Transportation A Global Supply Chain Perspective 8th edition Coyle Test Bank

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Chapter 2: Transportation: The Critical Link in the Economy

MULTIPLE CHOICE

1. In the 21st Century, the U.S. Transportation System will face serious challenges from:

   a. Inadequate infrastructure
   b. Sustainability issues
   c. Energy costs
   d. All of the above

   ANS: D PTS: 1 DIF: Medium REF: Page 37

2. Transportation systems are critical to industrialized societies because?

   a. They allow employees to work longer hours
   b. They allow producers to expand their market areas
   c. They provide access to recreation areas
   d. None of the above

   ANS: B PTS: 1 DIF: Easy REF: Page 38

3. What was the primary reason for the creation of the U.S. interstate roadway system?

   a. commerce
   b. defense
   c. create depression era jobs
   d. promote manufacturing

   ANS: B PTS: 1 DIF: Medium REF: Page 36

4. A transportation shipment of 75 tons for 125 miles would be:

   a. 200 ton-miles
   b. 3125 ton-miles
   c. 9375 ton-miles
   d. 6250 ton-miles

   ANS: C PTS: 1 DIF: Medium REF: Page 39

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5. If a product costs $100 to produce, the firm expects 15% margin on the cost to produce and transportation per unit costs $5, what is the least price the firm is likely to accept for the product?

   a. 115
   b. 120
   c. 105
   d. 100

   ANS: B PTS: 1 DIF: Medium REF: Page 44

6. Based upon Lardner's Law, if transportation costs decreased by 2500, how much does the relevant market area increase?

   a. 200%
   b. 50%
   c. 400%
   d. 600%

   ANS: A PTS: 1 DIF: Hard REF: Page 49

7. What key element is critical to the ability to sell products made in large scale production facilities?

   a. efficient transportation
   b. highly technical production
   c. just in time sourcing
   d. high quality design

   ANS: A PTS: 1 DIF: Hard REF: Page 45

8. Which mode of transportation is most important in terms of freight ton-miles?

   a. Air Carriers
   b. Rail Carriers
   c. Motor Carriers
   d. Pipelines

   ANS: C PTS: 1 DIF: Easy REF: Page 41

9. Which mode of transportation is most important in terms of passenger-miles?

   a. Air Carriers
   b. Rail Carriers
   c. Motor Carriers
   d. Pipelines

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ANS: A PTS: 1 DIF: Easy REF: Page 41

10. What is a major reason for lower freight transportation cost?

a. more efficient use of equipment
b. lower demand
c. higher fuel prices
d. driver shortage

ANS: A PTS: 1 DIF: Easy REF: Page 42

11. What percentage of ton mile traffic in the U.S. is carried by air?

a. 4%
b. 10%
c. 15%
d. None of the above

ANS: D PTS: 1 DIF: Medium REF: Page 43

12. The transit time would impact which of the following cost?

a. Inventory cost
b. Marketing cost
c. Production cost
d. Insurance cost

ANS: A PTS: 1 DIF: Medium REF: Page 47

13. In terms of average house hold expenses, transportation is:

a. First
b. Second
c. Third
d. Last

ANS: B PTS: 1 DIF: Easy REF: Page 51

14. Demand for transportation at the macro is _____, while demand for transportation at the micro level is _____?

a. elastic, elastic
b. elastic, inelastic
c. inelastic, inelastic
d. inelastic, elastic

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ANS: D PTS: 1 DIF: Medium REF: Page 42

15. Ozone reduction is a concern due to what compound used in refrigeration?

a. carbon dioxide
b. chloroform
c. chlorofluorocarbons
d. chlorophyll

ANS: C PTS: 1 DIF: Hard REF: Page 52

16. What does the right of eminent domain mean?

a. You can use force to protect your house
b. The government can seize your property for public use
c. If you are born in the U.S. you are a citizen automatically
d. Rail companies can seize your land

ANS: B PTS: 1 DIF: Medium REF: Page 36-37

17. Which of the following is considered a non-economic transportation regulation area?

a. Safety
b. Security
c. Environment
d. All of the above

ANS: D PTS: 1 DIF: Easy REF: Page 52-53

18. Which of the following is considered a transportation service characteristic?

a. Capability
b. Transit time
c. Reliability
d. All of the above are service characteristics

ANS: D PTS: 1 DIF: Easy REF: Page 45-47

19. The demand for transportation is considered a:

a. Derived demand
b. Independent demand
c. Primary demand
d. Substitute demand

ANS: A PTS: 1 DIF: Easy REF: Page 43

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20. Aggregate transportation expenditures are about what percentage of GDP in the U.S.?

a. 1%
b. 10%
c. 15%
d. 20%

ANS: C PTS: 1 DIF: Medium REF: Page 48

SHORT ANSWER

1. Transportation provides what critical link in the global economy?

ANS: Transportation provides for the link between producers and consumers.

PTS: 1 DIF: Easy REF: Page 35

2. The investment by government in transportation infrastructure is frequently referred for as:

ANS: Social Capital

PTS: 1 DIF: Medium REF: Page 35

3. Why is transportation considered a cost center in the firm?

ANS: Changes in price of transportation will impact the price of products without impacting its form.

PTS: 1 DIF: Medium REF: Page 48

4. In addition to its economic role, what other roles are associated with transportation:

ANS: Political and military factors have also shaped the system

PTS: 1 DIF: Hard REF: Page 36-37

5. What was the purpose of the Kelly Act?

ANS: Grant airmail contracts to private carriers

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ESSAY

1. Explain the economic importance of transportation in a global economy.

ANS:
Transportation is considered the life support system of a civilization. Transportation systems have a major impact on population patterns and economic development. The lack of transportation infrastructure is considered one of the significant factors that has restrained economic development in many third world countries. From a daily living perspective transportation is critical to supporting the tremendous resource requirements of the average U.S. citizen, for example a city of 3 million people requires more than million pounds of meat, poultry, fish, eggs, cheese, and beverages a day. In a global economy transportation's role is critical because of these opportunities to import and export products and enhance this overall viability of many economies.

PTS: 1 DIF: Medium REF: Page 37-38

2. Explain how transportation can contribute to the economic value of a product.

ANS:
Transportation cost has an important impact on the level of demand that a commodity will have. As transportation costs increase, demand for a product will generally go down (this is especially true the more elastic the demand). For example, if a commodity cost $10 to purchase and people in a certain part of the country are willing to pay $12 for that commodity that commodity can only be sold if the transportation cost is less than $2 per unit sold. On the other hand, decreases in transportation cost can expand this market area and increase demand.

PTS: 1 DIF: Medium REF: Page 34-36

3. Explain place utility.

ANS:
Place utility refers to the value of an article "where" it is located and/or needed. For example a bottle of water is worth about a dollar if you are standing next to a machine that sells water for a dollar. But how much is a bottle of water worth if you are out of water and in the middle of a hot desert? The same bottle has different values depending on the place. The more efficient a transportation system the lower the landed cost associated with a product and expand market areas and improve profits.

PTS: 1 DIF: Medium REF: Page 48

4. Explain time utility and its importance in the global markets.

ANS:
The concept of time utility is similar to that of place utility but emphasizes having a product available "when" needed. For example, snow shovels have little utility in the Bahamas, and significant utility in North Dakota. While snow shovels have greater utility in the Dakotas than Bahamas they have little

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utility in August in North Dakota. Time utility has increased in importance in the global economy because of the higher values of many products and the longer distances.

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5. Explain the role and importance of the Mississippi River System.

ANS:
The Mississippi River System is a very important component of this Inland Waterway System in the U.S. It provides low cost transportation service to the many communities located contiguous to the river for the movement of lower value products and materials.

PTS: 1 DIF: Medium REF: Page 35

6. Explain the roles and importance of geographic specialization. Is this role more important in a global economy?

ANS:
Geographic specialization refers to the concept that certain areas, based upon natural resources, infrastructure, demographics, and policy, are able to produce goods and more efficiently than another area. Competition rewards efficient operations. The more efficient and effective a company is able to perform a task they are more competitive that company becomes. So based on things like natural resources (ex. timber for furniture production) certain areas are likely to specialize in certain production and then buy goods from another location that cannot be efficiently produced locally. Geographic specialization has become more important in the global economy and increased the importance of efficient transportation.

PTS: 1 DIF: Medium REF: Page 35

7. Explain modalsplit and its importance.

ANS:
Modalsplit is an analytical tool used to study and analyze the total transportation market for passenger and freight transport according to volume and mode. For passenger transportation more than 77 percent of the passenger mile traffic is private highway traffic. Since 1970 air travel has decreased in relative cost, as such air traffic passenger miles has increased, but it is still relatively small. Looking at freight, intercity modal split is dominated by trucks. Since 1990, rail share has increased in ton-miles due to the rising cost of fuel, but the lower cost recently has aided motor carriers.

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8. What is transportation's impact on the environment?

ANS:
Transportation is the backbone of the economy and provides numerous benefits. However, associated with these benefits is some associated societal cost. Transportation pollutes the environment and

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consumes natural resources. Use of transportation must always consider the tradeoff between benefit and cost. Increasingly this tradeoff is getting more attention. There is growing realization and acceptance by businesses that they have an important role to play in maintaining a healthy environment. Interestingly a number of firms are finding that reducing environmental impact means reducing waste, and reducing waste ultimately leads to greater profit.

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9. Explain the relationship between the political process and transportation.

ANS:
The initial construction of nearly all transportation infrastructure and their maintenance is supported by the government (with the exception of freight rail service which is largely privately funded). Transportation is key to economic growth and prosperity and impacts all elements of business. Additionally, transportation infrastructure is beyond the ability of anyone industry to fund and maintain. In order to keep industry from acting opportunistically, and avoid market failures the government is also involved in establishing policy and regulation with respect to transportation safety and organization.

The government involvement in transportation may lead to certain drawbacks for some parts of the public. For instance, through right of the eminent domain, if government makes a determination that a certain route is important to societal transportation good, the government can seize personal property.

The transportation network is also important for national defense. The system of national highways mean that the government can quickly mobilize armies from one side of the country to another during a time of conflict.

The maintenance of the existing transportation infrastructure has become a major issue in the 21st century because of competing demands for public funds such as medical care and national defense. The current situation is a major challenge for future economic expansion. In addition, there is a need for additions or improvements to the infrastructure.

PTS: 1 DIF: Medium REF: Page 53-54

10. Why was the construction of the Erie Canal so important in 1825?

ANS:
The Erie Canal provided access from New York City and contiguous arenas from the movement of manufactured products from the more developed East Coast communities to markets in the Mid-West via the canal and the Great Lakes. Conversely, the agricultural products and raw materials from the Mid-West could be moved to the East Coast. While relatively slow, it was a vast improvement over the existing alternatives.

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