.
    b. increase the gains from immigration for the source country.
    c. reduce the gains from immigration for the individual immigrant.
    d. All of the above.
    e. None of the above.

12. The labor market model of immigration with fixed labor demand curves would provide an accurate picture of the economic effects of immigration if immigrants:
    a. do not affect the demand for labor or an economy’s growth rate.
    b. reduce demand for labor in the source country.
    c. expand demand for labor in the source country.
    d. affect only the labor supply curves.

13. Positive externalities to immigration in the source country may include:
    a. increased resource availability for innovation.
    b. increased demand for labor.
    c. less congestion.
    d. increasing returns to scale.
14. A possible implication of the Schumpeterian model of technological progress is that source
countries suffer a decline in innovation and economic growth. This outcome can be avoided if:
   a. immigrants eventually return to their homelands with more human capital.
   b. immigrants never return to their homelands.
   c. earnings remittances are used only for consumption.
   d. source countries ban immigrants’ return.

15. Among the reasons why the relationship between immigration and long-run economic growth
tends to be positive in the destination country is:
   a. Immigrants are carriers of ideas and knowledge, and therefore immigration increases the
      transfer of technology from abroad.
   b. Immigrants lack the talents and personalities appropriate for innovation.
   c. Immigration increases the likelihood that vested interests take protectionist measures that slow
      the process of creative destruction.
   d. Immigrants have negative externalities.

16. The brain drain is deemed to be a special problem because:
   a. when highly-skilled people leave, source country output rises.
   b. precious resources are used to educate people, who then leave to apply their scarce and costly
      human capital elsewhere.
   c. educated immigrants are often disruptive to traditional cultures.
   d. educated immigrants cause the rate of economic growth to rise in the destination country.
Chapter 19

Immigration Policy

Chapter summary:

Government restrictions on immigration, or what we generally refer to as immigration policy, are the main reason that more people do not respond to the enormous income differences across countries and immigrate from poor to wealthy countries. This chapter details the history of U.S. and Canadian immigration policy, which shows that immigration policies have fluctuated between supporting people’s freedom of movement and acting on their equally strong demands for protection from potentially objectionable new members of their community.

This chapter first provides a detailed history of U.S. immigration policy. After its independence from Britain, U.S. immigration policy reflected the fact that the United States was a geographically large country with a small European population surrounded by African American slaves and Native-Americans. European immigration was encouraged until the mid-1800s, when resentment in the United States against Irish and Catholic immigrants grew. There was increased political support for curbs on immigration in the late 1800s and early 1900s in the United States, but it took until the 1920s before legislation was passed to sharply limit immigration by means of a quota system designed to keep the ethnic composition of the U.S. population similar to what it had been in 1890, before the surge in immigration from southern and eastern Europe. The Great Depression meant that the immigration restrictions of the Immigration Act of 1924 were seldom tested for most nationalities, but the “likely to become a public charge” clause in 1882 immigration legislation was increasingly applied to restrict specific categories of immigrants.

The 1965 Immigration and Nationality Act effectively replaced the U.S. quota system with a set of general criteria permitting essentially unlimited immigrant visas for close relatives of persons already living in the United States as well as people with special skills. The 1965 law ended up permitting immigration to the United States to grow rapidly. By 2000, about 1 million persons were immigrating legally to the United States each year, and many more foreign workers entered the country illegally. By 2010, the United States was managing immigration according to a large set of criteria for allocating permanent residence visas and temporary work visas.

Canada’s immigration policy also changed frequently over the past two hundred years, following a pattern somewhat similar to that of the United States. Canadian immigration policy gradually became more liberal and less discriminatory during the twentieth century. Then in the latter part of the twentieth century, Canada’s immigration policy began to differ from that of the United States in that it issues proportionately many more immigrant visas, and it issues more visas according to a point system that adjusts the number of points awarded for various personal and professional characteristics as the Canadian labor market and economic conditions change.
### Match the Terms and Definitions

**In the space after each of the 28 terms, note the matching definition from among A through BB:**

1. 1910 Immigration Act  ______
2. 1946 Canadian Citizenship Act  ______
3. Alien and Sedition Acts  ______
4. Bracero Program  ______
5. Bureau of Immigration and Customs Enforcement (ICE)  ______
6. Chinese Exclusion Act of 1882  ______
7. Civil Rights Act of 1964  ______
8. community perspective  ______
10. Displaced Persons Act  ______
11. Emergency Quota Act  ______
12. Geary Act  ______
13. Illegal Immigration Reform and Immigrant Responsibility Act of 1996  ______
14. immigrant sponsorship  ______
15. Immigration Act of 1924  ______
16. Immigration and Nationality Act Amendments of 1965  ______
17. Immigration and Naturalization Service (INS)  ______
18. immigration policy  ______
19. Immigration Reform and Control Act of 1986 (IRCA)  ______
20. Know-Nothings  ______
21. libertarianism  ______
22. objectivism  ______
23. Order of the Star-Spangled Banner  ______
24. Refugee Relief Act of 1953  ______
25. social-contractionism  ______
26. U.S. Citizenship and Immigration Services (USCIS)  ______
27. United States Border Patrol  ______
28. utilitarianism  ______

**Definitions:**

A. This law extended the ban on Chinese immigration for ten years after 1892, and added restrictions on Chinese already living in the United States.

B. This special act to admit refugees right after World War II introduced the concept of immigrant sponsorship, under which some person or group in the United States assumed responsibility for immigrants’ welfare after their arrival.
C. The pledge by an American relative or organization to support an immigrant financially should they need assistance; the procedure of sponsorship was instituted to avoid having immigrants become a “charge of the state.”
D. Discriminatory and arbitrary immigration laws of the 1790s that targeted individuals with specific political and social viewpoints; among other things, these laws restricted the entry of people that prominent members of President John Adams’s political party thought might be inclined to vote for Thomas Jefferson.
E. The U.S. law that abolished the 1924 national quota system in favor of a new set of criteria for the granting of permanent resident visas.
F. The first U.S. legislation explicitly limiting immigration, and it was blatantly racist.
G. The complete set of government laws, regulations, and procedures that restrict or encourage the immigration of people from another country or by domestic citizens to another country.
H. The big change in U.S. immigration policy that in 1924 established a system of national quotas for immigrants.
I. Those who share the philosophy that government has few roles beyond the protection of property and of individuals from abuse or intimidation by others.
J. The new cabinet-level U.S. department that was created after the September 11, 2001, terrorist attacks to carry out the nonmilitary aspects of national security, including immigration law enforcement.
K. An act of the U.S. Congress that authorized 200,000 visas for refugees outside the quota.
L. The second agency, along with ICE, created out of the original INS after the reorganization of U.S. security agencies after 2001, this one for processing immigration visas and naturalization requests.
M. The bureaucracy set up to administer the U.S. immigration laws and procedures in the late 1800s, which was charged with the conflicting goals of welcoming foreign immigrants legally admitted into the country and keeping out unauthorized immigrants and deporting those caught inside the country.
N. The milestone U.S. law that banned racial and ethnic discrimination.
O. Also known as the Order of the Star-Spangled Banner.
P. With this act Canada became the first Commonwealth country to establish citizenship distinct from British citizenship.
Q. A U.S. law that authorized a clearinghouse that employers can call to verify the status of prospective immigrant employees, and provided increased funds for the border patrol.
R. The philosophical approach to human well-being that most closely resembles the simple tallying of gains and losses as is done in the supply and demand models of trade and immigration.
S. The philosophy centered on the idea that all answers to human problems can be found through reason and objective thought.
T. The 1910 Canadian law that gave authorities considerable discretionary power over who could enter Canada; one provision allowed authorities to deny entry to people “belonging to any race deemed unsuited to the climate or requirements of Canada.”
U. The agency charged with guarding the U.S. border.
V. Also known as the Know-Nothings because they replied “I know nothing” when questioned about their movement, this group opposed immigration by Irish and other Roman Catholics they deemed to be a threat to the culture of the United States.
II. Questions and Problems


2. Should society maximize the welfare of natives? Or should we be concerned primarily about the welfare of immigrants? Explain how immigration policy will affect natives and immigrants differently. How do you think that your country’s current immigration policies affect the welfare of natives and immigrants?

3. A typical “push” factor that tends to cause immigration is poverty, so people seek to improve their incomes by moving to a country with higher wages and better living conditions. The labor market model of immigration in fact assumes that it is the difference in wages that drives immigration. Yet, the highest flows of immigrants are not from the very poorest countries; the largest flows seem to be from medium income countries such as Mexico and the Philippines. Why might this be the case?

4. Explain the U.S. government’s strange mix of tolerance of illegal immigration in many cases and the cruel deportations of illegal immigrants who are part of otherwise legal families of immigrants. Why does the U.S. seem to contradict itself when it comes to illegal immigration? Hint: Use the Figure 18.5 as well as the history of immigration policy to discuss the issue.
III. Multiple Choice Questions

For each question, select the statement that best answers the question or completes the sentence:

___ 1. Among the “pull” factors that lead people to immigrate to another country is:
   a. high incomes.
   b. peace.
   c. employment.
   d. All of the above.
   e. None of the above.

___ 2. Why do so few people immigrate?
   a. Immigrants may face various forms of discrimination in the destination country.
   b. The adjustment to a different culture is difficult for many people.
   c. Many countries place strict limits on the number of immigrants permitted to enter.
   d. All of the above.
   e. None of the above.

___ 3. A nation’s immigration policy addresses a number of issues, including:
   a. How many resources will be devoted to enforcing the immigration restrictions?
   b. What methods will be used to enforce immigration restrictions?
   c. How are new immigrants to be treated compared to citizens of the country?
   d. All of the above.
   e. None of the above.

___ 4. If the pursuit of individual freedom is a country’s most important policy goal, then its immigration policy should:
   a. keep foreigners out of the country.
   b. avoid imposing barriers on the free exit and entry of people
   c. carefully select those people it prefers to have enter the country.
   d. All of the above.
   e. None of the above.

___ 5. If policy makers in a country seek to preserve a community’s culture, a particular distribution of responsibilities and rewards, or a vested set of economic interests, then their immigration policies should:
   a. consist of open borders.
   b. restrict the entry of foreigners.
   c. encourage the departure of natives.
   d. All of the above.
   e. None of the above.

___ 6. Among the laws passed by the U.S. Congress to limit immigration in the late 1800s was:
   a. An 1875 law that prohibited the entry of foreigners who were destitute, engaged in immoral activities, or suffered serious health or physical problems.
   b. the German Exclusion Act of 1882.
   c. the 1891 legislation closing the U.S. border to all immigration from non-European countries.
   d. the Immigration Reform and Control Act of 1886 (IRCA), which strengthened the Border Patrol and established penalties on employers who employ illegal aliens.
7. By the end of the nineteenth century, United States immigration policies had changed to where:
   a. some foreigners were no longer permitted to freely immigrate to the U.S.
   b. there were strict numerical limits on immigrants from all countries.
   c. all restrictions on immigration were eliminated.
   d. the agency that had administered immigration laws was eliminated.

8. The Immigration and Nationality Act Amendments of 1965 changed U.S. immigration procedures as follows:
   a. a quota system based on nationalities was established.
   b. 80 percent of the numerical limits were to be allocated to relatives of persons already in the U.S.
   c. immigrant visas were to be awarded only to people with special talents and skills.
   d. only spouses and children of U.S. citizens were to be permitted to immigrate to the U.S.

   a. eliminated the Border Patrol.
   b. eliminated the requirement that employers check the identification of employees to verify their legal status because it violated the principle of “innocent until proven guilty.”
   c. provided for a one-time amnesty for illegal immigrants by giving about 2.7 million illegal aliens living in the United States legal residence status.
   d. All of the above.
   e. None of the above.

12. More than 10 years after the Immigration Reform and Control Act of 1986 (IRCA), it has been found that:
   a. increased border patrols were not very effective in reducing illegal immigration to the U.S.
   b. the requirement that employers verify citizenship had little effect on the employment of illegal immigrants because forged documents became readily available.
   c. the amnesty of earlier illegal immigrants may actually have increased further illegal immigration to the United States.
   d. All of the above.
   e. None of the above.

10. One difference between current U.S. and Canadian immigration policy is that:
    a. Canada emphasizes family relationships much more than the U.S. does.
    b. Canada restricts immigrants according to national origin while the U.S. restricts immigrants according to economic criteria.
    c. Canada’s policies are more directed at attracting immigrants with special skills.
    d. Canada’s policies are much more restrictive in general, which is why Canada attracts few immigrants.

11. Another difference between U.S. immigration policy and Canadian immigration policy is that, unlike the U.S., Canada:
    a. did not restrict the entry of Chinese immigrants in the 1800s.
    b. never set up anything like the U.S. ethnic quota system.
    c. never restricted immigration because so few people wanted to go to its cold climate.
    d. remained completely for British citizens until well into the twentieth century because it remained a British colony.
12. The aging of populations in most developed economies is likely to:
   a. reduce opposition to immigration because working-age labor will become relatively more scarce.
   b. increase opposition to immigration because labor demand will decline.
   c. increase opposition to immigration because of its adverse effect on government budgets.
   d. have no effect on immigration policies.

13. Illegal immigration:
   a. is less common today than it was earlier in the twentieth century.
   b. often serves to segment the labor market in the destination country and reduces the downward pressure on wages throughout the economy.
   c. is strongly opposed by employers in low-wage industries in high-income countries.
   d. is almost always strenuously punished in most high-wage countries.

14. Illegal immigration occurs because:
   a. the declining income differences between countries reduce the advantages of immigrating legally.
   b. people seek to take advantage of opportunities to better themselves even when there are legal barriers.
   c. legal immigration is not restricted.
   d. employers are reluctant to hire illegal immigrants.

15. According to the case study on the traffickers who bring illegal workers to high-wage countries such as the United States, the United Kingdom, or Germany, these intermediaries are able to carry out their lucrative trade because:
   a. the wage differences between places like Europe and China represent huge arbitrage opportunities.
   b. developed countries offer many work permits to foreigners.
   c. there are many legal ways for immigrants from poor countries to travel to Europe and other high-income areas, even though they cannot work there.
   d. Consulates of high-wage countries in low-income countries readily give tourist or student visas.
The Evolving International Economy

Chapter summary:

The growth of international trade, investment, finance, and migration has integrated the world economically and socially and also has increased the stress on the natural environment. Economists’ and policy makers’ understanding of international economics will, therefore, determine how national policies address the many economic, social, and environmental problems human society has to face. Heterodox international economists, who seek to understand the implications of the complexity and uncertainty of this global economic system have a very important role to play in economics. Orthodox economics’ smooth, continuous functions, based on assumptions of stable markets, bias mainstream economic analysis and blind it to the many potential environmental dangers of continued rapid economic growth and international economic integration.

Within the integrated world economy, environmental issues are increasingly international in nature, and they are becoming more urgent. Humanity’s demand for nature’s renewable resources, or nature’s services, now exceeds the planet’s regenerative capacity by about 30 percent. Global warming is an especially clear example of humanity’s overuse of nature’s services; greenhouse gas emissions now exceed the atmosphere’s capacity to absorb them without triggering changes in the climate. Global warming is a major policy problem because the exact channels of causality are not well understood by individual consumers and producers and the uncertain consequences of current human activity will be felt mostly in the future.

Environmental problems are difficult not only because they require high levels of abstract thinking, but because the solutions to environmental problems like global warming require very substantial changes in the way industry produces and how people live. Therefore, people are predisposed to distrust even the most clear scientific evidence. Of course, special interest linked to the status quo lobby hard to avoid the costs of the needed adjustments. This chapter also explains why the free rider problem makes it so difficult for national governments—faced by internal political pressures from consumers, producers, and business lobbies—to cooperate on very critical international economic and environmental issues.

Some critics of environmental policies have argued that uncertainty about the true costs and benefits mandate a wait-and-see approach. Martin L. Weitzman shows, however, that under reasonable discount rates, uncertain but potentially catastrophic environmental events with a very small likelihood should be actively avoided so long as abatement costs are no more than a few percent of the value of human life.

The cost of prevention of environmental catastrophe is probably not as high as some people fear, perhaps as little as 2 percent of GDP. If we must spend 2 percent of GDP per year to stop global warming, we are effectively being asked to make a payment of about $25 to insure
an asset of $100,000 against an uncertain possibility of total loss. People spend much more than
this to insure their homes and cars, the losses of which would not threaten their survival.

This chapter uses a two-sector Solow growth model to illustrate how economic activity in
the economic sphere is related to the natural sphere where the ecosystem produces its services.
Economic growth requires that growth be sustainable in both spheres. The natural sphere also
calls for investment to compensate for depreciation and innovation to maintain growth of real
human economic activity, just as the Solow model suggests for the economic sphere.

The two-sector Solow model illustrates the effects of growth in the economic sphere that
has been much too fast given humanity’s failure to cover the depreciation of the ecosystem and
its capacity to continue supplying nature’s services needed in the economic sphere. The two-
sector Solow growth model shows how the failure to account for environmental damage can
toggle an actual decline in output in the economic sphere. Also, just like the single-sector
version of the model, the two-sector model shows that technological change is necessary to
sustain economic growth, and the two-sector model shows clearly that technological change
must occur in both spheres.

Humanity’s social and economic institutions, including everything from informal culture
to formal legal institutions, are not set up to induce its investors, producers, and consumers to
take account of what happens in the natural sphere. There are few effective signals and
institutions that lead to innovation and technological change in the natural sphere. The past two
hundred years’ growth not only occurred when environmental costs were not as great because the
human footprint was still small, but much environmental damage was simply ignored and its
costs implicitly pushed into the future that rising atmospheric temperatures and rapid losses of
species suggest we have now reached. Because business culture focuses only on a bottom line
that depends on outcomes in economic sphere, business opposition to environmental policies is
to be expected. For the sake of long-run human well-being, such resistance must be overcome.

A number of alternative policies have been suggested to provide incentives for producers
and consumers to reduce greenhouse gas emissions or change behavior that causes other
environmental damage. Included are schemes such as carbon taxes, cap and trade, land use
restrictions, nature preserves, et cetera.

I. Match the Terms and Definitions

In the space after each of the 22 terms, note the matching definition from among A through V:

1. anthropogenic
2. biodiversity
3. cap and trade
4. carbon tax
5. cultural services (of nature)
6. ecological footprint
7. effective resource stock
8. exhaustible (resources)
9. feedback effects

________________________________________________________________________
Definitions:

A. The physical stock of natural resources measured in terms of the goods and services that can be produced with the resources; if technology enables producers to get more output out of the same resources, the effective stock rises.

B. The average capacity of one hectare of the earth’s surface to produce services and absorb waste.

C. The inaccuracy of regression estimates when a statistical regression model does not include all the variables or explicitly model all the true relationships between all the relevant variables.

D. Any secondary effects of some phenomenon that end up strengthening the initial effects.

E. Natural production of resources and the continual processes that help to maintain the ecosystem.

F. Nature’s environment that shapes how humans live and create their culture, and it includes the setting, the scenery, and the natural locations that are revered by cultures.

G. In statistics, a specification error refers to any case where the statistical model inaccurately represents the true process being modeled.

H. The large-scale, capital-intense production of single crops covering vast tracts of land motivated by economies of scale, which are derived from the substitution of large equipment for labor, the heavy application of chemical fertilizers and insecticides in place of more labor-intensive and varied exploitation of the land, and industrial food processing operations in which machinery and assembly-line methods require uniform products.

I. The variation in outcomes that can be described with a known distribution function, so that the mean, median, and spread of outcomes are reasonably well understood.

J. The services of nature that in effect preserve the natural environment so that nature can continue to provide its other services that humans depend on.

K. The insurance provided by the diversity and redundancy of the ecosystem, so that the failure of one species does not immediately threaten humans because there are many other species that provide similar services and can take up the slack.

L. These are the products that nature provides to us directly, such as food, spices, water, air, warmth, vitamin D through sunlight, firewood, and myriad other things that we usually take for granted.
M. Resources that exist in nature in a fixed amount, sometimes referred to as *exhaustible resources*.

N. Natural resources that are fixed in supply and, therefore, exhausted when used, which are sometimes called *nonrenewable natural resources*.

O. A scheme consisting of setting specific emissions limits and then issuing a corresponding number of permits to emit that can be freely traded.

P. The situation where future outcomes cannot be predicted, nor is the distribution of possible outcomes understood well enough to be able to attribute probabilities to the potential outcomes.

Q. The unprecedented warming of the earth’s atmosphere that scientists trace to the growth in greenhouse gas emissions generated by the increased economic activity over the past two centuries.

R. The sum of (1) all forest, grazing land, cropland, and fishing grounds required to produce the food, fiber, and timber humanity consumes, (2) all land and water to absorb the wastes emitted when humans use energy, and (3) all land, water, air, and other natural resources required for humanity’s living space, production, transportation, and storage.

S. The number of different species of plants, animals, and micro-organisms on earth, the genetic variations and traits within species, and the way these species coexist within ecosystems.

T. Human made; phenomena such as *global warming* or *biodiversity* loss are said to be anthropogenic because they are caused by the growth of human society.

U. Nature’s services that regulate our climate, recycle our waste, and maintain our relationships with all other living species.

V. A tax levied on a product or directly on a producer in order to internalize the external costs of climate change caused by the emission of greenhouse gases like carbon dioxide into the atmosphere.

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**II. Questions and Problems**

1. Describe the five categories of nature’s services and give examples of each.

2. What are some of the ways that we can reduce greenhouse gases?

3. Why do many environmental groups dislike the cap and trade scheme to reduce GHG emissions?

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**II. Multiple-Choice Questions**

*For each question, select the statement that best answers the question or completes the sentence:*

1. Which of the following statements is true?
   - a. Nature is a subsystem of the economic sphere.
   - b. The social sphere and the economic sphere are subsystems of the nature.
   - c. The economic sphere lies entirely within the social sphere.
   - d. The social sphere lies entirely within the economic sphere.
2. Which of the following statements is false?
   a. The rate of species extinction today is probably at least 500 times as fast as its historical rate.
   b. The spread of human society and its economic activities, such as agriculture, are the main reasons for the decrease in biodiversity.
   c. Agriculture based on a variety of crops is more susceptible to a biological collapse than monoculture.
   d. All of the above.
   e. None of the above.

3. Scientific evidence shows that global warming is almost certainly caused by
   a. hot air produced during political election campaigns.
   b. greenhouse gases.
   c. sun spots.
   d. excessive volcanic activity.

4. All of the following are considered renewable resources except,
   a. air.
   b. water.
   c. soil.
   d. petroleum.

5. Scientific evidence shows that global warming is almost certainly caused by:
   a. human economic activity.
   b. change in the orbit of the earth around the sun.
   c. increased temperatures in the earth’s core.
   d. All of the above.
   e. None of the above.

6. Which of the following is an example of a feedback effect of global warming?
   a. reduced reflection of the sun’s heat with the melting of polar ice.
   b. increase of greenhouse gases from melting permafrost regions and ocean bottoms.
   c. increase of carbon released from warmer oceans.
   d. All of the above.
   e. None of the above.

7. Which of the following is NOT a greenhouse gas?
   a. sulfur.
   b. methane.
   c. nitrous oxide.
   d. hydroflourocarbons.
   e. water vapor.

8. The 2007 Intergovernmental Panel on Climate Change (IPCC) has concluded that:
   a. there will be no feedback effects that some scientists claim will greatly accelerate global warming.
   b. today’s average temperatures are similar to average temperatures in between past ice ages.
   c. over the past 50 years, temperatures have risen by 0.13°C per decade, about twice the rate over the previous 50 years.
   d. the projected rise in temperatures would be much lower if feedback effects were taken into consideration.
9. What is meant by biodiversity?
   a. The variety of plants, animals, and microorganisms that exist in earth’s environment.
   b. The ability of an animal to live in various different ecosystems.
   c. The ability of a plant to act like an animal, i.e. consume animals, insects, and microorganisms (e.g. Venus fly trap).
   d. All of the above.
   e. None of the above.

10. Which of the following is NOT a reason for decreasing biodiversity?
   a. Climate change.
   b. Loss of habitat because of human population expansion.
   c. Monoculture agriculture.
   d. Slower pace of evolution.

11. What is the meaning of the term green revolution?
   a. Civil disobedience actions by activist organizations such as Rising Tide.
   b. The gain in productivity of agriculture as measured in the economic sphere from increased mechanization, chemical usage, irrigation, and seed development.
   c. Uprisings of native populations in tropical countries where the rain forest is being destroyed.
   d. The takeover of crop land by noxious weeds.

12. Which of the following is a “service of nature?”
   a. Wind.
   b. The rotation of the earth.
   c. Carbon sinks.
   d. All of the above.
   e. None of the above.

13. Which of the following statements is true?
   a. Nature provides more services than the human economy does.
   b. The calculation of GDP already captures most of nature’s services.
   c. The finite nature of exhaustible resources is a more pressing issue than the deterioration of the ecosystem that provides nature’s renewable resources.
   d. All of the above.
   e. None of the above.

14. What is true about the conservation function in the enhanced Solow model?
   a. It is the depreciation line of nature’s services.
   b. It has a constant increasing slope.
   c. At some point in economic growth the slope decreases rapidly.
   d. It is a stable, non-changing function.

15. According to the two-sector Solow model in Chapter 20, what happens if the required expenditures to maintain nature’s services are not made?
   a. The conservation curve moves to the right.
   b. The production function shown in the economic dimension increases.
   c. Output and income in the economic sphere continue to increase.
   d. All of the above.
   e. None of the above.
16. Humans have been most successful in applying technological progress to the:
   a. natural sphere.
   b. economic sphere.
   c. stratosphere.
   d. All spheres of human existence.

17. Robert Stern estimated in 2008 that it would cost what percentage of world GDP to reduce greenhouse gas emissions enough to avoid global warming?
   a. 2 percent
   b. 5 percent
   c. 10 percent
   d. Stern concluded that no amount of investment and/or technological change can avoid global warming.

18. Among the five categories of nature’s services is:
   a. Provisioning Services - nature’s climate, raw materials, energy, scenery, land,
   b. Regulating Services - recycling waste, regenerating soils,
   c. Supporting Services - water purification, pollination, pest and disease control
   d. All of the above.
   e. None of the above.

19. Which of the following statements is false?
   a. Risk is the same thing as uncertainty.
   b. Climate scientists deal with risk, not uncertainty.
   c. Risk reflects a set of potential outcomes with stated probabilities of expected values within a specific range.
   d. Uncertainty is what insurance companies routinely deal with; risk is more difficult to deal with.

20. Which of the following statements about the two-sector Solow model is false?
   a. Technology can always shift the production function to higher levels in the economic sphere, even when the natural sphere is not maintained.
   b. Only up until a certain point in the growth of output are nature’s services able to replenish those services for free.
   c. Some saving and investment in the economic sphere must be transferred to investment in conservation in the natural sphere to have sustainable growth.
   d. A shift in savings and investment out of the economic sphere and into nature’s sphere will slow economic growth.
Warning!

You will benefit the most from taking the Self-Test if you do not look up the answers until you have completed the entire test. Only by taking the Self-Test as you would a normal exam can you get a good indication of how well you know the material and where you need to concentrate your review of the textbook material. Then, when you have completed the Self-Test and you have compared your answers to the answers provided at the end of this Study Guide, you should spend some time correcting your mistakes and omissions by going back to the textbook to find the correct answers.
Chapter 1 - Interdependence!

I. Match the Terms and Definitions


II. Problems and Questions:

1. According to Paul Seabright, by cooperating with others, people can achieve:
   - Higher Levels of Specialization
   - Reduction in Risks from Unpredictable Adverse Outcomes
   - Faster Expansion of Knowledge

   By cooperating, humans have achieved all three types of benefits. Today’s high standards of living would be impossible without extensive cooperation among strangers. The spread of knowledge is especially important in the long run; the “spread of knowledge” brings about the destruction of unsubstantiated belief systems that tend to restrict the development of a human society.

   There are many dangers, of course. Strangers who are unlikely to ever see you again have obvious incentives to cheat, lie, deceive, steal, overcharge, underdeliver, etc. Reputation means little if two people meet only once, never to see each other again. Dealings with strangers can have even worse outcomes, however. If there is an imbalance on strength and power, contact with strangers can result in exploitation, enslavement, and death. Our improvements in welfare are fundamentally the result of our improved ability to deal with greater numbers of people, that is, our ability to overrule the perverse incentives that people have to cheat, exploit, or otherwise harm strangers.

2. Creating institutions that induce selfish human beings to cooperate with strangers is difficult. Intelligent humans have often gotten the institutions wrong. Many writers have interpreted the great increase in life expectancy and material output over the past millennium as evidence of our recent success in designing good institutions. However, the Crusades, the Inquisition, witch hunts, slavery, the massive land grab by Europeans in the Western Hemisphere, the World Wars, the Holocaust, the Soviet Gulags, and an endless list of other atrocities right through the end of the 20th Century should cause us to temper such optimism. We continue to squander many potential gains from specialization, risk sharing, and knowledge creation. Douglass North (2005) appropriately reminds us that the very real improvements in the human existence “has been a trial and error process of change with lots of errors, endless losers, and no guarantee that we will continue to get it right in spite of the enormous accretion of knowledge over those centuries.” [Douglass C. North (2005), Understanding the Process of Economic Change. Princeton, NJ: Princeton University Press., p. 15.] There are cultures that have seem to free people from any obligation to cooperate with strangers or share economic costs and benefits.

3. Fundamentally, the scientific method consists of a strict procedure consisting of a rigorous series of steps such as these:
   1. Observe some world phenomenon.
2. Use reason to invent a hypothesis (an untested theory or model) that consistently explains what you observe.
3. Use this hypothesis to predict specific outcomes.
4. Perform experiments in which you generate specific outcomes or make additional observations of real world outcomes to test whether the generated outcomes or observed random outcomes are consistent with the outcomes predicted by your hypothesis.
5. Accurately record your procedures and clearly show your results so that they could be understood and replicated by others.
6. If your test results are inconsistent with your hypothesis, abandon the hypothesis or modify your hypothesis and return to step 3.
7. If your experiments and observations consistently confirm your hypothesis, your hypothesis becomes a theory.
8. Clearly communicate the results to others and use them yourself for further experiments to test further hypotheses.

The scientific method serves to keep research and development objective, thus preventing false ideas from gaining traction. More importantly, it guarantees progress by maintaining only hypotheses supported by evidence while systematically eliminating hypotheses that are not supported by evidence. Hence, because unsupported hypotheses are abandoned and only proven hypotheses are maintained, knowledge must improve over time. Forward progress is guaranteed only when new hypotheses are built on the proven hypotheses, not when they are built on false or unsubstantiated ideas.

Note that the scientific method gives a very precise definition for the term theory. Unlike the popular use of the word theory as referring to a vague or fuzzy idea, in science a theory means “confirmed hypothesis.” It is an idea fully supported by overwhelming evidence. A theory is a proven conceptual framework that consistently and accurately explains observed facts. This also means that an idea or, more accurately, a hypothesis can become a theory only if it is falsifiable. That is, we must be able to confront a hypothesis with real evidence so that we can objectively decide whether the hypothesis accurately describes what we actually observe. For example, the often-stated prediction that a continual expansion of the money supply in excess of the growth of economic activity will cause inflation is close to being considered an economic theory because we have been able to observe a very large amount of evidence across many countries and time periods that confirms the prediction. Furthermore, the hypothesis that excessive money growth causes inflation could have been falsified by observing actual prices and measures of economic activity.

4. See Figure 1.1 and the textbook explanation that accompanies the Figure.

5. At the very minimum, you should discuss this chapter’s explanation of holism and economic models. Essentially, Bastiat says that economists should not focus exclusively on the system’s parts without understanding how they interact with the rest of the system.

III. Multiple Choice Questions:

1-d, 2-e, 3-c, 4-b, 5-b, 6-c, 7-b, 8-d, 9-a, 10-d, 11-c, 12-d.
Chapter 2 - The Heterodox Approach

I. Match the Terms and Definitions


II. Problems and Questions:

1. *Replication* is a form of quality control and accountability that keeps the application of the scientific method honest. The scientific method is extremely difficult, and practical considerations often lead people to take short-cuts. Special interests often intentionally distort analysis in their favor while claiming to have followed the scientific method. Hence, replication and the constant threat of replication is necessary to uncover mistakes, honest errors, and intentional distortions.

2. There are many details from Chapter 2 that you can bring into your answer. For example, orthodoxy is the mainstream of an intellectual field, which mandates a single accepted (correct?) approach. The neoclassical paradigm has become the dominant culture of mainstream economics in the United States and most other countries, which follow the example of the United States in their universities.

Heterodoxy intentionally seeks to observe and analyze every issue from a variety of perspectives in recognition of the holistic nature of economic, social, and natural phenomena. Heterodox economics embraces alternative paradigms, plus the neoclassical paradigm, because it recognizes the limits of any particular model; it applies different models under different circumstances and compares the results of different models for any given set of circumstances. Because heterodox analysis uses alternative models and dynamic analytical frameworks, and recognizes the complexity of systems, heterodox economists’ policy prescriptions are usually much less specific than the policy prescriptions suggested by orthodox economists.

In recognition of uncertainty within a complex system, such as our economic, social, or natural systems, heterodox economists are likely to invoke the *precautionary principle* in complex cases such as financial deregulation, environmental policies to deal with climate change or biodiversity, and international economic integration.

3. Follow the hint provided in the question. One good approach is to explain the role of culture in human behavior, including the behavior of scientists. Review Pierre Bourdieu’s explanation of how culture locks people into narrow cultural paradigms. Habitus and doxa, which constitute culture, change slowly even in the face of substantial changes in economic outcomes, social shifts, or clear trends in the natural environment.

4. Some heterodox economists reject the orthodox neoclassical paradigm entirely, but in this textbook we embrace all models and paradigms as potential aids in understanding our complex economic, social, and natural environments. “hetero” implies “many”, not an exclusive set.

5. James Lovelock’s (1972) famous Gaia hypothesis states that the planet Earth functions as a large homeostatic organism that actively adjusts its “internal” natural conditions. The Gaia
hypothesis seems to suggest that somehow the system will adjust so that the overall ecological environment remains stable. Note, however, that while the whole system may be homeostatic, the on-going adjustment process of evolution causes a continual string of extinctions of species. Peter Ward (2009) offers his Medea hypothesis, which he named in honor of the mythological Greek sorceress who killed her own children in a fit of rage against her husband. Ward points out that the paleontological record suggests that mother Earth occasionally drives a very large proportion of species into extinction at the same time. Ward contends that because humanity evolved in the relatively stable natural environment over the past few million years, the recent unprecedented growth of the human population and its economic activity will cause the Earth’s system to adjust in ways that could overwhelm humans’ own homeostatic adjustment mechanisms.

6. We all respect the precautionary principle in cases of incomplete knowledge and uncertainty. For example, we do not dive off a bridge into murky water or eat unknown mushrooms. In the case of economic policy, we regulate greenhouse gases even though we cannot calculate with precision what their cost is. We regulate the financial system because a financial collapse is potentially very costly. We limit the accumulation of debt. Similarly, we engage in food and drug regulation, we limit nuclear proliferation, we establish the rule of law.

7. An example of bias in subject matter is the tendency for economists to focus exclusively on market activities, use data generated by markets, and interpret the observed results as if all economic activity occurred in well-defined competitive markets. Hence, most economic research analyzes activities included in measured GDP, uses market prices and quantities to quantify human economic activity, and judges outcomes in terms of market generated incomes and quantities. Social and ecological consequences of international economic activity are not a common topic of the field and reduce the kind of data that are even analyzed in international studies. There are relatively few economic studies of household activity. Interdisciplinary study is uncommon. The most egregious logical error committed by mainstream international economists, and perpetuated in the field’s most popular textbooks, is the defense of the limited perspective of their field with the claim that non-economic issues such as human psychological happiness, environmental problems, and non-market household activities are “beyond the scope of economics.” Definitions of human welfare are relatively limited to merely income levels, rather than enhanced with measures of human happiness. Models of international economics have not endogenized insights from ecology, biology, psychology, sociology, political science, evolutionary anthropology, and environmental science. Neoclassic models of international economics are biased by not taking into account environmental externalities, such as, global warming, and societal externalities, such as, the destruction of traditional family structures.

III. Multiple Choice Questions:

1-d, 2-d, 3-a, 4-c, 5-d, 6-b, 7-d, 8-c, 9-d, 10-c, 11-c, 12-d, 13-a, 14-e, 15-d, 16-c, 17-c.
Chapter 3 - Orthodox International Trade Theory: Why Mainstream Economists Like Free Trade

I. Match the Terms and Definitions


II. Problems and Questions:

1. You should have noticed that each of the straight-line curves in the diagram has the same slope, although of course it is negative for the demand curves and positive for the supply curves. The curves rise or fall by 20 units when the quantity increases by 100, which means the slope is .2 or −.2. Also, because all slopes are the same, the world equilibrium price clearly falls exactly halfway between the domestic prices in Homeland and Abroad, or $32. Also, the excess demand and supply curves in the international market, being the difference between the demand and supply curves in each national market, have slopes that are half as steep as each supply and demand curve, or .1 and −.1. So, since the equilibrium price in the international market is $32, which is 8 units below the y-intercept of the international demand curve at $40, for example, the equilibrium quantity in the international market must be 80. In free trade equilibrium, Homeland imports 80 million widgets, and it produces 60 million widgets itself. Abroad produces 140 million widgets, of which it exports 80 million to Homeland.

The changes to welfare are as follows:

\[
\begin{align*}
\text{Homeland Consumer Surplus} &= + (A + B) = +$960 \text{ million} \\
\text{Homeland Producer Surplus} &= - (A) = -$640 \text{ million} \\
\text{Net Change} &= + B = +$320 \text{ million} \\
\text{Abroad's Consumer Surplus} &= - a = -$640 \text{ million} \\
\text{Abroad's Producer Surplus} &= + (a + b) = +$960 \text{ million} \\
\text{Net Change} &= + b = +$320 \text{ million}
\end{align*}
\]

The net gain for the world is:

\[
\text{Net Changes} = + (B + b) = +$640 \text{ million}
\]
2. The partial equilibrium approach complements the general equilibrium model of trade introduced in the previous chapter in that it also finds that there are net overall welfare gains from free trade in each country that participates in trade. Partial equilibrium models assume that “all other things remain equal” elsewhere in the world economy, and, for that reason, they do not give us exactly the same view of trade as we get from general equilibrium models, which permit prices and output to vary across all sectors of the economies that trade. On the other hand, the partial equilibrium model provides important details about some of the welfare gains and losses that trade causes in an economy.

3. See Figure 3.7 for how your diagram should look.

**III. Multiple-Choice Questions**

1-d, 2-a, 3-d, 4-b, 5-d, 6-c, 7-a, 8-d, 9-b, 10-c, 11-b, 12-d, 13-c.

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**Chapter 4 - International Trade: Beyond the Neoclassical Perspective**

**I. Match the Terms and Definitions**


**II. Problems and Questions:**

1. The economic implications include:
   
   (1) Short-term and long-run human happiness do not depend on the exact same set of variables. Therefore, economic policies designed to satisfy people today do not necessarily maximize humans’ lifetime happiness. In terms that economists are familiar with, welfare functions are not constant, or stable, over time.
   
   (2) Secondly, the social welfare function is not a simple aggregation of individual welfare functions. The fact that people have empathy and the conscious awareness of social status means that the aggregate social welfare function, provided one even logically exists, depends on the distribution of income. Every change in the distribution of income must result in a new social welfare function and, therefore, a different set of social indifference curves.
   
   (3) Third, the demonstrated human aversion to change and, especially, loss means economists must change their estimates of the costs and benefits of opening an economy to free trade.
   
   (4) More generally, the neoclassical social welfare function, in which human welfare is a direct function of goods and services or just GDP, is clearly not an accurate guide for judging economic activity.
2. Table 4.2 shows that average levels of happiness differ across income groups within individual countries. The lowest income quartile (the 25 percent of the population at the bottom of the income distribution) contains the highest proportion of people reporting they were *not too happy* in the United States and not very happy or *not at all happy* in a group of European countries. Nearly 20 percent of the poorest Americans were not happy, but only 5 percent of wealthy Americans were *not happy*. Less than 25 percent of poor Americans, but over 40 percent of wealthy Americans, were *very happy*. Within a single country, or society, rich people are much more likely to be happy than poor people.

3. What this all means for the study of international trade is that economists should not measure the gains and losses from trade purely in terms of material output or per capita GDP. The costs of adapting to new jobs, losing investment incomes, or changing social status may be substantial, but orthodox models, such as the HO model, assume a stable set of indifference curves that remains unchanged even as the gains and losses from trade are spread unevenly across the populations. And, the importance of relative income over absolute income in today’s high-income countries means that the role of international trade in accelerating economic growth may not be as important as the fear that free trade will alter relative incomes and social status. We are still faced with the question we asked after looking at the happiness studies’ conclusions: Is it really worth causing a lot of people to lose their jobs in order to increase the income of others in society?

4. This question fits the fixed-factor model of trade. It is not unrealistic, because accumulated human capital actually makes it difficult for workers to move from one industry to another. A more extreme case is the Indian caste system, which still limits people’s ability to change professions, is another example. The immediate effect of “fixed” factors is that the PPF is not as bowed out as it would be if all resources can move readily from one activity to another. The small country general equilibrium model in Figure Q2 on the right illustrates such a PPF, labeled PPF<sub>F</sub>. Notice that there will still be specialization and exchange under free trade, but the gains
are not as great. Because the fixed factors make it more difficult to increase output of the Y industry, specialization is not as great and the tangency of the world price line with the PPF curve results in a consumption possibilities line WP that lies below the consumption possibilities line WP that would result in the case of complete mobility of all factors. This result is intuitive; a country that has difficulty in moving its resources also has difficulty in taking advantage of the gains from specialization.

III. Multiple Choice Questions:

1-d, 2-a, 3-a, 4-a, 5-d, 6-d, 7-a, 8-d, 9-b, 10-a, 11-e, 12-c

Chapter 5 - International Trade: Imperfect Competition and Transnational Companies

I. Match the Terms and Definitions


II. Problems and Questions:

1. Krugman showed that international trade makes possible a one-time gain in welfare from both lower unit costs and increased variety. By specializing, each country produces a larger quantity of fewer goods, thereby taking advantage of increasing returns to scale. And, by exchanging some portion of each of the goods for different foreign goods, each country actually increases the variety of goods available to its consumers.

2. Among other things: TNCs are in a position to more fully take advantage of increasing returns to scale. TNCs dominate international trade, and the foreign direct investment that constructs these TNCs dominates long-run international investment flows. The concentration of wealth in the hands of TNCs has enabled them to influence and, in many cases, permanently shape international institutions in ways that favor the further growth of TNCs. TNCs with market power can increase profit margins and gain income at the expense of consumers and workers. TNCs intentionally invest in factories and marketing organizations to exploit the comparative advantages of different economies. The management of TNCs often control both the exporter in one country and the importer in another country.
3. Your answer should include mention of at least the following points:

*Vertical* FDI occurs when a TNC builds or acquires foreign facilities that comprise one stage of its complete production process. *Horizontal* FDI, on the other hand, consists of FDI that duplicate facilities and operations that the TNC already owns and operates in other countries. TNC investments across developed economies are more often horizontal investments, and TNC activity in developing countries more often serves to vertically integrate the supply chain. Vertical FDI is driven by factor cost differences, a principal determinant of comparative advantage. Horizontal FDI occurs more frequently when transport costs and trade barriers are large.

4. *Market segmentation* is a common marketing practice that permits firms to enhance profits by charging prices in accordance to the characteristics of different markets. But it does take some degree of control over markets, and it is not always possible. Consumers may engage in arbitrage to take advantage of the price differences created by TNCs attempts to engage in market segmentation. Market segmentation is often accomplished by differentiating products slightly, perhaps by varying the size of a package, the payment terms, or the advertising image of the product. Or, a producer may appoint different distributors in different markets. Most often, the marketing is carried out by large TNCs with market power; price discrimination then becomes an internal marketing decision.

**Answers to the multiple choice questions:**

1-e, 2-c, 33-a, 4-a, 5-d, 6-d, 7-c, 8-b, 9-d, 10-a, 11-d, 12-c, 13-b, 14-c, 15-b, 16-a, 17-c, 18-b, 19-d, 20-b.

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**Chapter 6 - International Trade and Economic Development**

**I. Match the Terms and Definitions**


**II. Problems and Questions:**

1. a. $107.20; b. about $200; c. about $400; d. $104,567.

2. a. A=$1,010, B=1,020; b. A=$1,105, B=$1,219; c. A=$1,220, B=$1,486; A=$2,705, B=$7,245. Notice that with a one percentage point difference in growth rates, after 100 years,
economy B provides its citizens with 2.7 times as high a standard of living as economy A. The power of compounding is great.

3. First of all, show how the increase in real output from international trade and specialization shift the production function, which in effect represents a one-time improvement in technology. You could refer back to Case Study 3.1 in Chapter 3, which shows that the establishment of free trade is identical to a one-time spurt in economic growth. Then, use the Solow model to show how such an upward shift in the production function causes an increase in the economy’s steady state equilibrium. Shown here is Figure 5.12 from the textbook, which shows clearly how an upward shift in the production function from \( f_1(K) \) to \( f_2(K) \) causes the steady level of output to immediately increase from \( Y^* \) to \( Y' \) at the initial steady state level of capital \( K^* \), after which the capital stock gradually grows to \( K^{**} \) and output increases further to \( Y^{**} \). The growth in output from \( Y^* \) to \( Y' \) is short-run growth, the growth in output from \( Y' \) to \( Y^{**} \) is the medium-run, or transitional, growth as the economy shifts from one steady state to another.

4. The growth effect of international trade is almost never found to be positive in the case of countries whose comparative advantage is in exporting raw materials. As first confirmed by Jeffrey D. Sachs and Andrew M. Warner (1995) and reconfirmed by Jeffrey A. Frankel’s (2010) survey of the literature, in the case of raw material exporters, statistical results consistently show that expanding trade reduces economic growth. This finding is referred to as the natural resource curse, and many explanations have been given: (1) the transnational firms who dominate trade have the power to suppress prices of natural resources, (2) the elasticity of demand for natural resources is low, and (3) the concentration of ownership of resources keeps export earnings in the hands of local elite business and resource groups that use their earnings to control political institutions that restrict economic and social change.

III. Multiple-Choice Questions

1-d, 2-a, 3-e, 4-c, 5-d, 6-c, 7-d, 8-a, 9-d, 10-d, 11-b, 12-b, 13-c, 14-b.

Chapter 7: International Trade, Human Happiness, and Unequal Economic Development

I. Match the Terms and Definitions

II. Problems and Questions:

1. A country’s ability to use imported technology can increase its welfare. A country can increase its absorptive capability by improving the general level of education, infrastructure, and institutions. A country’s ability to copy rather than invent technologies may permit follower countries to achieve higher rates of economic growth and catch up to the technology leaders.

2. When ideas and knowledge are transferred in the form of designs, directions, instructions, blueprints, or diagrams that can be used directly by people to learn, understand, and apply the ideas and knowledge, the international transfers of technology are usually referred to as direct transfers of technology. International trade may enable direct transfers by creating contacts between people, creating competition that requires producers to acquire new technology, or simply stimulating curiosity through the introduction of new products.

   International trade may also bring about the indirect transfers of technology, which are the technology improvements embodied in the products that are imported from abroad. For example, a country can import foreign technology indirectly by importing capital goods and intermediate inputs that embody the technology.

3. International trade often enters these debates because many people are willing to accept the suggestion that foreign imports are the main reason they are losing the economic benefits they thought they had achieved. In fact, foreign competition is often held up by employers as the reason why they have to cut health benefits or pension contributions. Transnational firms continually threaten to shift production overseas if governments do not reduce taxes, eliminate regulations, or revise labor laws. Employers use the same threats when they deal with labor unions, threatening to pull up stakes or to outsource parts of their domestic production to foreign plants if unions do not agree to wage and benefits cuts. Governments take these threats seriously, and indeed corporate tax rates have been substantially reduced in many countries. Subsequently, the decline in tax revenues has strained governments’ ability to provide their citizens with the economic rights prescribed in the Universal Declaration of Human Rights.

4. Wealth is defined as the accumulated value of assets and capital in people’s possession. Income is the flow of new purchasing power acquired, and when these flows are adjusted for expenditures and depreciation of accumulated assets, they indicate how the stock of accumulated wealth changes. It is the accumulated set of assets, not annual income, that has most often been equated with economic power because the accumulation of wealth greatly exceeds the annual flows of income. Wealth also reflects accumulated social capital and economic capital, which directly provides people with economic, social, and political power.

5. A just society is one that someone would choose to join if they made their choice from behind a “veil of ignorance,” by which he meant that the choice would be made without anyone knowing their economic, social, and political status in that society. From such an unbiased view, where someone had no idea ahead of time where they would fit into that society, people would most likely prefer a society that provides true equal opportunity, equal education and social access, equal endowments, and a social safety net to protect people against unforeseen changes in circumstances, natural disasters, and simple bad luck. From a policy perspective, Rawls’ just society implies some form of social insurance like progressive taxation, collective government
services, and even direct government transfers to compensate for uncontrollable adverse individual outcomes. There must be mechanisms by which the lucky compensate the unlucky. There must also be a fair distribution of income, and inheritances would be broadly redistributed across all individuals. Rawls argues that the basic human rights that underlie social justice are inseparable from basic economic rights, and he therefore advocates a more equal distribution of wealth and income. Rawls ideas of a just society are effectively built into the United Nations Universal Declaration of Human Rights.

6. One reason for the agglomeration of innovative activity is that the adoption and application of existing technologies is not free. Technology transfers are costly, even when knowledge and technology is openly available. Applying existing technology normally involves a learning process and/or an adaptation of the technology to one’s specific circumstances. Such learning and adaptations are not free. Copyrights and patents restrict movement of ideas.

Can you think of an example where according to Moses Abramovitz “All other things equal, technological change will be faster in those locations where there are more resources and wealth to pay for the absorption of new technologies” does not hold true?

If the political and social climate does not want a particular technology, adaptation can be halted or at least slowed down. A good example of this is the introduction of genetically modified seeds in Europe’s agriculture sector. The European Union has a high absorption capacity for innovation because of its high level of education and other human capital, but in the case of genetically modified seeds, its culture does not want this new technology. In other countries where political power is concentrated, the chemical companies can force countries to adapt the new technology despite lower technological absorption capacity.

7. According to Bhagwati’s model of immizerising growth, gains from increased international trade may be undermined by adverse price movements (the terms of trade deteriorate) when economic growth that is biased towards expanding a country’s capacity to export products for which world demand is very inelastic. Such growth can actually cause national welfare to decline.

Developing economies are especially prone to suffering immiserizing growth because developing economies are often predominantly suppliers of raw materials and agricultural products. Miltiades Chacholiades (1990) lists the conditions that make immiserizing growth possible: (1) the exporting country’s growth in productive capacity is concentrated in the sectors of the economy that export, (2) the price elasticity of demand for the export product is inelastic, (3) exports account for a large share of the country’s GDP, (4) technological change is minimal, (5) the export country supplies a large portion of total world output, and (6) the export country does not restrict trade. Not all six of these conditions have to be satisfied for growth to be immiserizing; even when demand is elastic, satisfaction of the other five conditions may still be enough to cause immiserizing growth. The example of Brazil and its coffee exports is detailed in the textbook.

III. Multiple-Choice Questions

1-b, 2-b, 3-b, 4-a, 5-a, 6-b, 7-a, 8-d, 9-d, 10-d, 11-a, 12-d, 13-a.
Chapter 8: Tariffs, Quotas, and Other Trade Restrictions

I. Match the Terms and Definitions


II. Questions and Problems

1. a. For any given tariff, it is always possible to set a quota that reduces imports by the same quantity and changes domestic and foreign prices by the same amounts, all other things equal. Compare examples 8.4 and 8.11. You can similarly set up a two-country partial equilibrium model and generate nearly identical results for a tariff and its equivalent quota, showing precisely how in each case the product prices and quantities at home and abroad shift to the same new equilibrium values, how the changes in consumer surplus and producer surplus are identical, and how the deadweight losses are the same.

b. Tariffs provide revenue to the importing country’s government, quotas provide rents to either importers or exporters. Also, if supply or demand curves change, the equivalence between tariffs and their “equivalent” quota ceases to exist. And, quotas and tariffs tend to induce different types of rent-seeking activities because the potential beneficiaries of tariff revenue and quota rents are different.

2. From Homeland’s perspective, the tariff of $2 million levied by Homeland’s government effectively shifts the international supply curve up by $2 million. This results in a new equilibrium price of $9 million in the Homeland market. Notice, also, that the price in Abroad falls to $7 million as Homeland reduces its imports from 80 to 40 million units. The tariff revenue collected by Homeland’s government from importers, areas C plus Y, is thus paid in part by Homeland’s consumers and in part by Abroad’s producers. For Homeland, the welfare effects of shifting from free trade in jet aircraft to a $2 million specific tariff are as follows:

   Homeland Consumer Surplus = -(A+b+C+d) = -$130.00 million
   Homeland Producer Surplus = +(A) = + $70.00 million
   Homeland Gov’t Tariff Revenue = +(C+Y) = + $80.00 million
   Net Change = Y−b−d = + $20.00 million

Homeland thus actually gains from the tariff. Its consumers of jet aircraft in effect pay for some of the gains by Homeland’s jet aircraft producers. Who gains from the tariff revenue of course depends on how Homeland’s government spends or distributes its tax revenue. Note that Abroad suffers a net loss that exceeds Homeland’s net gain by the total deadweight losses in both countries:

   Abroad’s Consumer Surplus = +(W) = + $70.00 million
   Abroad’s Producer Surplus = -(W+x+Y+z) = -$130.00 million
   Net Change = Y−b−d = - $60.00 million

The net loss for the world is:

   World deadweight losses = -(b+d+x+z) = - $40.00 million
These results show that Homeland gains from the tariff and Abroad loses net welfare. By effectively reducing its demand, Homeland improves its terms of trade effect and thus shifts part of the tariff payment to producers in Abroad. Note, however, that the world as a whole suffers a welfare loss equal to $40 million.

If Abroad retaliates by levying a tariff on Homeland’s exports, then it is likely that Homeland will also suffer a terms of trade loss in addition to further deadweight losses.

3. There is a convenient formula for calculating the change in effective protection of a final product industry caused by a change in protection of the industry providing intermediate inputs:

\[ \Delta \text{ effective protection} = - \frac{\text{input share}}{\text{value added as } \% \text{ of final good price}} \cdot \left( \% \text{ price change of input} \right) \]

Therefore:

(a) \(- (50\%) (10\%) / 50\% = - (5\% / 50\%) = -10\%.

(b) \(- (20\%) (50\%) / 80\% = - (10\% / 80\%) = -12.5\%.

4. Use Figure 8.17 to explain how inelastic demand enables an exporting country government to effectively make foreign consumers pay most of the export tax.

**III. Multiple-Choice Questions**

*For each question, select the statement that best answers the question or completes the sentence:*

1-e, 2-c, 3-d, 4-b, 5-c, 6-c, 7-e, 8-c, 9-b, 10-a, 11-b, 12-a, 13-c, 14-b, 15-b.
Chapter 9: The History of Trade Policy

I. Match the Terms and Definitions


II. Problems and Questions:

1. The endogenous tariff model starts from the premise that many voters are confused about how policy makers affect their welfare. Therefore, politicians running for office must use advertising, public relations, and other marketing activities to influence voters. Such activities take money, of course, which leads office-seeking politicians to “sell” their policy making power in exchange for campaign contributions that can be used to fund political advertising to sway ignorant voters.

   Figure 9.3 illustrates the endogenous tariff model. There are diminishing marginal returns to campaign expenditures. Therefore, in the top diagram of Figure 9.3, the total number of votes gained by politicians (future policymakers) promising increased tariffs and gaining more campaign funds with which to influence voters is represented by a curve with a declining slope. At the same time, voters do not find it worth their time and effort to become informed about trade policies until tariffs are more restrictive (high). Thus, as tariffs rise the uncertainty about the politician’s activity in the legislature diminishes, which causes increasing losses of votes from those people hurt by the tariffs, as illustrated by the increasing-slope curve in the top diagram of Figure 9.3. The curve in the bottom of Figure 9.3 shows the total gains in votes as promised tariff protection is increased; it peaks at the tariff level where marginal votes gained from campaign expenditures is equal to the marginal votes lost from those adversely affected by the tariffs in the upper diagram, or where the slopes of the two curves are equal.

   You can tweak the model to change certain assumptions. For example, if voters become more informed, campaign expenditures will secure fewer votes and the “votes gained” curve in
the top diagram of Figure 9.3 will be lower. All other things equal, there will be less protection. In a smaller economy, the losses from protection are likely to be greater and felt sooner because consumers have fewer domestic options, thus raising the votes lost curve; protection in small countries may, therefore, tend to be lower than in large countries.

2. Use the Figures 9.5 and 9.6 illustrate how at least one industry must be “injured” for a country to achieve the full potential welfare gains from specialization and exchange.

3. Use Figure 9.7 and the discussion on pages 260-263 to write your answers.

4. Like all trade restrictions, sanctions cause losses and gains in many industries and countries. The costs are not felt only in those countries that are targeted by the sanctions. The costs of the trade sanctions on Iraq fell not only on Iraq, as expected, but also on Greece, Jordan, and Turkey, the three countries that traditionally traded most with Iraq. Ironically, the countries that gained the most from the sanctions on imports of oil from Iraq were Libya and Iran, two countries whose political behavior made them targets of a number of different trade sanctions by the United States and other countries. The gains and losses from trade sanctions are spread around the world in complex ways seldom foreseen, much less accurately estimated, by politicians eager to use the sanctions as a public show of their concern for some international issue.

5. The most important fundamental principles incorporated into the General Agreement on Trade and Tariffs (GATT) are that:
● Countries commit to keeping their tariffs below explicit limits.
● Countries can offer reductions in their limits on tariffs as “concessions” in order to induce other countries to reduce their tariffs.
● Countries who sign the agreement must give all other signatories most favored nation (MFN) treatment.
● Countries should not discriminate between foreign and domestic goods and services once they have entered the country and tariffs have been paid.
● Countries should use tariffs rather than quotas or other less visible non-tariff barriers if trade must be restricted.

Most of these principles have more or less been adhered to by GATT signatories. With some exceptions carried out under anti-dumping procedures or under the escape clause that lets countries restrict trade when an industry suffers extreme injury, countries have kept tariffs below their initial limits. The MFN principle has been adhered to for the most part, except in the cases where regional trade agreements have been negotiated. There has been some reluctance to eliminate quotas, and the proliferation of VERs in recent decades has actually increased nontariff barriers to trade.

6. Use the discussion of the Multi-Fiber Arrangement in Chapter 9 to guide your essay. The progression of the arrangement from a bilateral one covering only cotton textiles and clothing to a multilateral one covering all types of textiles and clothing was motivated by the natural tendency of other countries and other fibers to substitute the countries and fibers restricted by each of the agreements. You might highlight the general idea illustrated so well in general equilibrium models, which is that if you change one thing in the economy, everything else adjusts and therefore also changes. Restricting trade in one item implies that resources become
available to do other things, such as produce clothing using other fabrics, and markets demand substitute goods, such as similar products from other countries. Hence, to protect their own clothing and textile industries the developed countries eventually had to pressure all producers of clothing to “volunteer” to restrict all types of clothing and textile exports.

7. Political economy models can shed some light on U.S. trade policy in the 1800s. For example, the interests of new industries in the northern states led them to lobby their representatives in the Congress, who were able to prevail over the free-trade southern states. The median voter model probably applies here, especially when immigration increased the population of the northern states much more than it increased the southern states’ populations. Industries were better able to overcome the free rider problem and organize their opposition to free trade than were consumers or southern agricultural interests. U.S. tariffs fell sharply in the early 20th century, and this can be explained by the increased influence of midwestern farmers; again, the median voter model helps here, as does the adding machine model. All cases of protectionism can be explained partially by the uninformed voter model, and the endogenous tariff model can also be used to explain why there is likely to be some amount of protection regardless of the net costs and benefits of protectionist policies.

8. The United States’ procedure, which has been copied by many other countries, is as follows:
   I. A producer in the United States seeking protection from alleged dumping must first petition the United States Department of Commerce for a ruling on whether or not there is dumping. The petitioner presents evidence to support its case, but the Department of Commerce may also gather evidence.
   II. If the Department of Commerce finds dumping is taking place, the case is referred to the International Trade Commission (ITC), a separate office of the U.S. government, which must then rule on whether or not the dumping has a “material” affect on the well-being of the U.S. industry. The ITC is composed of four members, two representing each of the two major political parties of the United States, the Democrats and the Republicans. The petitioning U.S. producer could be required to present more evidence.
   III. If both the Department of Commerce and the ITC rule in favor of the petitioner’s request for protection, the matter is referred to the President of the United States, who then decides whether or not to implement a tariff equal to the estimated margin of dumping, supposedly taking all national interests into consideration.
   This three-step procedure seems to provide ample protection against phony claims of dumping. But, in recent years, the seemingly difficult process has not stopped the increased application of anti-dumping tariffs.

9. To successfully accuse a firm of predatory pricing in the United States under the Sherman Antitrust Act requires proof that (1) the alleged predator had the intent to drive out the competition in order to monopolize the market, (2) the predator had a reasonable chance of succeeding in its attempt to drive out the competition, and (3) that the loss of competition would cause actual damage to the economy. These are much tougher criteria than those of the GATT/WTO. U.S. antitrust laws and their antidumping provisions are intended to prevent monopolization of markets, they are not intended to protect individual firms from their competitors. Article VI(1) of the GATT says dumping occurs when:
(a) the price of the foreign product is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country,
(b) or, in the absence of such domestic price, the price of the foreign product is less than either
   (i) the highest comparable price for the like product for export to any third country in the ordinary course of trade, or
   (ii) the cost of production of the product in the country of origin plus a reasonable addition for selling costs and profit.

The margin of dumping is defined as (1) the difference between the selling price in the foreign market and the average production cost plus transport, selling costs, and “reasonable” profit, or (2) the difference between the foreign price and a home price or third-country market price. If either definition of dumping is satisfied, the WTO permits countries to levy a tariff to exactly offset the supposed degree of dumping.

The most likely reason why the two definitions differ is that domestically there are many groups that would oppose such blatant protection against what is deemed normal competition, but internationally antidumping measures fall directly on foreigners, who have relatively little ability to influence the U.S. Congress. Of course, you know from the general equilibrium model, as well as the growth models, that many domestic groups do suffer from protectionism, but unfortunately few of those groups realize this or are willing to defend themselves with the same fervor as those domestic interests that directly face foreign competition.

III. Multiple-Choice Questions

1-d, 2-a, 3-d, 4-b, 5-b, 6-d, 7-a, 8-b, 9-b, 10-c, 11-b, 12-a, 13-a, 14-d, 15-c, 16-c, 17-d, 18-b, 19-b, 20-d, 21-a, 22-d, 23-a, 24-c, 25-a, 26-c, 27-b, 28-d.

Chapter 10: International Trade Policy: A Holistic Perspective

I. Match the Terms and Definitions


II. Questions and Problems

1. Brazilian economic historian Celso Furtado (1963) estimated that Brazil’s terms of trade fell by about 50 percent at the start of the Great Depression, which meant that 1930 exports of coffee and other primary products only purchased half as many real imports as in 1929. Brazil was able to balance its balance of payments (see Chapter 11) only by severely devaluing its currency and
making imports much more expensive relative to domestic products. Exactly as exchange rate theory predicts, this shift in relative prices of imports to domestic products led domestic consumers to substitute domestic goods for foreign goods. Brazilian trade thus remained in balance despite the collapse of export earnings because it suddenly became economical to produce many products in Brazil that, before 1929, were imported from abroad.

The boom in Brazilian industrial production was only partially caused by the devaluation’s effect on import prices, however. Domestic demand was also stimulated by the Brazilian government’s very expansionary fiscal and monetary policies. These policies were actually an unintentional by-product of traditional domestic mercantilist rent seeking. When coffee prices fell sharply, the Brazilian government responded to coffee barons’ demands for help by providing huge subsidies that essentially maintained domestic coffee farmers’ incomes despite the fall in international prices. To pay for these subsidies, the Brazilian government printed money and substantially increased the domestic money supply. Therefore, in 1930 Brazil unintentionally carried out precisely the expansionary monetary and fiscal policies later advocated by John Maynard Keynes (1936) to reduce the Depression’s high unemployment in Britain, the United States, and elsewhere. In the words of Furtado (1963, p. 212):

It is therefore quite clear that the recovery of the Brazilian economy which took place from 1933 onward was not caused by any external factor but by the pump-priming policy unconsciously adopted in Brazil as a by-product of the protection of coffee interests.

The year 1933 marked the deepest point of the Great Depression in most developed countries of the world, but that year industrial production in Brazil had recovered its 1929 level. By 1937, Brazil’s industrial production was 50 percent greater than it was in 1929, and overall real domestic product was 20 percent greater in 1937 compared to 1929, quite a feat in the 1930s. The new industries were located mostly in the urban area around the city of São Paulo, where the coffee wealth was concentrated.

2. A. Charles Wilson (1963, p. 26) describes mercantilism as “all the devices, legislative, administrative, and regulatory, by which societies still predominantly agrarian sought to transform themselves into trading and industrial societies.” Recall also from the previous chapter Robert B. Eckelund and Robert Tollison’s (1981) description of mercantilism as the “supply and demand for monopoly rights through the machinery of the state.” That is, a mercantilist society is an active rent-seeking one in which commercial interests bid for, and gain control of, government mechanisms that provide them with special privileges and monopoly powers over sectors of the economy. When these alliances between central governments and commercial interests were extended overseas, mercantilism became colonialism, which was essentially the joint government-private conquest of foreign territory and resources.

B. This part of the question is open. Hint: Use the definition of mercantilism, and match it to your objective description of today’s global economy.

3. Prebisch’s justification for import substitution industrialization began with the fact that in a world with free trade, developing economies’ comparative advantage in trade lay with primary products. He then drew on evidence showing that the income elasticity of demand for primary products was inelastic and demand for such products would not grow in proportion to world income. On the other hand, he saw that the demand for the industrial products that the wealthier,
developed countries produced had an income elasticity greater than one. Prebisch therefore predicted that the terms of trade of countries that exported primary products would, in the long run, continually deteriorate. If export prices fall while import prices rise, the country’s terms of trade are said to decline, and the country effectively has to export more of its production to pay for the products it imports. Prebisch concluded that with deteriorating terms of trade, international trade would serve as a greater engine of growth for the industrialized countries than it would for the primary product exporters in the third world, and developing countries would thus fall further behind industrialized countries if they continued to produce according to current comparative advantage.

The second main strand of Prebisch’s argument for ISI policies was derived from the structuralist and dependency theory schools of thought. Prebisch saw how the international economic system had shaped the structure of Latin American economies and other developing economies. He therefore called for explicit government policies to free economies from the structures imposed by comparative advantage and foreign investments owned and operated by foreigners. His suggested ISI policies were intended to expand the manufacturing sector by drawing resources away from traditional primary economic activities like agriculture and mining. ISI policies that closed a country’s borders and intentionally defied its current comparative advantage were seen as a “necessary short-run cost” to force a long-run structural change in the economy. The structuralists and Prebisch claimed that the forced structural change would more than pay for itself in the form of higher rates of economic growth in the long run.

Note: For most of the twentieth century, commodity prices indeed trended downward, the occasional oil price spike notwithstanding. More recently, the decline in primary product prices has been accompanied by the growth of the margin between the prices paid to primary product producers and the prices earned in final product markets by the users of primary products.

Jacques Morisset (1998) examined the price differences between raw primary products in exporting countries and processed primary products in import markets (beef cows/beef, coffee beans/coffee, crude oil/fuel oil, crude oil/gasoline, rice/rice, sugar/sugar, and wheat/bread) over the period 1975–1994. He finds that “the spread between world commodity prices and domestic consumer prices has increased over time, by about 100 percent on average for the seven commodities analyzed here for 1975–94” (p. 520). These findings are troubling because they suggest that even the low measured income elasticity of demand for primary products overstates the expected growth of primary product demand. As the differential between export prices and the prices consumers pay in developed-country markets grows, it takes ever larger export price declines in developing economies to raise exports because the export price declines are only partially, or not at all, passed on to the final users.

Morisset examined many possible explanations for this rapid expansion of the differential between export prices of raw materials and prices in the final export markets, including changes in trade policies, transport and insurance costs, and marketing and processing costs. He finds that these explanations are not supported by the evidence. A more likely cause is the increased demand for processed food products in high-income countries and the growing concentration of the food processing industry in the hands of a small, and shrinking, number of large transnational corporations that capture most of the final price paid by consumers.

Price volatility is problematic for all exporters of primary commodities. Not only have primary commodity prices declined over time, but as we pointed out in Chapter 6, primary product prices have fluctuated rather wildly around the long-term downward trend. Christopher Blattman, Jason Hwang, and Jeffrey Williamson (2004) use statistical analysis to show that it is
the volatility of export prices, not persistent price declines, that most significantly depresses economic growth in developing countries. Their explanation for this finding is that economies can deal with gradual changes much more easily than sudden, unpredictable changes. Therefore, an economy should diversify its export earnings across more and different products in order to stabilize the engine of growth.

4. The structuralist school of economics explicitly rejected mainstream neoclassical economics’ fundamental assumption that economic outcomes were the result of free choices made by individuals who sought, rationally, to maximize their individual welfare. Structuralists argued that human behavior is holistically influenced by, among other things, culture, institutions, and psychological factors that lead people to favor the status quo. The structuralists further emphasized that international trade perpetuated unequal economic and social structures, such as the way the export of sugar by Brazil in the sixteenth and seventeenth centuries created a plantation society whose slavery and unequal wealth still distorted Brazilian society. Where neoclassical economic analysis assumes smooth functions and prompt marginal adjustments to price signals, structuralists argued that developing economies were plagued by structural rigidities, such as culture and institutions, that prevented smooth adjustments. The structuralists were convinced that if developing countries followed their current comparative advantages, they would forever be locked in to exporting primary products and to deteriorating terms of trade.

The structuralist school was related to the French philosophical movement led by, among others, the anthropologist Claude Lévi-Strauss. This philosophical movement, called structuralism, replaced existentialism as the dominant philosophical mood in the late 1940s and 1950s. Like the structuralist school of economics, philosophical structuralists rejected the idea that humans make choices according to their free will. Rather, structuralists hypothesized that human behavior is determined by various structures, or in terms of our holistic language, systems. They therefore concluded that human economic behavior could only be explained and predicted if the basic social, political, natural, and economic structures were understood. Like these structuralists in philosophy, anthropology, sociology, and other fields, structuralist economists accepted that human economic behavior was tightly bound by broader economic systems and, for developing countries, the international economic system, within which they lived.

5. **A. Agglomeration is driven by economies of scale.** Agglomeration is impeded by transportation costs and communications costs. Your answer should include the interplay between these two factors. Most simply put, when economic activity is subject to increasing returns to scale and it becomes easier to ship stuff around, production will tend to agglomerate in a limited number of locations.

   **B. The activities most likely to agglomerate are those that enjoy economies of scale when the firms that make up the industry are located close together.** These economies of scale depend on the sharing of ideas and technologies as well as a common labor force with certain critical accumulated skills and experience. There seems to be general consensus in economics that agricultural production is least likely to agglomerate because it uses land extensively. Still, in recent decades the food industry has expanded to include the field production of many standardized crops into a factory system of sorts. But farming is still limited by that traditional fixed factor land. Of course, animal husbandry has been turned into a factory process in the form of confined feeding operations as opposed to the traditional field grazing of animals.
Services are a mixed bag when it comes to economies of scale; some types of services enjoy economies of scale, such as, telecommunication systems that rely on networks, but telecommunications do not particularly have higher levels of agglomeration, just economies of scale. Theater and film making as well as financial services seem to agglomerate. Others struggle to improve their efficiency through size. Manufacturing is definitely subject to economies of scale and tends to agglomerate. Often parts manufacturers locate close to final product manufacturers. Innovation and research seem to be very dependent on scale economies, and innovative activities are the most likely to agglomerate. People with bright ideas like to be located close to others with bright ideas. Examples include biotechnology around Boston, Massachusetts, or computer technology around Silicon Valley, California.

There are many examples of agglomeration:

Detroit – automobiles
Pittsburg, the Ruhr Valley, Birmingham – Steel
Silicon Valley – Information technology
London, New York – Financial services
Boston, Massachusetts – biotechnology
Province in China across from Hong Kong – manufacturing
Bangalore?India – telemarketing services
Los Angeles, California – film making

You can probably think of many other examples of certain economic activities concentrated in specific regions or cities. These examples most likely are characterized by increasing returns to scale, technology spillovers, and most likely dependent on labor with specialized talents and training.

C. There are many ways to answer this question, but somewhere your answer should bring up this point: As the world increasingly integrates and many industries are subject to increasing returns to scale, economic activity will tend to agglomerate not only within each country, but it will agglomerate in the integrated world economy. This means that the growth of increasing returns to scale industries will not be uniform across countries; some activities will grow in some countries and not at all in others. Why does this matter?

III. Multiple-Choice Questions

1-c, 2-b, 3-d, 4-b, 5-d, 6-b, 7-a, 8-b, 9-e, 10-a, 11-b, 12-d, 13-d, 14-b, 15-d.
Chapter 11: International Investment and International Finance

I. Match the Terms and Definitions


II. Questions and Problems

1. You should show that individuals in the various sectors of the economy face the actions and decisions of others in the same economy and others in the rest of the world. You might start with the closed-economy national version of the circular flow diagram (Figure 2-6), and then progress to the open-economy circular flow diagram (Figure 2-7). As an example, you might use the case of government taxes on wages and salaries. In this case, households may decide to supply less labor to producers, since households would get to keep less of the income they earn. Additional leisure, which is not taxed, will be substituted for the labor income that would otherwise be used to purchase consumption and investment goods. This would in turn affect profits for producers and returns on other factors of production as well as the returns to assets. In short, everything depends on everything else in an economy, and thus everything depends on the many incentives that drive activities throughout the economy. Then, you can trace through how taxes on income in one economy alter savings flows and trade flows and how those changes affect trade and investment flows between the national economy and the rest of the world, and how those changes specifically might affect consumers (prices, income), producers (competition, prices, profits), the financial sector (savings, interest rates) and government (tax revenue, transfers) in the rest of the world.

2. You should have no difficulty in seeing the sudden growth of current account deficits beginning in the early 1980s, the reduction in those deficits in the very early 1990s, and the renewed growth of current account deficits later in the 1990s and early 2000s. You should also notice that the current account deficits were, as expected, offset by financial account surpluses and the gradual decline in the U.S. net international investment position. In fact, the U.S. became the world’s biggest net debtor. If you look at the detailed financial accounts, you may also notice that the U.S. net international investment position involves a great variety of assets that imply a great variety of payments and future obligations.

3. The increasingly negative net international investment position of the United States should show up in the balance of payments as increasing net negative flows of rents, dividends, interest payments, royalties, etc. Yet, that was not the case throughout the 1980s and 1990s. It was not until after 2000 that the huge negative net international investment position of the U.S. caused the net flow of asset returns in the current account to turn negative, and then only barely. How was the United States able to balance inflows and outflows of asset returns when foreigners owned so many more U.S. assets than Americans owned foreign assets? It appears to be the case that U.S. investors enjoyed much higher returns on their foreign investments than foreigners.
enjoyed on the U.S. investments. One reason may have been that foreign-owned U.S. companies were more concentrated in low-profit industries. Also, much foreign investment in the U.S. consisted of government bonds, which are a less risky investment but also a lower return investment. Another important factor may be that, because foreign investment in the U.S. is newer on average, it is not as profitable. New investments take time to mature and become cash cows. Also, foreign investors in the U.S. may have reinvested many of their earnings on their U.S. investments, which means the rents, interest payments, and dividends that accrued to foreigners did not flow out of the U.S. and, therefore, did not appear in the U.S. balance of payments. And, there is the possibility that measures of net international investment are flawed.

4. Your diagram should look like the Figure 11.4.

5. The Figure Q1 below, which is similar to Figure 10.7, shows that savers in Ecuador, where the equilibrium rate of return is 10 percent, will acquire assets in Peru, where the rate of return is 20 percent. As a result, savings equal to \( I_t \) flow from Ecuador to Peru, total borrowing increases in Peru and falls in Ecuador, Ecuadorian savers gain welfare equal to the area \( a + b \), Peruvian savers lose welfare equal to the area \( c \) because the total supply of savings expands with the inflow of Ecuadorian savings equal to \( I_t \). Ecuadorian borrowers lose welfare equal to the area \( a \) as domestic savings flow overseas to Peru, and Peruvian borrowers gain welfare equal to the area \( c + d \).

III. Multiple-Choice Questions

1-d, 2-c, 3-c, 4-c, 5-c, 6-a, 7-a, 8-c, 9-a, 10-d, 11-a, 12-a, 13-d, 14-d, 15-a, 16-d, 17-d, 18-a.
Chapter 12: The Foreign Exchange Markets

I. Match the Terms and Definitions


II. Questions and Problems

1. This question is very straightforward and essentially asks you to summarize the whole discussion about foreign exchange market arbitrage, including geographic arbitrage, triangular arbitrage, and intertemporal arbitrage. See also the example on arbitrage of cucumbers in the textbook chapter.

   Geographic arbitrage, enhanced by modern communications, ensures that the relative prices of any two specific currencies will be essentially the same anywhere in the world where the exchange of currencies is not restricted. Modern communications have created an integrated world market for foreign exchange that essentially functions twenty four hours per day. Triangular arbitrage ensures that all exchange rates are compatible and that, in the case of n currencies, you only need to know the n-1 exchange rates for one currency to determine the world’s [n(n-1)]/2 bilateral exchange rates. Triangular arbitrage also means that if any one exchange rate changes, then all other exchange rates will also tend to change.

   Intertemporal arbitrage links the spot exchange rate to expectations of future exchange rates in general and, when they exist, the forward markets. The interest parity condition is the relationship by which the spot exchange rate is linked to the expected future exchange rates. The covered interest parity condition links the spot rate to the forward exchange rate, and the uncovered interest parity condition, or just the interest parity condition in general, links the spot exchange rate to the expected future exchange rates.

2. The application of Equation (4.12), and some reshuffling of its terms in order to isolate the forward exchange rate, gives us an exact answer: \( f_{t+1} = e_t \left[ \frac{(1 + r_{US})}{(1 + r_{CAN})} \right] = \left[ \frac{1.09}{1.013} \right] \times .50 = .4823 \). That is, intertemporal arbitrage would set the forward rate at .4823 U.S. dollars = 1 Canadian dollar.

3. In a world of n countries there are \([n(n-1)]/2\) bilateral exchange rates. Thus, in the case of 158 currencies, there are \([158(157)]/2 = 12,903\) bilateral exchange rates. But there are only n-1 fundamental exchange rates from which all the others can be found so long as triangular arbitrage is complete. Thus, there are 158−1 = 157 fundamental exchange rates.

4. The covered interest parity condition links the spot exchange rate to the forward exchange rate; the uncovered interest parity condition links the spot exchange rate to the expected future exchange rate. The covered interest parity condition is more likely to hold because it does not include a risk factor, which can cause the spot and expected future exchange rates in the uncovered interest parity condition to diverge from their theoretical relationship.

5. The completed table is:
The Completed Set of Cross Rates

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<tr>
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<th>US$ per</th>
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<th>AUS$ per</th>
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<td>2.00</td>
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<td>2.50</td>
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<tr>
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<td>2.00</td>
<td>.02</td>
<td>.80</td>
<td>.40</td>
<td>1</td>
</tr>
</tbody>
</table>

6: The application of Equation (12.14) gives us an exact answer: \( e_t = \frac{(1 + r_{UK})}{(1 + r_{US})} E_{t+1} = \frac{(1.04/1.08)}{} \times 2.50 = 2.41 \). Thus, intertemporal arbitrage sets the spot rate equal about $2.41 dollars = £1 pound.

7. The application of Equation (12.14), and some reshuffling of its terms in order to isolate the forward exchange rate gives us an exact answer: \( f_{t+1} = e_t \frac{(1 + r_{CAN})}{(1 + r_{UK})} = \frac{(1.05/1.013)}{} \times 3.23 = 3.00 \). Thus, intertemporal arbitrage would set the forward rate at $3.00 dollars = £1 pound.

8. Using Equation (12.14), (a) \( e_t = \frac{(1 + r^*)}{(1 + r)} E_t e_{t+1} = \frac{(1.02/1.08)}{} \times 2.00 = 1.8888 \); (b) \( e_t = \frac{(1.08/1.02)}{} \times 1.00 = 1.0588 \); (c) \( e_t = \frac{(1.15/1.15)}{} \times 1.50 = 1.50 \).

9. Adjusting Equation (12.14), (a) \( E_t e_{t+1} = \frac{(1 + r^*)}{(1 + r)} e_t = \frac{(1.04/1.16)}{} \times 1.00 = 0.8966 \); (b) \( E_t e_{t+1} = \frac{(1.13/1.07)}{} \times 2.00 = 2.1121 \); (c) \( E_t e_{t+1} = \frac{(1.10/1.10)}{} \times 0.50 = 0.50 \).

III. Multiple-Choice Questions

1-b, 2-b, 3-d, 4-a, 5-c, 6-b, 7-b, 8-b, 9-b, 10-b, 11-b, 12-b, 13-b, 14-a, 15-d, 16-c, 17-a, 18-d, 19-a, 20-b, 21-c, 22-c, 23-c
Chapter 13: International Financial Markets

I. Match the Terms and Definitions


II. Questions and Problems

1. This is an open question. In your answer, you should refer to the balance of payments from the last chapter, and analyze how the individual entries in the balance of payments could be expected to change over the coming years. What do these changes imply for people, firms, and the government in the U.S?

2. In reality, the international investment position is at best an approximate representation of a country’s net foreign wealth. The reason for the inevitable inaccuracy of any measure of a country’s international investment position is that it is very difficult to estimate the current values of foreign assets. Depreciation as reported to the tax authorities is a highly inaccurate measure, often dictated by tax codes rather than true wear and tear for invested real capital. And market values are difficult to estimate for many assets that are not frequently traded. Years of accumulated statistical discrepancies in the balance of payments accounts also cause large inaccuracies in a country’s international investment position.

3. Hyman P. Minsky’s financial instability hypothesis is derived directly from Keynes’ writing on uncertainty, specifically Chapter 12 in Keynes’ General Theory. Minsky echoes Keynes in the assertion that capitalism’s inherent instability is caused by the precarious nature of capitalist finance. Financial decisions must be made in a state of uncertainty. To detail why financing causes instability, Minsky (1982) identified three broad categories of financial arrangements: hedge finance, speculative finance, and Ponzi finance. The precise mix of hedge, speculative, and Ponzi financing determines whether an economy has a stable or unstable financial system. Minsky then reasoned that if most financing arrangements in the economy are hedge financing, and there are few cases of Ponzi financing, then the financial system will be relatively stable and unlikely to generate panics and widespread economic distress. It takes a very substantial shift in economic circumstances to convert hedge financing into Ponzi financing. On the other hand, if speculative and Ponzi financing are prominent throughout the economy, then even a modest change in actual or perceived economic conditions can trigger a sudden rise in defaults that the financial industry cannot cover from its reserves and accumulated capital. In the latter case, the financial sector will become defensive and stop lending, in which case investment and consumption of durables will fall sharply, and the economy will fall into recession.

Minsky goes further to conclude: “Stability—or tranquility—in a world with . . . capitalist financial institutions is destabilizing” (1982, p. 101). To reach that conclusion, he derives his “second theorem,” which comes directly from Keynes’s view of investment under uncertainty. Like Keynes, Minsky points out that a capitalist economy requires that real activities such as investment and research remain consistently successful over extended periods of time if
aggregate demand is to remain compatible with the growing aggregate supply in the economy. This is exactly what Keynes meant when he wrote that investors, lenders, and borrowers follow the convention that they continue to do what they were doing as long as things work out roughly as expected, and this behavior will be “compatible with a considerable measure of continuity and stability in our affairs, so long as we can rely on the maintenance of the convention” (Keynes’s italics; 1936, p. 152).

Minsky also draws on Keynes’s explanation of why investors and lenders rely on recent experiences rather than long-run trends to predict the future. Keynes wrote: “It is reasonable . . . to be guided to a considerable degree by the facts about which we feel somewhat confident, even though they may be less decisively relevant to the issue than other facts about which our knowledge is vague and scanty” (1936, p. 148). Keynes has been fully validated by recent psychological research that finds that people discount the past as well as the future relative to today. Such shortsighted backward vision was actually institutionalized by many financial firms recently, such as AIG’s use of just a few years’ data to justify not holding any reserves for credit default swaps it issued on the top tranches of credit default swaps (Question 15 below).

Minsky then uses Keynes’s points that we use past experience to set our expectations and that our expectations are more influenced by recent experience than distant experience, to “prove” his second theorem:

Such a stable or tranquil state of the economy, if sustained for a while, will feed back and affect long term expectations about the performance of the economy. This will affect views of the uncertainties involved which, in turn, will affect asset values and permissible liability structures. (1982, p. 100)

Thus, the longer growth is sustained, the more investors and lenders begin to view the growth as normal. Soon they forget the recessions in the more distant past, or they convince themselves that the world is now in some way different, and they ratchet up their expectations. Investment then increases, which increases aggregate demand and economic growth and effectively makes the higher expectations self-fulfilling.

**III. Multiple-Choice Questions**

1-a, 2-a, 3-c, 4-a, 5-c, 6-c, 7-c, 8-d, 9-d, 10-b, 11-d, 12-a, 13-c, 14-d
Chapter 14: Exchange Rate Crises

I. Match the Terms and Definitions


II. Questions and Problems

1. Under the gold standard, the order effectively followed by national governments included:
   • Fix an official gold price or parity for the national currency in terms of a fraction of an ounce of pure gold.
   • Permit the free conversion of gold into domestic money and domestic money into gold at the parity price in unlimited amounts and without question.
   • Eliminate all restrictions on foreign exchange transactions and allow the import and export of gold.
   • Back domestic coin and currency fully with gold reserves, and link the growth of domestic money to the availability of reserves.
   • Allow the domestic price level to be determined by the worldwide supply and demand for gold.
   • If the central bank must serve as a lender of last resort in the case of short-term credit crises in the domestic banking sector, always charge interest rates well above those charged in the markets.

A gold standard has a serious weakness: Revenue-hungry governments will be tempted to issue more paper currency than they have gold stored in their vaults. Suspicious holders of paper money could then panic and start a “run” on gold, in which case the government would have to suspend convertibility of paper money into gold and effectively leave the gold standard. The gold standard was thus an order built on the faith that paper money and bank accounts could always be converted to pure gold at any time without restrictions.

The sixth rule was known as “Bagehot’s Rule,” in honor of a former director of the Bank of England who applied this rule to ensure that private banks would only borrow from the central bank when they truly faced an emergency, thus avoiding the central bank’s role as lender of last resort from undermining its other role of keeping the money supply compatible with gold supplies.

2. Using the example of the U.S. dollar and British pound from the textbook, the gold points were determined by arbitrage activity in response to deviations from the gold parity exchange rate at £1.00 = $4.87. For example, if the foreign exchange market for some reason fell much below the parity rate, arbitrageurs would enter the market, buy gold in England at the parity rate, ship the gold to the United States, use the gold to buy dollars there at the parity rate, then go to the foreign exchange markets to exchange dollars for pounds and earn a profit. This arbitrage profit would tend to cause huge amounts of dollars being exchanged for pounds, thereby driving the dollar price of pounds back to the parity rate of £1.00 = $4.87. The gold points were determined by transport costs, insurance costs, and other transactions costs. Specifically, the gold points were the limits to how far the exchange could deviate from parity before it became worthwhile to ship gold and exchange moneys and engage in the arbitrage activity described.
above. With the lowering of transport costs in the late 1800s, the gold points only deviated from the parity exchange rate by a few pennies. Since such arbitrage profit is quite safe, quick, and easy when the rules of the gold standard are observed; large sums of money would be devoted to arbitrage activity as soon as the arbitrage profits exceeded the costs of shipping gold and money.

You might use a diagram such as Figure 14.3 to illustrate how arbitrage and the gold points it establishes makes the supply and demand curves for pounds look like the thick “kinked” curves labeled D₂ and S₂ in Figure 14-3. The gold points could be maintained so long as everyone expected governments to continue to freely convert currency to gold at the fixed gold parities.

3. If international purchases and sales of assets are unrestricted, then the interest parity condition is likely to hold at least approximately. That is, \( e_s \approx \frac{(1 + r^*)}{(1 + r)}(E_t e_{t+n}) \), where \( r \) and \( r^* \) are the domestic and foreign rates of return on assets, respectively, \( e_s \) is the spot exchange rate, and \( E_t e_{t+n} \) is the expected exchange rates \( n \) periods into the future. Note that, if the interest parity condition holds, then depending on domestic and foreign rates of return on assets, the spot rate is clearly related to expectations of future exchange rates.

The interest parity equation implies that \( e_t = \frac{(1 + r^*)}{(1 + r)}(E_t e_{t+n}) \), where \( r \) and \( r^* \) are the domestic and foreign rates of return on assets, respectively, \( e_t \) is the spot exchange rate, and \( E_t e_{t+n} \) is the expected exchange rates \( n \) periods into the future. Note that, if the interest parity condition holds, then depending on domestic and foreign rates of return on assets, the spot rate is clearly related to expectations of future exchange rates. Thus, to keep the spot exchange rate fixed over time, each one of the terms on the right hand side of the equation must remain unchanged. That is, the domestic and foreign rates of return must stay unchanged and expectations must stay unchanged. But, for expectations to remain unchanged as time passes, future exchange rates must be expected to remain constant, which will only happen if rates of return are equal at home and abroad.

4. You can use the examples of exchange rate crises given at the end of the chapter to illustrate the role of the trilemma. The 1994 Mexican crisis, 1997 Asian crisis, and the 2001 Argentine crisis are similar in that each of the countries had liberalized financial account transactions and their foreign loans and investment had grown rapidly. Also, all the governments were openly committed to maintaining fixed exchange rates. That is, they had picked globalization and fixed exchange rates from the trilemma menu.

In each case, when it became apparent that underlying economic conditions and policies were not compatible with the exchange rates at which the currencies were being fixed, investors began to shift their wealth out of assets denominated in these countries’ national currencies and into assets denominated in U.S. dollars, Japanese yen, and other currencies that were expected to not lose value in the future. The shifts in wealth eventually turned into panics when it became apparent that the government was running out of reserves or politically unable to continue intervening to prevent the exchange rate from changing. Everyone became a speculator. Many importers in effect became speculators by making advance purchases of foreign goods, sometimes even making advance payments to foreign suppliers, because they feared a currency devaluation would raise the domestic price of foreign goods in the future. Exporters kept their overseas receipts parked in foreign bank accounts, awaiting the possible devaluation that would increase the amount earned from converting the foreign receipts to domestic currency. All of these things of course further increased demand for foreign exchange and reduced supply, and
central banks found themselves spending reserves of foreign exchange more and more rapidly in order to bridge the growing gap between demand and supply. After losing large amounts of foreign reserves, central banks gave up and let their currencies float freely, as the millions of large and small speculators had expected.

The economic slowdowns in Mexico, Southeast Asia, and Argentina were severe because the exchange rate crises triggered financial crises. In each case, domestic banks and domestic firms had borrowed overseas in dollars while their revenues were in terms of the domestic currency. That is, their liabilities were in dollars but their assets were in domestic money. Hence, exchange rate depreciation caused liabilities to suddenly rise in terms of the domestic currency. There was, therefore, a sudden deterioration of bank balance sheets; an increase in liabilities was not matched by a concurrent increase in assets. Many banks were technically bankrupt after the sharp decline in the value of the peso. Furthermore, many of the banks’ largest customers had also borrowed overseas, and they faced similar deteriorations of their balance sheets, which translated into problem loans for the banks and a reduction in assets. Bankrupt banks cannot lend, and for this reason the financial crisis turned into a sharp slowdown in investment and any other economic activities that needed credit and financial intermediation.

III. Multiple-Choice Questions

1-c, 2-b, 3-d, 4-b, 5-a, 6-c, 7-d, 8-c, 9-a, 10-a, 11-c, 12-d, 13-b, 14-a, 15-b, 16-b, 17-b, 18-b.

Chapter 15: Early Monetary History

I. Match the Terms and Definitions


II. Questions and Problems:

1. Under the gold standard, the order effectively followed by national governments included:

- Fix an official gold parity for the national currency in terms of a fraction of an ounce of pure gold.
- Permit the free conversion of gold into domestic money and domestic money into gold at the parity price in unlimited amounts and without question.
- Eliminate all restrictions on foreign exchange transactions and allow the import and export of gold.
- Back domestic coin and currency fully with gold reserves, and link the growth of domestic money to the availability of reserves.
- Allow the domestic price level to be determined by the worldwide supply and demand for gold.
If the central bank must serve as a lender of last resort in the case of short-term credit crises in the domestic banking sector, always charge interest rates well above those charged in the markets.

A gold standard has a serious weakness: Revenue-hungry governments will be tempted to issue more paper currency than they have gold stored in their vaults. Suspicious holders of paper money could then panic and start a “run” on gold, in which case the government would have to suspend convertibility of paper money into gold and effectively leave the gold standard. The gold standard was thus an order built on the faith that paper money and bank accounts could always be converted to pure gold at any time without restrictions.

The sixth rule was known as “Bagehot’s Rule,” in honor of a former director of the Bank of England who applied this rule to ensure that private banks would only borrow from the central bank when they truly faced an emergency, thus avoiding the central bank’s role as lender of last resort from undermining its other role of keeping the money supply compatible with gold supplies.

2. Using the example of the U.S. dollar and British pound from the textbook, the gold points were determined by arbitrage activity in response to deviations from the gold parity exchange rate at £1.00 = $4.87. For example, if the foreign exchange market for some reason fell much below the parity rate, arbitrageurs would enter the market, buy gold in England at the parity rate, ship the gold to the United States, use the gold to buy dollars there at the parity rate, then go to the foreign exchange markets to exchange dollars for pounds and earn a profit. This arbitrage profit would tend to cause huge amounts of dollars being exchanged for pounds, thereby driving the dollar price of pounds back to the parity rate of £1.00 = $4.87. The gold points were determined by transport costs, insurance costs, and other transactions costs. Specifically, the gold points were the limits to how far the exchange could deviate from parity before it became worthwhile to ship gold and exchange moneys and engage in the arbitrage activity described above. With the lowering of transport costs in the late 1800s, the gold points only deviated from the parity exchange rate by a few pennies. Since such arbitrage profit is quite safe, quick, and easy when the rules of the gold standard are observed; large sums of money would be devoted to arbitrage activity as soon as the arbitrage profits exceeded the costs of shipping gold and money.

III. Multiple-Choice Questions

1-b, 2-d, 3-a, 4-d, 5-d, 6-b, 7-a, 8-b, 9-a, 10-d, 11-b, 12-b, 13-a, 14-b, 15-c, 16-c, 17-a.
Chapter 16: Bretton Woods to the End of the Twenty-first Century

I. Match the Terms and Definitions


II. Questions and Problems:

1. The Bretton Woods system worked very well during the 1950s, despite several devaluations (the British pound and the French franc) and revaluations (the German mark and the Dutch guilder). World trade grew twice as fast as the world economy as a whole, which also grew at a very healthy rate. The countries that had been destroyed by the war recovered impressively; West Germany and Japan were the great economic success stories of the decade. It appears as though the designers of the Bretton Woods system had been right: A pegged exchange rate, adjustable under extreme circumstances, would help create an economic climate appropriate for rapid economic growth. But the system was not really tested in the late 1940s and 1950s.

   The potential conflict between policy independence and fixed exchange rates, the trilemma, had not come to the forefront before 1960 because (1) most countries were willing to follow U.S. economic policy, (2) current account transactions were not large because world trade was still just recovering from the protectionism of the 1930s, and (3) financial account transactions were tightly controlled by most countries. The United States carried out fairly non-inflationary monetary policy that was not far out of line with the monetary policy that other countries preferred. And, with foreign exchange transactions related mostly to international trade, not international investment, required intervention to maintain the exchange rate peg was not very large even when monetary and fiscal policies were not compatible with the pegged exchange rate.

   After 1958, international transactions were liberalized by many of the major economies, and the trilemma increasingly forced central banks to target exchange rates rather than domestic economic conditions. With economic growth at all-time highs, and the growth of trade twice as fast, current account transactions grew very rapidly as well. Many countries also began to drop the rigid controls on international capital movements that they had instituted during post-war reconstruction. Thus the foreign exchange markets grew, and the larger the foreign exchange markets, the greater the amounts of central bank intervention that were necessary in order to maintain pegged exchange rates in the face of shifts in supply and demand. In 1971, the trilemma forced countries to abandon the fixed exchange rates and let currencies float. After a brief period of new pegs, in 1973 the major currencies again floated, as they have continued to do through the present.

   Clearly, the Bretton Woods order failed in some respects. As a fixed exchange rate arrangement, it severely limited governments’ ability to carry out economic policies, especially after international trade and investment began to expand rapidly. Prices and output were not stable either, and some countries suffered repeated cycles of recession and recovery. Also, inflation became a serious concern in the 1960s and early 1970s. Finally, the Bretton Woods system was far from self-regulating; it required the constant monitoring by central banks and
government policy makers. Most seriously, keeping exchange rates fixed in a globalized economy required increasing levels of cooperation and planning among countries, something that political leaders of the major countries were not willing to engage in. Nevertheless, the Bretton Woods system succeeded marvelously in meeting the lofty goals set in 1944, namely, the revival of the global economy, the growth of trade, the rapid rise in standards of living, and the avoidance of further world wars.

The delegates at Bretton Woods opted for a hybrid system that included elements of the gold standard as well as the Keynesian view that macroeconomic policy should be focused on preventing unemployment. The system adopted at Bretton Woods was sometimes referred to as the gold exchange standard. It was agreed that the United States would set a gold parity for its currency at $35 per ounce of gold. The general public would not be allowed to convert dollars into gold, however. Only other central banks would be allowed to trade dollars for gold or gold for dollars. The Bretton Woods order reflected the consensus of the economists present at the conference that a fixed exchange rate was necessary in order to stimulate the growth of world trade. Recovery of the world economy required a rapid return to earlier levels of international trade and the exploitation of comparative advantage. The cost of protectionism in the early 1930s was still very clear in the minds of the delegates. Many economists feared that floating exchange rates might prove to be too unstable, thereby imposing high uncertainty costs on traders and investors. Perhaps the most distinctive feature of the Bretton Woods agreement was the provision that the fixed exchange rates were not to be treated as if they were etched in stone. John Maynard Keynes, the head of the British delegation to the Bretton Woods conference, blamed Britain’s tight monetary policies, need to lower prices and enable Britain to restore its traditional gold parity for the pound, for the massive unemployment and economic stagnation in the 1920s.

2. Under the gold standard, the trilemma was avoided because governments did not usually have active monetary or fiscal policies. The U.S. in fact did not even have a central bank that could manipulate the money supply. Hence, monetary policy was passive, just as the rules of the game prescribe. During the early years of the Bretton Woods system, globalization had not progressed very far and international investment flows were largely restricted; thus, governments enjoyed a substantial amount of policy independence even though they pegged exchange rates. In the latter part of the Bretton Woods system, however, government policies were more and more restricted by the other two elements of the trilemma. As international investment grew, policy independence was surrendered in order to maintain the fixed exchange rates. Under the EMS, the same thing happened: fixed exchange rates could only be maintained as long as government policies were compatible with the fixed exchange rates. Germany’s divergent monetary and fiscal policies following unification made it impossible for the EMS members to keep exchange rates fixed, and the system had to be abandoned. The European Union’s adoption of a single currency effectively creates a permanent fixed exchange rate of 1 between the moneys (the same euro) used in each of the EU members. The trilemma was dealt with by specifying a set of criteria about their fiscal policies that countries were to follow. The euro crisis in 2010-2011 showed that these criteria were not followed, especially when the U.S.-triggered financial crises spread around the world.

3. The criteria were:

• The currency’s exchange rate must have remained within a tight band for two years.
• Inflation must be less than 1.5 percent above the average inflation rate of the three European countries with the lowest inflation.
• Interest rates on openly-traded government bonds must be less than 2 percentage points above the average rates for the three European countries with the lowest rates.
• The government budget deficit must be less than 3 percent of GDP.
• Total government debt must be less than 60 percent of GDP.

Each of these criteria were designed to ensure that countries would put in place fiscal and monetary policies that were compatible with all of the other countries. The trilemma should make it clear why this was necessary for a monetary union among a group of very open economies. Thus, each country completely surrendered policy independence and maintained policies compatible with the other countries.

III. Multiple-Choice Questions

1-c, 2-c, 3-d, 4-e (each country’s central bank), 5-b, 6-c, 7-a, 8-b, 9-c, 10-d, 11-b, 12-b, 13-b, 14-a, 15-d, 16-d.

Chapter 17: Another Bretton Woods Conference?

I. Match the Terms and Definitions


II. Questions and Problems:

1. Your answer should first review the liquidity trap, which limits the effectiveness of monetary expansion. It seems obvious that lenders will not make long-term loans at very low interest rates if it is likely that interest rates will rise in the future. The capital losses, not to mention the likelihood of bankruptcy, are just too great. Hence, lowering interest rates to near zero, as central banks of several major economies did in 2008, serves only to bail out banks and cash-strapped governments, but it takes a fiscal stimulus to actually increase aggregate demand in the economy. The monetary mechanism will not necessarily work below certain interest rates.

2. The accumulation of reserves may not have been undertaken only to benefit export industries or to boost overall GDP.

   Given the huge costs of the recent foreign exchange crises in terms of lost GDP and employment, it is likely that the developing countries wanted to accumulate dollar, euro, and yen
reserves in order to protect themselves from future exchange rate crises. The reserves effectively enable countries to credibly fix exchange rates. Because accumulated reserves permit central banks to intervene in the foreign exchange market for long periods of time, the hope is that speculators would recognize that their chances of gaining from their speculation are substantially diminished and refrain from attacking the currency of a country whose central bank holds large reserves.

The accumulation of large foreign exchange reserves thus serves as an insurance policy to protect an open economy from sudden exchange rate changes triggered by changing economic circumstances over which the country has little control. Recall from Chapter 14 that exchange rate crises are not always caused by faulty policies in the countries that suffer speculative attacks on their currencies. Jeffrey Frankel and Nouriel Roubini (2002) document that shifts in developed-economy macroeconomic policies have often been the cause of developing-country financial crises. They mention, among other events, the tightening of U.S. monetary policy as the cause of the many 1982 crises throughout the developing world. Interestingly, they also point to the easing of monetary policy in the United States and the decline in U.S. interest rates as helping to ease the 1997 Asian crisis. To the extent that domestic policies and institutions cannot prevent foreign events and circumstances, developing countries interested in controlling their currencies’ value thus concluded that they have to accumulate large reserves to prevent exchange rate instability.

3. At the Bretton Woods conference, Keynes had wanted to create the International Clearing Union (ICU) to regulate the exchange of currencies and act as a lender of last resort to national central banks. Keynes saw the ICU as the financial intermediary for all trade and currency transactions. He also proposed a new international reserve currency, which he named the bancor. The bancor would take the role that, at the insistence of the United States, the Bretton Woods agreement instead gave to the U.S. dollar. Keynes also proposed that the ICU regulate the exchange of currencies. He did not merely suggest that foreign exchange markets be regulated to ensure their efficient operation; rather, he wanted to limit international financial flows with the express purpose of preventing countries from accumulating either large foreign debts or large stocks of foreign reserves. Keynes correctly saw foreign debt as the fundamental reason why large exchange rate adjustments cause financial crises and economic recessions. He wanted to the Bretton Woods order to include measures to prevent such financial crises.

The ICU would work as follows. Say someone in France exports a product to Italy. The Italian importer would pay lira to the ICU, the ICU would debit Italy’s bancor account at the ICU according to the pegged lira-bancor rate, the ICU would then transfer those bancors over to France’s bancor account at the ICU, and French francs would be issued to the French exporter according to the pegged franc-bancor rate. The exporter and importer would deal through their own private or public commercial bank, much as international traders now go through their bank to buy and sell foreign exchange. But rather than deal with private foreign exchange dealers, the banks would deal with the ICU.

To prevent the accumulation of large foreign debts or reserves, Keynes proposed rules that would limit both trade deficits and trade surpluses. Limiting trade deficits was not difficult: when continued trade deficits eventually depleted a country’s bancor account, importers would no longer be able to acquire bancors to pay foreign exporters. The ICU would provide overdraft privileges up to one half the value of a country’s average annual exports, but when that ran out there would be no more bancors available for buying imports. In this sense, the ICU was no
different from the Bretton Woods system of pegged exchange rates. But Keynes wanted to restrain surplus countries too. He noted that historically one country’s trade deficit was often more the fault of other countries’ intentional currency undervaluation, export subsidies, or other foreign trade restrictions than of the deficit country’s excessive consumption or government debt. He did not think it was fair that the system ultimately adopted at Bretton Woods would only punish deficit countries for their trade imbalance. Keynes thus proposed limits on how many bancors a country could accumulate in its ICU account as a result of overseas sales by its exporters. These limits would be enforced by having the ICU tax a rising percentage of the bancors that exceeded the limits. In short, both deficit and surplus countries would be motivated to balance their trade.

The proposal seems relevant to the problems in the euro area. For example, if the Greek government had not been able to borrow so much, it might not have ended up with such a huge budget deficit when the Great Recession unfolded in 2007.

4. This is a completely open question – use the opportunity to review the economic and financial problems outlined. What solutions can you suggest to deal with the problems?

III. Multiple-Choice Questions

1-d, 2-c, 3-d, 4-a, 5-a, 6-c, 7-d, 8-d, 9-d, 10-b, 11-c, 12-d.
**II. Questions and Problems:**

1. **A:**

![Diagram of labor markets before and after immigration](image)

1. **B:** The geometric areas can be easily calculated since all lines are straight lines. For example, the area e is equal to \((7 - 4) \times 60\), or \(3 \times 60 = 180\). The area g is equal to \(3 \times (100 - 60 - 40) / 2 = 120 / 2 = 60\). Hence, as shown below, since e+g = $240, the loss of e+g = −$240.

**Summary of Gains and Losses**

1. **Guatemala:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Gain/Loss</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners of other (non-labor) factors</td>
<td>loss of e + g</td>
<td>− $240</td>
</tr>
<tr>
<td>Remaining workers</td>
<td>gain of e</td>
<td>+ 180</td>
</tr>
<tr>
<td>Net change in real income</td>
<td>loss of g</td>
<td>− $60</td>
</tr>
</tbody>
</table>

2. **Mexico:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Gain/Loss</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Workers</td>
<td>loss of E</td>
<td>− $160</td>
</tr>
<tr>
<td>Owners of other (non-labor) factors</td>
<td>gain of E + G</td>
<td>+ 560</td>
</tr>
<tr>
<td>Net change in real income</td>
<td>gain of G</td>
<td>+ $400</td>
</tr>
</tbody>
</table>

3. **Immigrants:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Gain/Loss</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of Guatemalan wages</td>
<td>loss of h</td>
<td>− $160</td>
</tr>
<tr>
<td>Gain of wages in Mexico</td>
<td>gain of H</td>
<td>+ 400</td>
</tr>
<tr>
<td>Net change in real income</td>
<td>gain of (H − h)</td>
<td>+ $240</td>
</tr>
</tbody>
</table>

**World (1 + 2 + 3):**

<table>
<thead>
<tr>
<th>Category</th>
<th>Gain/Loss</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net change in Guatemalan real income</td>
<td>loss of g</td>
<td>− $60</td>
</tr>
<tr>
<td>Net change in Mexican real income</td>
<td>gain of G</td>
<td>+ 80</td>
</tr>
</tbody>
</table>
Net change in immigrants’ real income: \[ \text{gain of } (H-h) + \$240 \]
Net gain: \[ \text{gain of } (H+G) - (h+g) + \$260 \]

1.C:

[Graph showing labor markets before and after immigration with both supply and demand shifts in both countries.]

1.D: Summary of Gains and Losses

1. Guatemala:

Owners of other (non-labor) factors: \(\text{loss of } a+e+g+c \) \(- \$240\)
Remaining workers: \(\text{gain of } e \) \(+ \$90\)
Net change in real income: \(\text{loss of } a+g+c \) \(- \$150\)

2. Mexico:

Native Workers: \(\text{loss of } A \) \(- \$80\)
Owners of other (non-labor) factors: \(\text{gain of } A+B+C+D+J \) \(+ \$320\)
Net change in real income: \(\text{gain of } G \) \(+ \$240\)

3. Immigrants:

Loss of Guatemalan wages \(\text{loss of } h \) \(- \$160\)
Gain of wages in Mexico \(\text{gain of } H \) \(+ \$480\)
Net change in real income: \(\text{gain of } (H-h) \) \(+ \$320\)

World (1 + 2 + 3):

Net change in Guatemalan real income: \(\text{loss of } a+g+c \) \(- \$150\)
Net change in Mexican real income: \(\text{gain of } A+B+C+D+J \) \(+ \$240\)
Net change in immigrants’ real income: \(\text{gain of } (H-h) \) \(+ \$320\)
Net gain: \(+ \$410\)
1.E: 

The Labor Markets Before and After Immigration with Remittances and Demand Increases in Both Economies

1.F: Summary of Gains and Losses

1. Guatemala:

Owners of other (non-labor) factors: loss of \( c + e + g - a \) $-240

Remaining workers: gain of \( c + e \) $+240

Net change in real income: net of \( a - g \) $0

2. Mexico:

Native Workers: loss of \( A \) $-120

Owners of other (non-labor) factors: gain of \( A + B + C + J \) $+240

Net change in real income: gain of \( B + C + J \) $+120

3. Immigrants:

Loss of Guatemalan wages loss of \( h \) $-160

Gain of wages in Mexico gain of \( H + G \) $+440

Net change in real income: gain of \( (H + G - h) \) $+280

World (1 + 2 + 3):

Net change in Guatemalan real income: net of \( a - g \) $0

Net change in Mexican real income: gain of \( B + C + J \) $+120

Net change in immigrants’ real income: gain of \( (H + G - h) \) $+280

Net gain: $+400
III. Multiple-Choice Questions
1-d, 2-c, 33-a, 4-b, 5-c, 6-d, 7-b, 8-b, 9-c, 10-a, 11-d, 12-a, 13-c, 14-a, 15-a, 16-b

Chapter 19: Immigration Policy

I. Match the Terms and Definitions

II. Questions and Problems:
1. IRCA’s combination of amnesty, improved identification, holding employers responsible for hiring unauthorized immigrants, and tougher border controls was a compromise between those who emphasized tougher enforcement and those who sought a humanitarian way of dealing with longtime unauthorized immigrants. The legislation both welcomed past unauthorized immigrants and threatened potential new unauthorized immigrants. IRCA’s one-time amnesty for unauthorized immigrants resulted in about 2.7 million unauthorized aliens already living in the United States gaining legal residence status. Lobbied by business and agricultural interests, Congress subsequently failed to fund the border and employer enforcement measures in IRCA, and twenty years later measures to require forgery-proof identification documents for immigrants and to enforce employer responsibility had still not been put into effect.

2. In the destination country, policies that restrict immigration tend to protect native workers that compete with prospective immigrants in the domestic labor market, but other factors of production are likely to lose from restrictions on immigration. Of course, in the source country, the effects tend to be reversed, unless remittances are large or immigrants only move temporarily and eventually return with their wealth and acquired human capital. Also, illegal immigration has slightly different effects; as Figures 16.9 and 16.10 show, everyone may gain in the destination country if immigration policies arbitrarily serve to direct illegal immigrants to a few sectors of the economy where labor productivity is low and industries would collapse or leave the country without the availability of low-wage labor. You might also look into how immigration policy influences the movement of people that are important for economic growth and technological innovation. Countries have increasingly sought to attract highly educated engineers, scientists, scholars, entrepreneurs, etc. in order to increase their supplies of those factors deemed especially valuable for promoting innovation and the creation of new ideas.

3. The answer is that (1) the poorest countries have poor communications that prevent people from being aware of immigration opportunities, (2) people in the poorest countries do not have the means to pay for transportation and other costs of moving, and (3) people in the poorest
countries also have the lowest levels of education and preparation for work in higher-income countries. Thus, a country may see more of its people leaving after economic growth has pushed per capita incomes above subsistence levels than the number who left when the economy was dismally poor, a result that seems to contradict the claim that it is the difference between countries’ wages that drives immigration.

4. Since the illegal immigrants are consumers as well as workers, the overall demand for output, and thus for labor, may rise along with the supply of illegal labor, which leads to the possibility that everyone in the destination country gains from the presence of illegal immigrants. Figure 18.5 illustrates this case. Notice how the rise in the labor demand curve causes the wage for native workers to rise. Specifically, if the demand for labor curve shifts up perfectly parallel to the former labor demand curve as in Figure 18.5, native workers’ wage rises to \( w_3 \) while employers and other factors continue to earn the areas \( G \) and \( D \). As a result, native labor income increases by the area \( J \), the result of increased demand for output by the immigrants. In this case, not only employers but also native workers would be in favor of maintaining official restrictions on immigration while turning a blind eye to illegal foreign workers who do not compete directly with native labor.

III. Multiple-Choice Questions

1-d, 2-d, 3-d 4-b, 5-b, 6-a, 7-a, 8-b, 9-c, 10-c, 11-d, 12-a, 13-b, 14-b, 15-a.

Chapter 20: The Evolving International Economy

I. Match the Terms and Definitions

II. Questions and Problems:

1. The services of nature fall into five categories, which include many different types of natural services:

   Provisioning Services - nature’s climate, raw materials, energy, scenery, land,
   Regulating Services - recycling waste, regenerating soils,
   Supporting Services - water purification, pollination, pest and disease control
   Cultural Services - nature provides the landscape settings for human cultures to develop inspiration for art, literature, and science.
   Preserving Services - diversity and redundancy of the ecosystem provides insurance against future uncertainties.

2. About two-thirds of the GHGs in the atmosphere are derived from energy use in industry, transportation, heating and cooling our homes, and in growing our food. The remaining GHGs are the result of waste management and the destruction of forests and other natural environments caused by the geographic expansion of human land use. Therefore, GHG emissions can be reduced by:

   (1) switching to new sources of energy that emit fewer GHGs, such as replacing coal-fueled electricity generation with solar, wind, tides, etc.
   (2) reducing waste by making things more durable or biodegradable, and increasing recycling.
   (3) developing new technologies that radically increase the ratio of output relative to GHG-emitting inputs in generating energy, powering transportation, and producing industrial output.
   (4) reducing energy use with energy-efficient homes, vegetarian diets, smaller and less powerful automobiles, and public transportation.
   (5) consuming local products
   (6) maintaining forests that absorb carbon, storing water, and protecting living species that provide valuable services to humanity or form critical links in the ecological system.

   Surely you can think of more options. Do not hesitate to include items that require wholesale changes in lifestyles and consumption patterns. Sustainability requires a massive shift in the way humans live, work, and go about their lives. Small changes will not reduce GHG emissions enough to stop global warming.

3. Many environmentalists oppose cap and trade schemes. They greatly prefer a carbon tax or direct regulation of carbon emissions. First of all, they argue that cap and trade establishes an effective property right over the atmosphere, and human nature suggests such property rights will not easily surrendered once granted. If the rights to emit carbon are awarded to firms and countries according to current emissions, as carbon permits have indeed usually been awarded in most countries, then a cap and trade system effectively constitutes what the environmental organization Rising Tide calls a “massive resource grab.” The commons is privatized and very unequally distributed under a cap and trade system. Since the wealthy nations emit most carbon, such a privatization will benefit the rich countries most. Another fear about cap and trade is that
the market for carbon permits will be unstable and, therefore, fail to provide clear incentives for firms to invest in alternative energy systems, conservation, and new products. Also, if prices fluctuate excessively, consumers will be less decisive in changing their consumption patterns.

Furthermore, there are fears about how the carbon markets will be operated. Will they turn into typical financial markets, where speculators and gamblers dominate short term trading, much like they do in stock markets and foreign exchange markets? Will the world’s financial firms run the carbon markets as over-the-counter markets that they control and manipulate for their profit?

Most worrisome is how carbon permits will be allocated and their overall quantities determined. The recent experience of the European Union is sobering. Early in the 2000s, the EU proudly initiated a cap and trade scheme, but it issued too many permits and caused their price to fall to zero. At that price, there was no incentive for anyone to conserve on energy or to pursue alternative technologies. Also, the issuing of carbon permits requires a rather elaborate monitoring system to keep track of who emits how much carbon, reconciles the emissions with the permits issued, and punishes violations. Critics of cap and trade correctly foresee massive violations, corruption, and large scale failures in government oversight.

III. Multiple Choice Questions

1-b, 2-c, 3-b, 4-d, 5-a, 6-d, 7-a, 8-c, 9-a, 10-d, 11-b, 12-d, 13-a, 14-a, 15-e, 16-a, 17-a, 18-d, 19-c, 20-a.