INTERNATIONAL TRADE

(THEORY & POLICY)

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前　　言

　　本书是作者根据近几年的教学体会，大量参阅了国内外著名专家学者的专著和教材，为本校国际贸易和国际金融专业本科生编写的校内教材。作者的目的是使学生在学习经济理论的同时，又能提高自己的英语水平，起到一箭双雕之功效。

　　本书编成后在几个班中试用，本系教师和学生提出了大量宝贵的意见，作者对原书结构进行了重新设计，并做了大量修改。在此对他们表示诚挚的谢意。

一．本书的内容和结构

　　本书内容主要为两大部分，即国际贸易理论和国际贸易政策。

　　简单地说，国际贸易理论是研究国际贸易的原因和结果（cause and effects）。因此，第一部分就按照这个逻辑顺序展开。第一章关于比较优势的理论、第二章关于要素禀赋的理论和第三章关于规模经济的理论，是从供给的方面研究国际贸易的起因，第五章关于收入和偏好的理论则是从需求的方面研究国际贸易的产生原因。第四章产品周期理论研究比较优势的动态变化过程。第六章是关于国际贸易产生的结果，从静态的角度研究国际贸易对一个国家经济的总体影响，以及对一个国家内部各个不同利益集团的影响。第七章则从动态的角度研究一个国家的国际贸易和经济增长的关系。

　　第二部分是国际贸易政策。第七、八、九章，分别介绍关税壁垒、非关税壁垒和促进出口的政策工具。第十章介绍传统的贸易保护主义与自由贸易观点的争论。第十一章介绍新贸易保护主义理论即战略性贸易政策，并在附录中简单介绍了波特的国家竞争优势理论。第十三章介绍经济一体化的理论和实践。

　　另外，在本书的第十四、十五两章分别介绍了资本和劳动力在国际间的流动。教师可根据教学的课时对此决定取舍。也可以作为学生的课外阅读资料。

二．本书的研究方法

　　从研究的性质来看，国际贸易理论也像其它经济学一样，可以分成实证的理论（Positive theory）和规范的理论（Normative theory）。

　　所谓实证的理论分析，主要揭示各种经济变量之间的关系，分析各种贸易行为和政策的前因后果，但不去评论好坏对错。实证研究是一种技术分析，就像各种化验、测量一样。而规范理论分析则会对实证分析的结果做出诊断、评论，这种诊断、评论则在很大程度上反映了不同的认识和价值论。例如，在分析进口关税的结果时，实证分析将揭示这一政策对消费者、生产者和整个国家所造成的得失，至于怎样来看待这些利益和得失，这些得失的重要性如何，则是规范理论研究的问题。

　　不过在任何一项具体研究中，这两者都是密不可分的。实证分析为规范理论提供基础，离开实证分析的理论往往是缺乏说服力的。但仅仅是实证分析而没有规范研究则会失去经济学的社会意义。因此，整个国际贸易理论体系是实证与规范的统一。我国传统的贸易理论中，规范研究偏多而实证分析较少，本书把实证理论作为一个重要的组成部分。

三．本书的基本分析工具

　　本书所用的基本分析工具主要是西方经济学中的微观经济分析方法，因此，在学习本书之前，应先具备经济学的基本知识。为了使学生更容易掌握国际贸易的基本理论和方法，本书中尽量减少数学公式及推导过程，而代之以更加直观的几何图形的方法。

　　为了便于学生学习，本书每一章的后面都有关键词的中文对照，书中较为难懂的部分也加了适当的中文解释和提示，有些章节还加了中文附录，作为正文的某些补充。为了使学生理论联系实际地学习国际贸易理论，每章后面还提供了案例分析（Case Study），尽管有些案

例并不是当前国际贸易中的最新情况，但仍然对理解国际贸易的基本理论问题有很大帮助，特别是一些很重要的数据和图表，仍能在很大程度上反映问题的本质，希望读者在学习时对这些案例给以足够的重视。

为了巩固所学的知识和培养学生独立思考能力，每章的最后都提供了一些练习思考题。这些练习思考题有的是正文中忽略或有意遗留的问题，有的是与正文有关但又超出了正文范围的一些问题。通过这些练习思考题，希望能进一步提高学生或读者分析问题和解决问题的能力。

教师授课时可以单独使用本书，也可以与教育部推荐的中文教材配套使用，可以根据各自的教学要求和课时安排，自主选择教材中的内容或改变某些章节的顺序。

由于本人水平有限，不足之处在所难免，恳请读者不吝赐教。

编　者

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CHAPTER 1   THEORY OF COMPARATIVE ADVANTAGE

1.1   Introduction

In this chapter, we examine the development of trade theory from the seventeenth century through the first part of the twentieth century. This historical approach is useful not because we are interested in the "history of economic thought" as much but because it is a convenient way of introducing the concepts and theories of international trade from the simple to the more and realistic.

The basic questions that we seek to answer in this chapter are:

1. What is the **basis for trade** and what are the **gains from trade**? Presumably (and as in the case of an individual), a nation will voluntarily engage in trade only if it benefits from trade. But how are gains from trade generated? How large are the gains and how are they divided among the trading nations?
2. What is the **pattern of trade**? That is, what commodities are traded and which commodities are exported and imported by each nation?

We begin with a brief discussion of the economic doctrines known as mercantilism that prevailed during the seventeenth and eighteenth centuries. We then go on to discuss the theory of absolute advantage, developed by Adam Smith. It remained, however, for David Ricardo, writing some 40 years after Smith, to truly explain the pattern of and the gains from trade with his law of comparative advantage. The law of comparative advantage is one of the most important laws of economics, with applicability to nations as well as to individuals and useful for exposing many serious fallacies in apparently logical reasoning.

1.2   The Mercantilists' Views on Trade

Economics as an organized science can be said to have originated with the publication in 1776 of **The Wealth of Nations** by *Adam Smith*. However, writings on international trade preceded this date in such countries as England, Spain, France, Portugal, and the Netherlands as they developed into modern national states. Specifically, during the seventeenth and eighteenth centuries a group of men (merchants, bankers, government officials and even philosophers) wrote essays and pamphlets on international trade that advocated an economic philosophy known as **mercantilism**. Briefly, the mercantilists maintained that the way for a nation to become rich and powerful was to export more than it imported. The resulting export surplus would then be settled by an inflow of

bullion, or precious metals, primarily gold and silver. The more gold and silver a nation had, the richer and more powerful it was. Thus, the government had to do all in its power to stimulate the nation's exports and discourage and restrict imports (particularly the luxury consumption goods). However, since all nations could not simultaneously have an export surplus and the amount of gold and silver was fixed at any particular point in time, one nation could gain only at the expense of other nations. The mercantilists thus preached economic nationalism, believing as they did that national interests were basically in conflict.

At a more sophisticated level of analysis, there were more rational reasons for the mercantilists' desire for the accumulation of precious metals. This can be understood if it is remembered that the mercantilists were writing primarily for rulers and to enhance national power. With more gold, rulers could maintain larger and better armies and consolidate their power at home; improved armies and navies also made it possible for them to acquire more colonies. In addition, more gold meant more money (i.e., more gold coins) in circulation and greater business activity. Further, by encouraging exports and restricting imports, the government would stimulate national output and employment.

In any event, mercantilists advocated strict government control of all economic activity and preached economic nationalism because they believed that a nation could gain in trade only at the expense of other nations (i.e., trade was a **zero-sum game**). These views are important for two reasons. First, the ideas of *Adam Smith, David Ricardo,* and other classical economists can best be understood if they are regarded as reactions to the mercantilists' views on trade and on the role of the government. Second, today there seems to be a resurgence of neo-mercantilism, as nations plagued by high levels of unemployment seek to restrict imports in an effort to stimulate domestic production and employment. In fact, aside from England during the period 1815-1914, no Western nation has ever been completely free of mercantilist ideas.

1.3 Trade Based on Absolute Advantage: Adam Smith

According to *Adam Smith*, trade between two nations is based on absolute advantage. When one nation is more efficient than (or has an absolute advantage over) another in the production of one commodity but is less efficient than the other nation in producing second commodity, than both nations gain by each **specializing** in the production of the commodity of its advantage and exchanging part of its output with the other nation for the commodity of its absolute disadvantage. By this process, resources are utilized in the most efficient way and the output of **both** commodities will rise. This increase in the output of both commodities measures the gains from specialization in production

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available to be divided between the two nations through trade.

In his **Wealth of Nations** (1776), *Adam Smith* ridiculed the fear of trade by comparing nations to households. Since every household finds it worthwhile to produce only some of its needs and to buy others with products it can sell, the same should apply to nations:

It is maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy. The taylor does not attempt to make his own shoes, but buy them from the shoemaker........

What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the product of our own industry, employed in a way in which we have some advantage. ①

Smith's reasoning can be illuminated with a numerical example. Let us look at the kind of example used by *David Ricardo* in the early 19th century, that will bring out a key difference between *Smith's* idea and later ideas about what made trade profitable. To see the effects of trade, being with a situation in which nations do not trade with each other. Without trade, what would determine the relative prices of the two goods? *Smith* thought that all economic "value" was determined by, and measured, in hours of labor. The labor cost of producing a unit of good was the value, or price, of that unit. In this respect he was imitated by *Ricardo* and by *Karl Marx*, who also believed that labor was the basis for all value. Let us suppose that the United States has an absolute advantage in producing wheat, meaning that we can produce it at an absolutely lower labor cost. And let us suppose that the rest of the world (e.g. China) has an absolute advantage in producing cloth. Specifically, we have:

Table   1-1

	Case of Absolute Advantage		
	In the U.S.		In China
Labor cost required to make			
1 bushel of wheat	2 hours	<	2.5 hours
1 yard of cloth	4 hours	>	1 hours

If there is no trade between nations, the relative prices of the two goods will be dictated by conditions within each country. *Smith* thought that labor costs alone determined how much wheat it took to buy a yard of cloth, or how much cloth it took to buy a bushel of wheat, without considering the strength of demand for each good.

People would only trade equal labor values of wheat for cloth. So within the United States, with each bushel of wheat requiring only 2 hours of labor, one would have to give up two bushels of wheat, made with 4 hours of labor to trade for one yard of cloth, which also took 4 hours to make. Correspondingly, in China, where it takes two and a half times as much labor to grow a bushel of wheat as it takes to make a yard of cloth, Smith's labor theory of value says that people would have to offer 2.5 yards of cloth to get others to give up a bushel of wheat, which cost the same labor to make. The underlying idea was reasonable: if individual households and businesses had the choice of switching their own labor between growing wheat and making cloth, this choice would tend to dictate the prices at which they were willing to trade wheat for cloth in their nations marketplace.

So because of relative labor costs, it would turn out that people's desire to consume mixtures of wheat and cloth would make these prices prevail in the separate national marketplaces:

Table 1-2

	In the U.S.	In China
With no international trade		
Price of wheat	0.5 yards/bushels	2.5 yards/bushels
Price of cloth	2.0 bushels/yard	0.4 bushels/yard

Each nation has its separate price ratio between wheat and cloth. Let us assume that we were in a world without money.

Now let trade be opened up between the U.S. and China. Somebody will notice the difference between the national prices of the same good and will think of a way to profit from that difference. The first businesspeople will think of sending wheat from the United States in exchange for foreign cloth. Each bushel could be obtained by giving up 0.5 yard of cloth in the United States. But the same bushel would be sold for 2.5 yard of cloth in China. (Let us assume that the cost of transporting goods between nations is zero.) He then ships the cloth to the US and gets 2.5 times 2.0 bushels per yard. or 5.0 bushels of wheat, having started with only one bushel. The principle is simple and universal: as long as prices differ in two places, there is a way to profit by trading。

The opening trade would also affect what people decide to produce with their labor That is, nations would *specialize* in their production. Sooner or later in the United States would be shifted toward making more wheat, which has a high value abroad, and less cloth, which is cheaper to import from abroad. Meanwhile, in China, people would stop making wheat, which is cheaper to import from the U.S., and instead they would make more cloth, which is getting a higher price in the United States

The point of all this, of course, is that countries can gain from specializing and

trading. Productivity is increased, incomes are higher because more is sold, costs are lower and consumption is higher. Everyone gains from international trade when absolute advantage exists, or at least that would certainly seem to be the case.

Absolute advantage, however, can explain only a very small part of world trade today, such as some of the trade between developed and developing countries. Most of world trade, especially trade among developed countries, could not be explained by absolute advantage. It remained for *David Ricardo*, with the law of comparative advantage, to truly explain the basis for and the gains from trade. Indeed, absolute advantage will be seen to be only a special case of the more general theory of comparative advantage.

1.4　Trade Bases on Comparative Advantage: David Ricardo

A more complicated problem comes up if one country is more efficient at producing both products. What if the China is more efficient at producing both wheat and cloth? Is there then any reason why China should trade with the U.S.? *David Ricardo's* main contribution to our understanding of international trade was to show what countries gain from trade whether or not they have any absolute advantage. His writings in the early 19th century demonstrated what has become known as:

The principle of comparative advantage: a nation like a person, gains from trade by exporting the goods and service in which it has its greatest comparative advantage in productivity and importing those in which it has the least comparative advantage.②

The key word here is comparative, meaning relative and not necessarily absolute. Even one nation were the most productive at producing everything and another were the least, they would both gain by trading with each other and with third countries as long as their (dis)advantages in making different goods were different in any way.

Here is a simple numerical example of gains from trading two goods between two countries.

Table 1-3

Labor　cost	In the U.S.	In China
1 bushel of wheat	2 hours	1.5 hours
1 yard of cloth	4 hours	1　hour

Here a nation has inferior productivity in both goods. The United States, in other

words, has no absolute advantage. What goods will the United States trade and how do we know that trade will bring net national gains to both sides?

Now we begin by imagining the two economies separately with no trade between them. Within the two isolated economies, national prices would tend to follow the relative cost of wheat and cloth:

Table 1-4

	In the U.S.	In China
With no trade		
Price of wheat	0.5 yard/bushel	1.5 yard/bushel
Price of cloth	2.0 bushel/yard	0.67 bushel/yard

Clearly, China has a comparative advantage in cloth, and the U.S. in wheat. Opening up trade brings the same opportunities for profit and the same pressure on prices to equalize internationally. Somebody will notice the international price difference and trade profitably. Perhaps they acquire wheat in the United States, by giving up only 0.5 yard of cloth, and sell the wheat abroad for 1.5 yard cloth, ending up with a yard of cloth in pure gain. Or perhaps they will acquire cloth in China, giving up only 0.67 bushel of wheat for each yard, and sell it in the United States in exchange for bushels, ending up with 1.33 bushel of wheat in pure gain. One way or the other, they will gain. (There is one exception to the law of comparative advantage. If China produces 1 yard of cloth by use of 3 hours, there is no comparative advantage in both nations and no mutually beneficial trade between them.)

The opening of profitable international trade will start pushing the two separate national price ratios into a new worldwide equilibrium. The more people start removing wheat from the American market for export, the more expensive wheat will start to become relative to cloth in the United States. Meanwhile, wheat starts to become cheaper in China, thanks to the new supply of wheat from the United States. So wheat tends to get more expensive where it was cheap at first, and cheaper where it was more expensive at first (and this is true in reverse for cloth). The tendencies will continue until the two prices become one world price. For example, let us say that the demand forces bring the international price ratio to rest at the value of 1 bushel = 1yard. **Both counties gain from trade and from specialization.③**

We can convince ourselves of this by considering a simple example from everyday life. Suppose a lawyer can type twice as fast as his secretary. The lawyer then has an absolute advantage over his secretary in both the practice of law and typing. However, since the secretary cannot even practice law without a law degree, the lawyer has a greater absolute advantage or a comparative advantage in law, and the secretary has a comparative advantage in typing. According to the law of comparative advantage, the

lawyer should spend all of his time practicing law and let his secretary do the typing. For example, if the lawyer earns $100 per hour practicing law and must pay his secretary $10 per hour to do the typing, he would actually lose $80 for each hour that he typed. The reason for this is that he would save $20 (since he can type twice as fast as his secretary) but forgo earning $100 in the practice of law.

1.5   Ricardo's Constant Opportunity Costs And The Production-Possibilities Curve

In this section, we firstly introduce two important concepts: the opportunity cost and the production-possibilities curve (PP curve).

According to the **opportunity cost** theory, the cost of a commodity is the amount of a second commodity that must be given up to release just enough resources to produce one additional unit of the first commodity. ④

The **production-possibilities** curve is a curve that shows the *alternative* combinations of the two commodities that a nation can produce by fully utilizing all its resources with the best technology available to it.

Ricardo's numerical illustration succeeded in proving the principle of comparative advantage. Yet it also has some limitations. A more serious limitation is that *Ricardo's* example assumed that marginal costs stay constant, and this assumption violates some known facts. Let us first see a diagram showing what whole nations can produce and consume.

Assume there are only two counties in the world, the United States and France, and each produces only two commodities, beef and wine. Assume further that if each country uses all of its productive factors (land labor, management and capital), it can produce the alternative outputs of beef and wine shown in Table 1-5. Translating this output data into graphical form gives us the production possibilities curves of the two counties shown in Figures 1.1 and 1.2.

Table 1-5

	Units of beef	Units of wine
United States	100	50
France	50	150

Figure 1.1
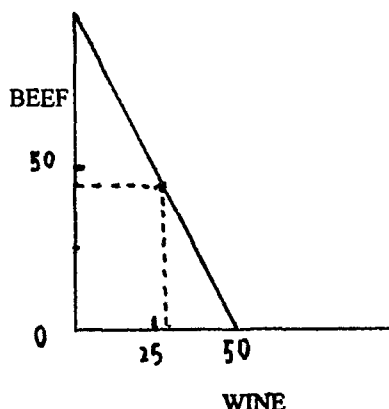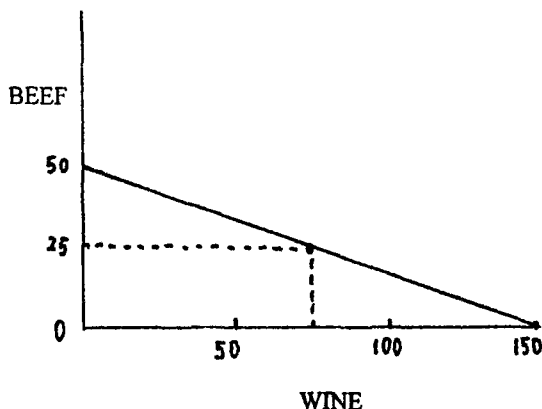**U.S. PP curve: Constant Opportunity Costs**

Figure 1.2
France PP curve: Constant Opportunity costs

The U.S. production possibilities curve indicates the various combinations of beef and wine that the U.S. productive factors can produce when they are fully employed and used efficiently. Similar remarks can be made about the French production possibilities curve.

Both curves depict constant opportunity costs for beef and wine. To increase the output of wine by one unit in the United States, factors must be taken away from the production of beef in such amount as to lower the output of beef by two units. Hence, the opportunity cost of one wine unit is two beef units, and this cost is not affected by the output levels of beef and wine. In France, the opportunity cost of one wine unit is always a one-third beef unit. These constant opportunity costs are shown by the constant slopes of the respective curves, -2 for the United States and -1/3 for France. The rate at which the output of one product must be reduced to increase the output of the product is the marginal rate of substitution in production (MRSp). In the case of the United States, the MRSp of beef into wine is 2, which equals the slope of the production possibilities curve. When opportunity costs are constant, the MRSp is also constant. Under conditions of pure competition, the domestic barter rate of exchange of beef for wine (the marginal rate of substitution in trade or MRSt) equals the MRSp or slope of the production possibilities curve. In the United States two units of beef will exchange for one unit of wine while in France one unit of beef will exchange for three units of wine.

In the absence of trade, each country can elect to consume only a beef-wine combination that lies somewhere on its production possibilities curve, such as A in Figure 1.1 (45 beef units and 27.5 wine units) and D in Figure 1.2 (25 beef units and 75

wine units). The existence of different marginal rate of substitution in production, however, offers both countries an opportunity to gain from mutual trade and consume a beef-wine combination that lies beyond their possibilities curves. This pleasant outcome will occur when beef and wine are traded at any barter rate of exchange that falls between the domestic barter rates which, in turn, are equal to the respective marginal rates of substitution in production.

Figure 1.3
U.S. Gains from Trade:
Constant Opportunity costs

Figure 1.4
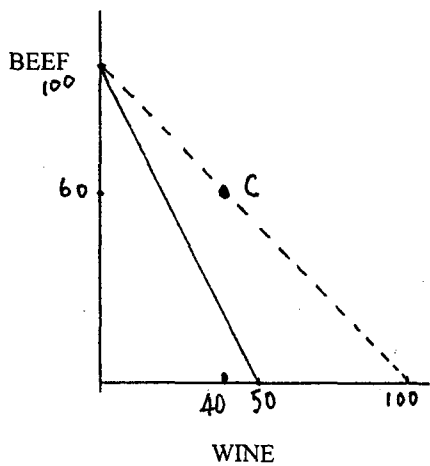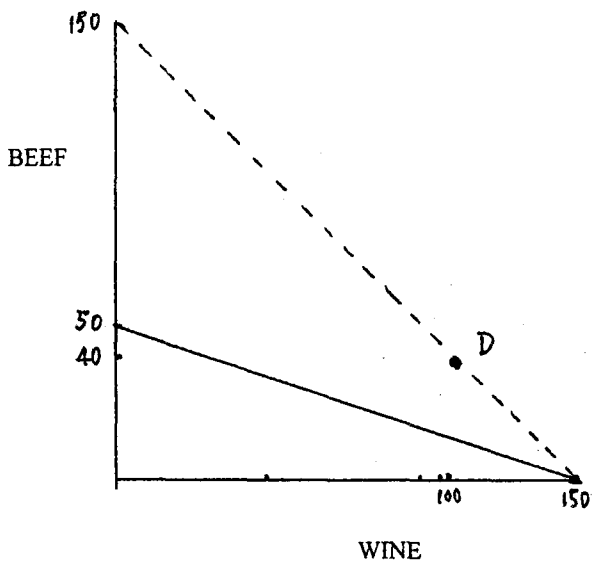**France Gains from Trade:**
Constant Opportunity Costs

The gains from trade are depicted in Figure 1.3 and 1.4. Reciprocal demand determines an international barter rate of exchange (commodity terms of trade) that is shown by the slope of the dashed lines, which is identical in both figures. At this rate of exchange (one beef unit = one wine unit), the United States will specialize completely in beef production because it can obtain from France more wine for each unit of beef than it can at home. Conversely, France will specialize entirely in wine production, obtaining all its beef from the United States. At the international rate, the United States chooses to consume 40 units of wine, importing them from France in exchange for 40 units of beef. The converse is true for France. As a result of trade, then, the United States is able to consume a beef-wine combination, indicated by C on the international barter exchange line, that is bigger than any combination the United States can produce in isolation. For France, D represents a beef-wine combination that is superior to any combination producible at home. Both countries gain from trade; because of specialization their combined output of beef and wine is higher than before and the production increment is shared by consumers in both countries. An arithmetic

recapitulation of the before- and after-trade situations is instructive, as shown in Table1-6.

Table 1-6

	Before Trade					
	Production		Consumption		Gains from trade	
	Beef	Wine	Beef	Wine	Beef	Wine
United States	45	27.5	45	27.5	0	0
France	25	75	25	75	0	0
Combined	70	102.5	70	102.5	0	0
	After Trade					
United States	100	0	60	40	15	12.5
France	0	150	40	110	15	35
Combined	100	150	100	150	30	47.5

1.6   Increasing Opportunity Costs And
The Production-Possibilities Curve

Constant opportunity costs arise when (1) resources or factors of production are either perfect substitutes for each other or used in fixed proportion in the production of both commodities, and (2) all units of the same factor are homogeneous or of exactly the same quality. The assumptions behind constant opportunity costs are highly unrealistic. In actuality, the factors of production are partial substitutes for each other, and each good is produced with different factor combinations or intensities.[5] With a given technology, good A will be generally more labor (and less capital) intensive in production than good B. The existence of different factor intensities for two goods will make a country's production possibilities curve concave to the origin, indicating increasing opportunity costs.

Such a curve is shown for the United States in Figure 1.5 .

Note that the marginal rate of substitution in production (the slope of curve MN) is no longer constant. The meaning of increasing opportunity costs may be described as follows. Suppose the United States is producing only wine at N. Now it decides to produce one unit of beef. To do so, it must draw factors of production from wine, forcing a reduction in wine output. Note, however, that this reduction is small (the slope

of the production possibilities curve is steep near N) because the withdrawn factors of production are actually better suited to beef production than to wine production. But as the production of beef is progressively increased, greater and greater amounts of wine must be sacrificed to obtain one more unit of beef (the slope of the curve gets flatter and flatter). Why should the opportunity costs of beef increase? Because the factors of production drawn from wine production (such as land) are less and less suited to the production of beef. As the latter approaches M, very large quantities of wine must be given up to get one more unit of beef. Similarly, if the United States starts at M and then progressively transfers resources from beef to wine production, it will eventually encounter increasing opportunity costs.

What determines the domestic barter rate of exchange between beef and wine under conditions of increasing opportunity costs? The answer is the demand preference or tastes of consumers, the combination of beef and wine that a nation's people want to consume (we will repeat the effect of demand on international trade lately). We can portray the demand preference of U.S. consumers by an indifference curve that consists of infinite number of indifference curves. The slope of an indifference curve at any point is the marginal rate of substitution in consumption (MRSc), in this instance, the amount of beef consumers are willing to give up to obtain another unit of wine. The slope of each indifference curve is determined by consumer tastes; a change in tastes will generate a new family of indifference curves.

Figure 1.5   U.S. PP Curve: Increasing Opportunity Costs