# International Business 7e

by Charles W.L. Hill

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# Chapter 5

## International Trade Theory

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# An Overview Of Trade Theory

- Free trade refers to a situation where a government does not attempt to influence through quotas or duties what its citizens can buy from another country or what they can produce and sell to another country



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# The Benefits Of Trade

- Smith, Ricardo and Heckscher-Ohlin show why it is beneficial for a country to engage in international trade even for products it is able to produce for itself

International trade allows a country:

- to specialize in the manufacture and export of products that it can produce efficiently
- import products that can be produced more efficiently in other countries



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# The Patterns Of International Trade

- Some patterns of trade are fairly easy to explain - it is obvious why Saudi Arabia exports oil, Ghana exports cocoa, and Brazil exports coffee
- But, why does Switzerland export chemicals, pharmaceuticals, watches, and jewelry?  Why does Japan export automobiles, consumer electronics, and machine tools?



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# Trade Theory And Government Policy

- Mercantilism makes a crude case for government involvement in promoting exports and limiting imports
- Smith, Ricardo, and Heckscher-Ohlin promote unrestricted free trade
- New trade theory and Porter's theory of national competitive advantage justify limited and selective government intervention to support the development of certain export-oriented industries


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# Mercantilism

- Mercantilism suggests that it is in a country’s best interest to maintain a trade surplus -- to export more than it imports
- Mercantilism advocates government intervention to achieve a surplus in the balance of trade
- It views trade as a zero-sum game - one in which a gain by one country results in a loss by another


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# Absolute Advantage

- Adam Smith argued that a country has an absolute advantage in the production of a product when it is more efficient than any other country in producing it
- According to Smith, countries should specialize in the production of goods for which they have an absolute advantage and then trade these goods for the goods produced by other countries



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# Absolute Advantage

- Assume that two countries, Ghana and South Korea, both have 200 units of resources that could either be used to produce rice or cocoa
- In Ghana, it takes 10 units of resources to produce one ton of cocoa and 20 units of resources to produce one ton of rice
- So, Ghana could produce 20 tons of cocoa and no rice, 10 tons of rice and no cocoa, or some combination of rice and cocoa between the two extremes


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# Absolute Advantage

- In South Korea it takes 40 units of resources to produce one ton of cocoa and 10 resources to produce one ton of rice
- So, South Korea could produce 5 tons of cocoa and no rice, 20 tons of rice and no cocoa, or some combination in between
- Ghana has an absolute advantage in the production of cocoa
- South Korea has an absolute advantage in the production of rice



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# Absolute Advantage

Without trade:

❖Ghana would produce 10 tons of cocoa and 5 tons of rice

❖ South Korea would produce 10 tons of rice and 2.5 tons of cocoa

If each country specializes in the product in which it has an absolute advantage and trades for the other product:

❖Ghana would produce 20 tons of cocoa

❖South Korea would produce 20 tons of rice

❖Ghana could trade 6 tons of cocoa to South Korea for 6 tons of rice



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# Absolute Advantage

After trade:

- Ghana would have 14 tons of cocoa left, and 6 tons of rice
- South Korea would have 14 tons of rice left and 6 tons of cocoa

- Both countries gained from trade



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# Absolute Advantage

## Table 5.1 Absolute Advantage and the Gains from Trade

| Resources Required to Produce 1 Ton of Cocoa and Rice | | |
|---|---|---|
| | **Cocoa** | **Rice** |
| Ghana | 10 | 20 |
| South Korea | 40 | 10 |
| **Production and Consumption without Trade** | | |
| | **Cocoa** | **Rice** |
| Ghana | 10.0 | 5.0 |
| South Korea | 2.5 | 10.0 |
| Total production | 12.5 | 15.0 |
| **Production with Specialization** | | |
| | **Cocoa** | **Rice** |
| Ghana | 20.0 | 0.0 |
| South Korea | 0.0 | 20.0 |
| Total production | 20.0 | 20.0 |
| **Consumption After Ghana Trades 6 Tons of Cocoa for 6 Tons of South Korean Rice** | | |
| | **Cocoa** | **Rice** |
| Ghana | 14.0 | 6.0 |
| South Korea | 6.0 | 14.0 |
| **Increase in Consumption as a Result of Specialization and Trade** | | |
| | **Cocoa** | **Rice** |
| Ghana | 4.0 | 1.0 |
| South Korea | 3.5 | 4.0 |



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# Comparative Advantage

- David Ricardo asked what might happen when one country has an absolute advantage in the production of all goods
- Ricardo's theory of comparative advantage suggests that countries should specialize in the production of those goods they produce most efficiently and buy goods that they produce less efficiently from other countries, even if this means buying goods from other countries that they could produce more efficiently at home


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# Comparative Advantage

Assume:

- Ghana is more efficient in the production of both cocoa and rice
- In Ghana, it takes 10 resources to produce one tone of cocoa, and 13 1/3 resources to produce one ton of rice
- So, Ghana could produce 20 tons of cocoa and no rice, 15 tons of rice and no cocoa, or some combination of the two
- In South Korea, it takes 40 resources to produce one ton of cocoa and 20 resources to produce one ton of rice
- So, South Korea could produce 5 tons of cocoa and no rice, 10 tons of rice and no cocoa, or some combination of the two



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# Comparative Advantage

With trade:

- ❖Ghana could export 4 tons of cocoa to South Korea in exchange for 4 tons of rice
- ❖Ghana will still have 11 tons of cocoa, and 4 additional tons of rice
- ❖South Korea still has 6 tons of rice and 4 tons of cocoa
- ❖If each country specializes in the production of the good in which it has a comparative advantage and trades for the other, both countries gain
- ❖Comparative advantage theory provides a strong rationale for encouraging free trade



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# Comparative Advantage

## Table 5.2: Comparative Advantage and the Gains from Trade

| Resources Required to Produce 1 Ton of Cocoa and Rice | | |
|---|---|---|
| | **Cocoa** | **Rice** |
| Ghana | 10 | 13.33 |
| South Korea | 40 | 20 |
| **Production and Consumption without Trade** | | |
| | **Cocoa** | **Rice** |
| Ghana | 10.0 | 7.5 |
| South Korea | 2.5 | 5.0 |
| Total production | 12.5 | 12.5 |
| **Production with Specialization** | | |
| | **Cocoa** | **Rice** |
| Ghana | 15.0 | 3.75 |
| South Korea | 0.0 | 10.0 |
| Total production | 15.0 | 13.75 |
| **Consumption After Ghana Trades 6 Tons of Cocoa for 6 Tons of South Korean Rice** | | |
| | **Cocoa** | **Rice** |
| Ghana | 11.0 | 7.75 |
| South Korea | 4.0 | 6.0 |
| **Increase in Consumption as a Result of Specialization and Trade** | | |
| | **Cocoa** | **Rice** |
| Ghana | 1.0 | 0.25 |
| South Korea | 1.5 | 1.0 |



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# Qualifications And Assumptions

The simple example of comparative advantage assumes:

- only two countries and two goods
- zero transportation costs
- similar prices and values
- resources are mobile between goods within countries, but not across countries
- constant returns to scale
- fixed stocks of resources
- no effects on income distribution within countries



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# Extensions Of The Ricardian Model

- Resources do not always move freely from one economic activity to another, and job losses may occur
- Unrestricted free trade is beneficial, but because of diminishing returns, the gains may not be as great as the simple model would suggest

Opening a country to trade:

- might increase a country's stock of resources as increased supplies become available from abroad
- might increase the efficiency of resource utilization, and free up resources for other uses
- might increase economic growth



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# The Samuelson Critique

- Paul Samuelson argues that dynamic gains from trade may not always be beneficial
- The ability to offshore services jobs that were traditionally not internationally mobile may have the effect of a mass inward migration into the United States, where wages would then fall



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# Heckscher-Ohlin Theory

- Ricardo's theory suggests that comparative advantage arises from differences in productivity
- Eli Heckscher and Bertil Ohlin argued that comparative advantage arises from differences in national factor endowments – the extent to which a country is endowed with resources like land, labor, and capital
- The Heckscher-Ohlin theory predicts that countries will export goods that make intensive use of those factors that are locally abundant, while importing goods that make intensive use of factors that are locally scarce


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# Classroom Performance System

All of the following theories advocated free trade except

a) Mercantilism
b) Comparative Advantage
c) Absolute Advantage
d) Hecksher-Ohlin


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# The Leontief Paradox

- Wassily Leontief theorized that since the U.S. was relatively abundant in capital compared to other nations, the U.S. would be an exporter of capital intensive goods and an importer of labor-intensive goods.
- However, he found that U.S. exports were less capital intensive than U.S. imports
- Since this result was at variance with the predictions of the theory, it became known as the Leontief Paradox



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# Classroom Performance System

Which theory suggested that comparative advantage arises from differences in national factor endowments?

a) mercantilism
b) absolute advantage
c) Heckscher-ohlin
d) comparative advantage



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# The Product Life Cycle Theory

- The product life-cycle theory, proposed by Raymond Vernon, suggested that as products mature both the location of sales and the optimal production location will change affecting the flow and direction of trade
- Vernon argued that the size and wealth of the U.S. market gave U.S. firms a strong incentive to develop new products
- Vernon argued that initially, the product would be produced and sold in the U.S., later, as demand grew in other developed countries, U.S. firms would begin to export
- Over time, demand for the new product would grow in other advanced countries making it worthwhile for foreign producers to begin producing for their home markets



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# The Product Life Cycle Theory

- U.S. firms might also set up production facilities in those advanced countries where demand was growing limiting the exports from the U.S.
- As the market in the U.S. and other advanced nations matured, the product would become more standardized, and price the main competitive weapon
- Producers based in advanced countries where labor costs were lower than the United States might now be able to export to the U.S.
- If cost pressures became intense, developing countries would begin to acquire a production advantage over advanced countries
- The United States switched from being an exporter of the product to an importer of the product as production becomes more concentrated in lower-cost foreign locations



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# The Product Life Cycle Theory

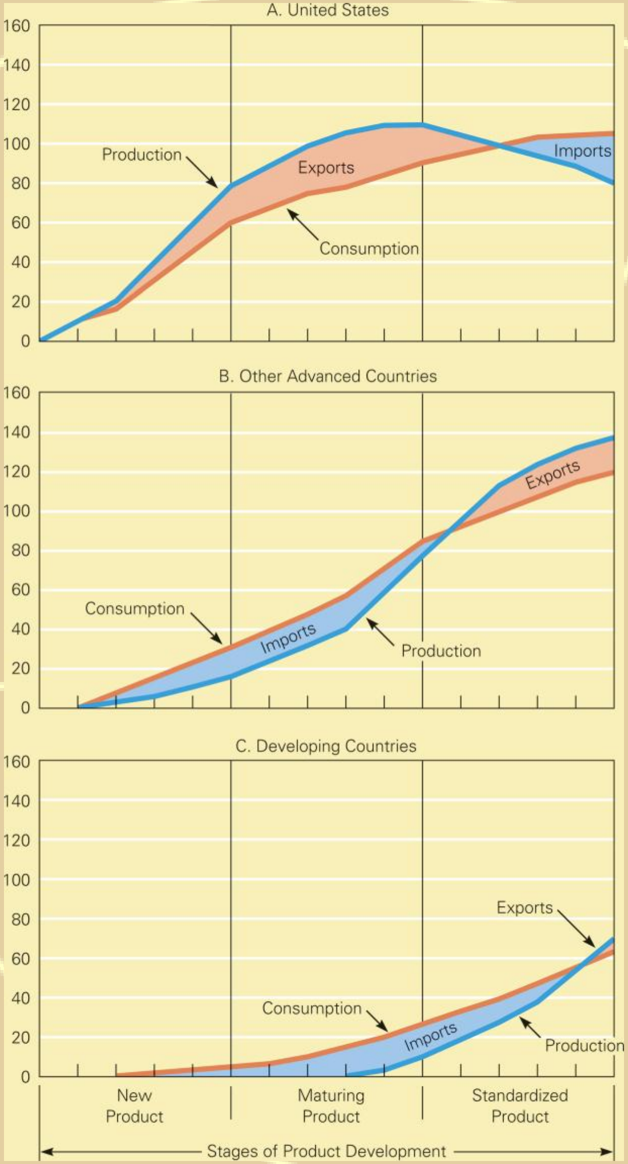


Figure 5.5: The Product Life Cycle Theory



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# The Product Life Cycle Theory

- The product life cycle theory accurately explains what has happened for products like photocopiers and a number of other high technology products developed in the US in the 1960s and 1970s
- But, the increasing globalization and integration of the world economy has made this theory less valid in today's world


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# Classroom Performance System

Which theory suggests that as products mature the optimal production location will change?

a) Mercantilism
b) Comparative Advantage
c) Absolute Advantage
d) Product life-cycle



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# New Trade Theory

- New trade theory suggests that the ability of firms to gain economies of scale (unit cost reductions associated with a large scale of output) can have important implications for international trade

New trade theory suggests that:

- through its impact on economies of scale, trade can increase the variety of goods available to consumers and decrease the average cost of those goods
- in those industries when output required to attain economies of scale represents a significant proportion of total world demand, the global market may only be able to support a small number of enterprises



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# Variety And Reducing Costs

- Without trade, nations might not be able to produce those products where economies of scale are important
- With trade, markets are large enough to support the production necessary to achieve economies of scale
- So, trade is mutually beneficial because it allows for the specialization of production, the realization of scale economies, and the production of a greater variety of products at lower prices



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# Economies Of Scale, First Mover Advantages, And The Pattern Of Trade

- The pattern of trade we observe in the world economy may be the result of first mover advantages (the economic an strategic advantages that accrue to early entrants into an industry) and economies of scale
- New trade theory suggests that for those products where economies of scale are significant and represent a substantial proportion of world demand, first movers can gain a scale based cost advantage that later entrants find difficult to match



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# Implications Of New Trade Theory

- Nations may benefit from trade even when they do not differ in resource endowments or technology
- A country may dominate in the export of a good simply because it was lucky enough to have one or more firms among the first to produce that good
- While this is at variance with the Heckscher-Ohlin theory, it does not contradict comparative advantage theory, but instead identifies a source of comparative advantage
- An extension of the theory is the implication that governments should consider strategic trade policies that nurture and protect firms and industries where first mover advantages and economies of scale are important



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# Classroom Performance System

Economies of scale and first mover advantages are important to which trade theory?

a) Mercantilism

b) Product life cycle

c) New trade theory

d) Comparative advantage



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# National Competitive Advantage: Porter's Diamond

- Michael Porter tried to explain why a nation achieves international success in a particular industry and identified four attributes that promote or impede the creation of competitive advantage:
- Factor endowments
- Demand conditions
- Relating and supporting industries
- Firm strategy, structure, and rivalry



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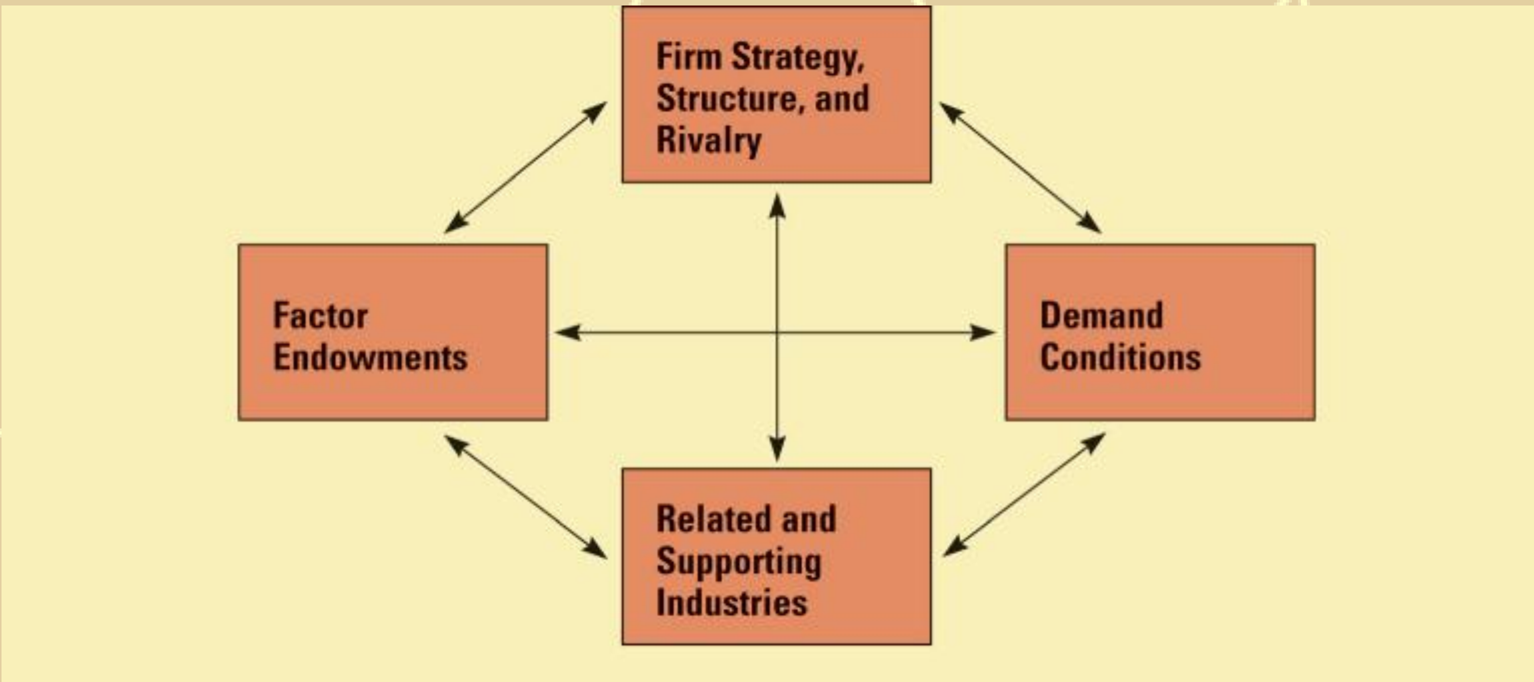
# National Competitive Advantage: Porter's Diamond

Figure 5.6: Determinants of National Competitive Advantage: Porter's Diamond



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# Factor Endowments

- Factor endowments refer to a nation's position in factors of production necessary to compete in a given industry
- A nation's position in factors of production can lead to competitive advantage
- These factors can be either basic (natural resources, climate, location) or advanced (skilled labor, infrastructure, technological know-how)



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# Demand Conditions

- Demand conditions refer to the nature of home demand for the industry's product or service
- The nature of home demand for the industry's product or service influences the development of capabilities
- Sophisticated and demanding customers pressure firms to be competitive


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# Relating And Supporting Industries

- Relating and supporting industries refer to the presence or absence of supplier industries and related industries that are internationally competitive
- The presence supplier industries and related industries that are internationally competitive can spill over and contribute to other industries
- Successful industries tend to be grouped in clusters in countries - having world class manufacturers of semi-conductor processing equipment can lead to (and be a result of having) a competitive semi-conductor industry



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# Firm Strategy, Structure, And Rivalry

- Firm strategy, structure, and rivalry refers to the conditions governing how companies are created, organized, and managed, and the nature of domestic rivalry
- The conditions in the nation governing how companies are created, organized, and managed, and the nature of domestic rivalry impacts firm competitiveness
- Different management ideologies affect the development of national competitive advantage
- Vigorous domestic rivalry creates pressures to innovate, to improve quality, to reduce costs, and to invest in upgrading advanced features



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# Evaluating Porter's Theory

Government policy can:

- affect demand through product standards
- influence rivalry through regulation and antitrust laws
- impact the availability of highly educated workers and advanced transportation infrastructure.

- The four attributes, government policy, and chance work as a reinforcing system, complementing each other and in combination creating the conditions appropriate for competitive advantage



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# Classroom Performance System

Porter's diamond of competitive advantage includes all of the following except

a) Factor endowments
b) Demand conditions
c) First-mover advantages
d) Firm strategy, structure, and rivalry


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# Implications For Managers

There are three main implications for international businesses:

- location implications
- first-mover implications
- policy implications



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# Location

- Different countries have advantages in different productive activities
- It makes sense for a firm to disperse its various productive activities to those countries where they can be performed most efficiently
- International trade theory suggests that firm sthat fail to do this, may be at a competitive disadvantage



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# First-Mover Advantages

- Being a first mover can have important competitive implications, especially if there are economies of scale and the global industry will only support a few competitors
- Firms that establish a first-mover advantage may dominate global trade in that product



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# Government Policy

- Government policies with respect to free trade or protecting domestic industries can significantly impact global competitiveness
- Businesses should work to encourage governmental policies that support free trade
- Firms should also lobby the government to adopt policies that have a favorable impact on each component of the diamond



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# Classroom Performance System

_________ refer to the nature of home demand for the industry's product or service.

a) Demand conditions

b) Factor endowments

c) Firm strategy, structure, and rivalry

d) Related and supporting industries



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