

AP[®] HUMAN GEOGRAPHY

2011 SCORING GUIDELINES

Question 3

Industrial location models are used to explain geographic patterns of economic activity. The maps above show automobile factories built before and after 1986 in the United States.

Part A (2 points)

Identify TWO changes in the geography of automobile factory construction shown by the maps.

1. International-based change in the geography of plant construction
 - a. Increase in the number/investment of foreign-owned automobile plants **OR**
 - b. Increase in both small and especially larger-size, foreign-owned automobile plants

Note: Students cannot earn 2 points for listing two international-based changes.

2. Domestic-based change in the geography of plant construction
 - a. Increase in the number/investment of automobile plants in the South or Southeast part (Sun Belt) of the United States
 - b. Increase in number/investment of automobile plants built away from the traditional core of the American manufacturing belt (Rust Belt)
 - c. Decrease in the number of American-owned automobile plants
 - d. Decrease in the number/investment of automobile plants west of the Mississippi River

Notes

- Students cannot earn credit by simply counting the change in number of plants per state.
- Students may earn 2 points for identifying TWO domestic-based changes.

Part B (4 points)

Identify and explain TWO factors related to industrial location that may have contributed to the changes.

Identification (1 point each)	Explanation (1 point each)
1. Low-cost labor (not low-skilled or uneducated workforce)	<ul style="list-style-type: none">• More nonunionized labor in the South (or Southeast or Sun Belt).• Right-to-work states in the South (or Southeast or Sun Belt).
2. Market	<ul style="list-style-type: none">• More foreign-owned companies to minimize shipping costs (cheaper transportation costs).• More foreign-owned companies to avoid paying federally imposed tariffs.• United States represents one of the world's largest markets for automobile consumption.
3. Deindustrialization (North only)	<ul style="list-style-type: none">• Shifting or relocation of automobile plants because of high labor costs (unions) in the North.• Obsolete infrastructure in the North (or Rust Belt).• Outsourcing — domestic companies shifting from states in the North to Mexico.

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Question 3 (continued)

4. Government policies	<ul style="list-style-type: none">• Economic and development incentives — pro-industrial policies.• Connection to preexisting infrastructure systems — e.g., access to interstate highways, rail spurs, water/sewage/electricity.• State and local taxes — lower in the South, higher in the North.• Variances on zoning and environmental regulations.
5. Cheap land	<ul style="list-style-type: none">• Accessible and available sites in the South cost less than accessible and available sites in the North.
6. Available infrastructure	<ul style="list-style-type: none">• Cost-efficient interstate highway systems in the South (or Southeast or Sun Belt).• Cost-efficient rail system in the South (or Southeast or Sun Belt).• Allows quick and inexpensive assembly of supplies for the manufacture of automobiles and efficient distribution of automobiles to car dealerships.• Facilitates just-in-time production.
7. Cheap energy	<ul style="list-style-type: none">• Abundant, inexpensive supplies of energy in the South.• South (or Southeast) is below the national average for \$/kWh.

Note: No identification or explanation points should be awarded for the mention of raw materials.

Ⓐ The geography of automobile factory construction has changed as more foreign-owned factories have relocated in the United States, many small-scale factories have been eliminated, giving rise to large-scale production factories, and some automobile factories have relocated in Southern States including Alabama and Mississippi.

Ⓑ Several factors related to industrial location have led to these changes. Government incentives by state governments, including tax incentives (lower taxes), the construction of infrastructure (roads and manufacturing plants) and looser environmental regulations have encouraged automobile factories to relocate, ~~in order to~~ state governments often try to attract these factories in order to provide more job opportunities, and in turn, receive more money (through the income tax of the workers.) Economic Incentives have also

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Write in the box the number of the question you are answering on this page as it is designated in the exam.

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contributed to the relocation of
car manufacturing factories. (situation^{situational} factor)
Foreign companies benefit from relocating
to the United States in order to
be closer to their market (they sell
their cars in the United States) and
increase profits by cutting down on
transportation costs. Because wage
rates are lower, on the average,
in states like Alabama and
Mississippi, these Southern States have
been particularly attractive places
for automobile companies to
build new factories. (site factor)

A. In recent years there has been an increase in foreign^{owned} automobile factories in the United States. There has ~~also~~ ~~as~~ also been a decrease in United States owned automobile factories.

B. More foreign owned automobile factories have been built because they will be closer to the market area and consumers.

The foreign owned automobile factories are owned by usually German or Japanese companies. Both Germany and Japan are located very far away from the consumers in the United States. The transportation costs to get the automobiles to the United States would be extremely high. Since, transportation costs ~~is~~ is one of the key factors in determining where to locate a factory, the cost has a major impact on these companies on where to locate their factories. By locating their factories in the United States they are saving on transportation costs, so they can lower their prices for the product, ~~at this moment~~ thus more people will be willing to buy the product. Therefore, they will get a better profit by locating their factories in the United States.

Also, foreign owned ~~an~~ automobile factories

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are being located in the United States, because that is where the majority of the consumers or customers are located. The United States is the ~~number one~~ number one consumer of automobiles in the world. So it would be smart for foreign owned automobile companies to locate their factories there so they get more consumers, and thus more sales.

In conclusion, foreign owned automobile factories have been moving into the United States because they are closer to the market area so they would have lower transportation costs and so they are near more consumers, so more of the product will be sold. In both ways the factories location contributes to the economic development of the company.

These two maps are examples of industrial location models, which are used to explain geographic patterns ~~in~~ of economic activities. There are many ~~changes in~~ differences between the two maps.

When looking at the map showing before 1986 the majority of the automobile factories were United States owned and widely dispersed. However, the ~~1~~ after 1986 map depicts that the bulk of the factories are owned by foreign countries' and are mainly clustered in the mid-West.

There are many factors in which this change was provoked. Automobile manufacturing is a bulk-gaining industry. Meaning that to lower transportation costs the factories would have to be near the market. If foreign car companies were to ship the cars from their countries' it would raise the cost of the car dramatically. The Mid-West is also in close proximity to natural resources such as steel that

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Write in the box the number of the question you are answering
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are needed to make a car. In conclusion,
the United States has adapted to the
needs of ~~car~~ automobile manufacturing.

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2011 SCORING COMMENTARY

Question 3

Overview

This question required students to identify locational factors that pertained to the expansion of the automobile industry in the United States. They were then asked to explain how the factors they identified worked in combination to create a pattern of investment in new automobile assembly plants. The students were expected to use the Weber model of industrial location to frame their response to this question.

Sample: 3A

Score: 6

This essay demonstrates a comprehensive understanding of the geography of automobile plant construction and industrial location factors and earned full credit (2 points in part A and 4 points in part B). In part A the response received 1 point for correctly identifying an international change: “more foreign-owned factories have relocated in the united states [*sic*].” An additional point was awarded for identifying a domestic change: “some automobile factories have relocated in southern states including Alabama and Mississippi.” In part B the essay earned 1 point for identifying government policies as a factor in these changes. Another point was gained for explaining that government policies “including tax incentives (lower taxes), the construction of infrastructure (roads and manufacturing plants) and looser environmental regulations” have attracted factories “in order to provide more job opportunities.” The essay also received 1 point for identifying the market as a factor for foreign companies considering relocation. One more point was merited for the explanation that foreign companies would “increase profits by cutting down on transportation costs.”

Sample: 3B

Score: 4

The essay received full credit in part A (2 points) and partial credit (2 points) in part B. In part A the response earned 1 point for correctly identifying an international change by stating, “In recent years there has been an increase in foreign owned automobile factories in the United States.” An additional point was awarded for identifying the “decrease in United States owned automobile factories.” In part B no location factors were identified. Two points were granted for explanations implicitly tied to the market. The essay received 1 point for making the point that companies would save on transportation costs by locating their factories in the United States. One point was merited for the understanding that the United States represents one of the world’s largest markets for automobile consumption by stating that “foreign owned automobile factories are being located in the United States because that is where the majority of the consumers or customers are located.” The response received no further credit, as the discussion continues to highlight points previously made (that is, foreign-owned automobile factories are moving to the United States).

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Question 3 (continued)

Sample: 3C

Score: 3

The essay received partial credit in part A (1 point) and partial credit (2 points) in part B. In part A the response merited 1 point for correctly identifying an international change: “the after 1986 map depicts that the bulk of the factories are owned by foreign countrys’ [*sic*].” No domestic change identification point was earned, as the response merely describes the wide dispersal of automobile factories on the map. In part B the market identification and explanation points were awarded for indicating, “to lower transportation costs [1 point for explanation] the factories would have to be near the market [1 point for identification].” The response received no further credit because the discussion centers on the proximity of raw materials to automobile plant location.