Salvatore's Managerial Economics: Principles and Worldwide Applications, 8th International Edition

Chapter 6: International Competitiveness and Comparative Advantage

International competitiveness determines the comparative advantage of the nation. Here we explain the meaning and importance of comparative advantage and determine the comparative advantage of the United States, Japan, and Europe.

Comparative Advantage

The law of *comparative advantage* postulates that even if a nation is less efficient or has an absolute disadvantage with respect to another in the production of all commodities, there is still a basis for mutually beneficial trade. The nation should specialize in the production of the commodities in which its absolute *disadvantage* is *smallest* (these are the commodities of its *comparative advantage*) and import the commodities in which its absolute *disadvantage* is *greatest* (these are the commodities of its *comparative disadvantage*). But how, you might ask, can a country that is less efficient than another in the production of all commodities be able to export anything to the more efficient nation? By input prices being sufficiently lower in the less efficient nation to make some of its commodities (those in which the nation has a comparative advantage) actually cheaper in terms of a common currency than in the other nation. Thus, India has a comparative advantage and exports labor-intensive commodities based on its relative abundance of cheap labor, while the United States has a comparative advantage and exports capital-intensive commodities based on its relative abundance of cheap capital.

A great deal of trade among developed countries today, however, is not trade in entirely different products manufactured with different input combinations under conditions of constant returns to scale. It is rather *intra-industry trade,* or trade in differentiated products produced under conditions of economies of scale. *Product differentiation* refers to products of the same industry that are similar but not identical, as, for example, the different types of automobiles on the market today. Such product differentiation satisfies the different tastes of different consumers. This is the reason that the United States both exports and imports chemicals, computers, automobiles, and many other products.

Intra-industry trade allows each nation to specialize in the production of some variations of the product for the domestic market and for export (thus achieving economies of scale), while importing other variations of the product from other nations at a lower price than it could produce them domestically. For example, Germany exports luxurious and expensive Mercedes automobiles to France and imports many economy Renaults from France. Nearly 50 percent of world trade and more than 60 percent of U.S. trade is now intra-industry trade.

The Comparative Advantage of the United States, Europe, and Japan

The broad comparative advantage of the United States, the European Union, and Japan can be inferred by the excess in the percentage of total exports over the percentage of total imports in each major commodity group for each country or region. The 27-member European Union (EU) refers to the fifteen older members (Germany, France, the United Kingdom, Italy, Spain, the Netherlands, Belgium, Denmark, Portugal, Greece, Ireland, Luxembourg, Austria, Finland, and Sweden) and the ten newly-admitted countries (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic, Slovenia). The rationale is that if a nation exports relatively more than it imports of a particular product, the nation must have a comparative advantage in that product.

Following this rule, we can infer from the following table, that in 2004, the United States had a revealed comparative advantage in food (since U.S. food exports as a percentage of total overall U.S. exports exceeded U.S. food imports as a percentage of total U.S. imports), but a strong revealed comparative disadvantage in fuels. In manufactures, the United States had a revealed comparative advantage in chemicals and in telecommunications equipment, but a revealed comparative disadvantage in automotive products, as well as in textiles and clothing. The EU seemed to have a comparative advantage in automotive products and chemicals, and a comparative disadvantage in all other commodity groups. Japan seemed to have a very strong comparative advantage in manufactures (other than textiles and clothing) and an equally strong comparative disadvantage in primary commodities. Product differentiation is the reason for intra-industry trade (i.e., for the same type of product being both exported and imported by the same nation or region).

Table
Composition of Exports and Imports of the United States, the European Union, and Japan and their Revealed Comparative Advantage

	United States % of Total		European Union % of Total		Japan % of Total	
	Exports	Imports	Exports	Imports	Exports	Imports
Primary commodities	14.3	22.0	15.5	21.7	2.9	41.9
Food	7.3	4.4	7.8	8.1	0.5	11.6
Fuels	2.3	14.2	3.9	8.7	0.4	20.8
Manufactures	81.8	74.3	81.2	74.9	92.7	56.2
Automotive products	9.3	12.9	12.7	10.5	20.5	2.8
Chemicals	13.8	7.6	14.8	12.4	8.5	7.6
Office & telecom. equip.	14.8	14.0	8.5	10.5	19.1	14.1
Textiles and clothing	2.1	6.3	3.9	5.0	1.4	6.0

Source: WTO, *International Trade* Statistics (WTO: Geneva, 2005).

The following table shows some of the manufactured products in which the United States, the European Union, Japan, China, and Brazil have a comparative advantage (i.e., in which they had a trade surplus) in 2010.

Table
The Comparative Advantage of the United States, European Union, Japan, China, Brazil, and Korea in 2010

United States: Chemicals other than pharmaceuticals, aircraft, integrated circuits, non-electrical machinery, and scientific and controlling instruments.

European Union: Iron and steel, chemicals (including pharmaceuticals), transport equipment (automobiles and aircraft), all types of machinery, and scientific and controlling instruments.

Japan: Iron and steel, chemicals other than pharmaceuticals, office and telecom equipment and most other types of machinery, automobiles and other transport equipment, and scientific and controlling instruments.

China: iron and steel, pharmaceuticals, office and telecom equipment and most other types of machinery other than integrated circuits, transport equipment other than automobiles, power generating and electrical machinery, textiles and clothing, and personal household goods.

Brazil: Iron and steel, and transport equipment other than automobiles, and personal and household goods.

Source: WTO, *International Trade Statistics* (Geneva, 2011).