# Canada-U.S. Trade Connection: The Automobile Industry

## Overview & Objectives

This inquiry lesson addresses the Canada-U.S. trade connection, the world’s largest bilateral trade relationship. The example of the automobile industry highlights the trade relationship based on geographic factors including location, resources, and transportation networks. The further inquiry question investigates whether a new bridge should be built to support the Canada-U.S. trade relationship and the automobile industry.

**Students will be able to...**

- Explain how Canada’s geographic factors including location, resources, and transportation networks are important for Canada’s manufacturing and the production of automobiles
- Describe why Canada and the U.S. have a longstanding trade connection
- Identify and give examples of economy of scale and comparative advantage
- Explain why the auto industry is a fully integrated continental industry
- Distinguish facts and opinions of multiple resources to present two perspectives on an issue

## Grades

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<th>8th</th>
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## Time

3-6 days depending on number of activities and extensions selected

## Required Materials

- Computer Internet access with projector
- Computer Internet access for students
- Textbooks and atlases
- Activity Materials: scissors, glue sticks, pencils, paper, construction paper, paper bags
- Power Point: “Auto Overview: Where is Your Car Made?” and “Where Should a New Bridge be Built?”
- Handouts: “Resources: Why are Cars Made in Canada”; “Why are Cars Made in Canada?” Chart and Key; “Building a Car Activity: Teacher Directions”; “Building a Car Activity”; “Vehicle Stencils”; “Canada’s Automobile Bailout”

## Minnesota Social Studies Standards & Benchmarks

**Standard 10.** The meaning, use, distribution and importance of resources change over time.

**8.3.3.10.1** Explain how the changing patterns of industrialization and trade between the United States, and Canada or Mexico, have resulted in close connections between the countries in terms of manufacturing, energy and finance.

*Example:* Trade patterns between Minnesota and Mexico, North American Free Trade Agreement, trade patterns between Minnesota and Canada, the building of the Great Lakes Seaway, the manufacturing of automobiles and other products in the Great Lakes Industrial Region, the development of the Canadian oil and gas fields and the pipelines connecting them to markets in the United States.

**Standard 10.** The meaning, use, distribution and importance of resources change over time.

**8.3.3.10.2** Describe the impact of comparative advantage, the international division of labor, and de-industrialization on manufacturing regions and commercial districts within urban areas in the United States and Canada.

*Example:* Decline of the Midwest as an industrial region because of the outsourcing of manufacturing, the rise of export focused garment manufacturing in China, Southeast Asia and elsewhere, the development of call centers and computer technology support services in India.
Economics Standard 12. International trade, exchange rates and international institutions affect individuals, organizations and governments throughout the world

**8.2.15.12.1** Explain why trade is mutually beneficial to countries; define and apply absolute and comparative advantage with respect to international trade.

*Example:* Absolute advantage—using fewer resources to produce a good (based on differences in productivity). Comparative advantage—giving up fewer other goods to produce a good (based on differences in opportunity costs). A worker in Country A can produce two rugs or four pizzas in one day, while a worker in Country B can only produce one rug or one half of a pizza. Country A has an absolute advantage in producing both rugs and pizzas (workers can produce more of both). However, Country B has a comparative advantage in producing rugs (one rug costs one half of a pizza in Country B, while in Country A one rug costs two pizzas). Both countries would be better off if Country A specialized in producing pizzas and Country B specialized in producing rugs and they traded at a rate of one rug for one pizza.

**SUGGESTED PROCEDURE**

**Opening**
Ask students if they will be earning their drivers’ license soon. What car would they like to drive? Begin by showing pictures of cars and asking where the cars are made using “Vehicles Made in Canada” at Government of Canada: Industry Canada [http://www.ic.gc.ca/eic/site/auto-auto.nsf/eng/am02365.html](http://www.ic.gc.ca/eic/site/auto-auto.nsf/eng/am02365.html). How expensive are the cars? Would the cars be different or more expensive if they were made in Canada?

**Day #1-2**
Pose the question, “Why are cars made in Canada?” Divide students into groups to investigate the reasons. Each group of 4 students receives a card with directions representing one of the following roles: Physical Geographer, Human Geographer, Transportation Engineer, and Industrialist.

- Physical Geographer: physical landscape and resources
- Human Geographer: population characteristics including density and education
- Transportation Engineer: transportation networks including roads, ships, railroads
- Industrialist: skilled workers, access to resources, financial centers, location to market

Working in same role groups, students work collaboratively using the provided resources listed at “Resources: Why are Cars Made in Canada” (including their textbook and atlas) to answer the question, why are cars made in Canada, from their perspective. Students complete the chart, “Why are Cars Made in Canada?” from their perspective with 4-5 facts before jigsaw the groups to complete the chart.

Students examine the Library of Congress Maps (listed under Resources) to understand why southern Ontario became the location of the automobile industry and to complete the chart. Using the Library of Congress Panoramic Maps Site, go to each panoramic map of four cities from the 1800s. Identify the characteristics that existed 100 years ago that might have helped the cities grow and become centers of manufacturing. All four cities are located in southern Ontario. Looking at the panoramic maps and the pattern of characteristics, what inferences can you make about the region?


What inferences can be made about this region? Why is southern Ontario a valuable manufacturing region?

Show the portion of the power point “Auto Overview: Where is Your Car Made?” and discuss why southern Ontario is a major vehicle manufacturing center.

Students write a paragraph explaining why cars are made in southern Ontario, Canada as their exit card.
Day #3
Why might countries work together to make a product? Students remain in the original jigsaw groups and receive directions for the Building a Car Activity in which students “construct” cars. Students will understand that mass-producing an item (economy of scale) is a more efficient process than making a single product one at a time. The idea of opportunity cost (or comparative advantage) will be clear as students realize that they do not have all the resources needed in one location and trade is an important characteristic of production. After completing the activity, discuss economy of scale and opportunity cost in relation to the activity. The Exit Card is: Why might two countries work together to build a car?

Day #4-6
Using the automobile industry as the example, what are the current problems with Canada-United States trade? Students might cite rising costs and wages, Detroit bankruptcy, alternative transportation, foreign competition.

Show the Power Point “Where Should a New Bridge be Built?” to the “New International Bridge” (slide #13) and discuss whether a new bridge is needed. Review the Michigan State Trade Fact Sheet to understand the cross-border trade.

Students investigate answers to questions using the resources listed in Website Resources.
1. Should a new bridge be built?
2. Should an international bridge be owned and controlled by a private business or a government?
3. What rights & responsibilities do citizens have to make decisions about an international bridge?
Students work in groups to present both sides of the questions using one of the following methods: poster, multi-media, newscast/interview show. Students present their conclusions using the rubric as a guide. The class discusses groups’ results and examines the current status of the bridge (power point slides #31to #34).

Closing
Discuss as a class: Is the proposed new bridge appropriate and ethical? Did the necessity of the bridge supersede legal and ethical concerns? That is, was the democratic process of legislation overlooked for economic gain?

Extensions
2. Use the resources from this lesson and the following resources to investigate Canada’s auto industry historically to determine why the country does not make cars today.
Assessment
- Chart: “Why are Cars Made in Canada?”
- Paragraph Exit Card: Explain why cars are made in southern Ontario, Canada
- Student Responses
- Exit Card: Why might two countries work together to build a car?
- Group Presentation

Group Presentation Rubric:

<table>
<thead>
<tr>
<th></th>
<th>Outstanding</th>
<th>Very Good</th>
<th>Good</th>
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</thead>
<tbody>
<tr>
<td>Position</td>
<td>Clearly supported by at least 2 distinct sources</td>
<td>Supported by 2 distinct sources</td>
<td>Supported by 2 sources</td>
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<tr>
<td>Perspectives</td>
<td>Clearly presented a balanced perspective of at least 2 perspectives</td>
<td>Presented a balanced perspective of 2 perspectives</td>
<td>Presented 2 perspectives</td>
</tr>
<tr>
<td>Facts &amp; Opinions</td>
<td>Clearly presented &amp; distinguished facts &amp; opinions</td>
<td>Presented &amp; distinguished facts &amp; opinions</td>
<td>Presented facts &amp; opinions</td>
</tr>
<tr>
<td>Presentation</td>
<td>All participants actively involved in prepared &amp; organized presentation</td>
<td>All participants involved in prepared &amp; organized presentation</td>
<td>All participants involved in prepared presentation</td>
</tr>
</tbody>
</table>

Website Resources:
Library of Congress Historical Maps (4):
1. Partie occidentale de la Nouvelle France ou du Canada; 1755
   [link]
2. Map of the United States in part and Canada, showing all the canals, railroads, navigable rivers; 1852
   [link]
3. Railroad map showing the lands of the Standard Coal and Iron Co. situated in the Hocking Valley, Ohio, and their relation to the markets of the north and west; 1881
   [link]
4. Canadian Pacific Railway and connecting lines; 1912
   [link]

Library of Congress Panoramic Maps (4):
Brantford; 1875; [link]
Chatham; 1870; [link]
St. Thomas; 1896; [link]
Port Huron & Sarnia; 1867; [link]

The Bridge Questions
“New Detroit-to-Canada Bridge to Be Unveiled”; New York Times; June 14, 2012 article
[link]
“Snyder, Canadian leader Harper to sign deal for new bridge over Detroit River on Friday”; Crain’s Detroit Business; June 14, 2012 article
[link]
Detroit Bridge Information website
[link]
“PM Delivers Remarks in Windsor, Ontario” Speech on June 15, 2012; Prime Minister’s Office
[link]
“Michigan, Canada Strike $3.4 Billion Detroit Bridge Deal”; June 15, 2012; Bloomberg News
[link]
Additional Resources:
Interactive Historical Atlas
http://www.historicalatlas.ca/website/hacolp/national%5Fperspectives/population/UNIT%5F19/UNIT%5F19%5FPopEcon%5F1800/UNIT_19_frame_PE00.htm
The Canadian Atlas
www.canadiangeographic.ca/atlas
“Vehicles Made in Canada” at Government of Canada: Industry Canada
http://www.ic.gc.ca/eic/site/auto-auto.nsf/eng/am02365.html
Topographic Map at Atlas of Canada
http://atlas.nrcan.gc.ca/site/english/maps/topo/map
“Ontario Auto Industry” at Ontario, Canada
“State Trade Fact Sheet” for Michigan: Embassy of Canada in Washington
http://can-am.gc.ca/relations/commercial_relations_commerciales.aspx?lang=eng
“PM announces signing of an agreement for the construction of the new Detroit River International Crossing”; Prime Minister Office News Release; June 15, 2012; Windsor, Ontario
http://pm.gc.ca/eng/node/21855
“The Automotive Industry in Canada: Driving Our Economic Health and Prosperity”; Canadian Vehicle Manufacturers’ Association
http://www.cvma.ca/eng/industry/industry.asp
“Ontario-Gateway to North America’s Innovation Economy” and “Why Ontario?” and “Top 10 Reasons”; Ontario Automotive Communities Alliance
http://www.ontarioautoalliance.com/why-ontario/
Resources: “Why are Cars Made in Canada?”

Note: The Geographers & Transportation Network will be able to find information in their textbook, atlas, and Library of Congress maps while the Industrialist will rely on the websites below.

Physical Geography:

St. Lawrence Seaway History

CRS Earth Observation Catalogue, sponsored by Natural Resources Canada, for layered map of Ontario
http://ceocat.ccrs.nrcan.gc.ca/portal/index.html

Industrialist:

Handout “Canada’s Automobile Bailout”

Canada’s Automobile History
http://www.thecanadianencyclopedia.com/articles/automotive-industry

“Automotive”; Canadian Trade Commissioner Office

Canadian Vehicle Manufacturers’ Association
http://www.cvma.ca/eng/industry/industry.asp
**Why are Cars Made in Canada?**

**Directions:** From one of the perspectives below, investigate the reason why cars are made in Canada. Begin by reading and recording 4-5 facts from your perspective in the box below. When you are done, you will fill in boxes with facts from the other perspectives before completing the summary statements.

- Physical Geographer: physical landscape and resources
- Human Geographer: population characteristics including density and education
- Transportation Engineer: transportation networks including roads, ships, railroads
- Industrialist: skilled workers, access to resources, financial centers, location to market

<table>
<thead>
<tr>
<th>Physical Geographer</th>
<th>Summary Statement</th>
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<table>
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<tr>
<th>Human Geographer</th>
<th>Summary Statement</th>
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<thead>
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<th>Transportation Engineer</th>
<th>Summary Statement</th>
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<th>Industrialist</th>
<th>Summary Statement</th>
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*Why is southern Ontario a valuable manufacturing region?*
**Answer Key: Why are Cars Made in Canada?**

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<tr>
<td>Plains</td>
<td>Plains</td>
<td>St. Lawrence Lowlands—agriculture &amp; population center—with access to resources &amp; transportation</td>
</tr>
<tr>
<td>Rich soil</td>
<td>Rich soil</td>
<td></td>
</tr>
<tr>
<td>Moderate climate</td>
<td>Moderate climate</td>
<td></td>
</tr>
<tr>
<td>Clean water</td>
<td>Clean water</td>
<td></td>
</tr>
<tr>
<td>Hydroelectric, wind &amp; nuclear power</td>
<td>Hydroelectric, wind &amp; nuclear power</td>
<td></td>
</tr>
<tr>
<td>Access to resources—minerals, water, forests, land, population</td>
<td>Access to resources—minerals, water, forests, land, population</td>
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<table>
<thead>
<tr>
<th>Human Geographer</th>
<th>Facts</th>
<th>Summary Statement</th>
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<tr>
<td>Settled for 200 years</td>
<td>Settled for 200 years</td>
<td>Skilled, cohesive workforce</td>
</tr>
<tr>
<td>Farmers, merchants, skilled workers</td>
<td>Farmers, merchants, skilled workers</td>
<td></td>
</tr>
<tr>
<td>Cluster of integrated cities &amp; Toronto nearby</td>
<td>Cluster of integrated cities &amp; Toronto nearby</td>
<td></td>
</tr>
<tr>
<td>Common language—English</td>
<td>Common language—English</td>
<td></td>
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<tr>
<td>Influx of immigrants</td>
<td>Influx of immigrants</td>
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<tr>
<td>Numerous skilled workers</td>
<td>Numerous skilled workers</td>
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<tr>
<th>Transportation Engineer</th>
<th>Facts</th>
<th>Summary Statement</th>
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<tbody>
<tr>
<td>Extensive waterways &amp; canals</td>
<td>Extensive waterways &amp; canals</td>
<td>Transportation linkages established for over 100 years including water, rail, air, highways</td>
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<td>Ferries &amp; steamboats</td>
<td>Ferries &amp; steamboats</td>
<td></td>
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<tr>
<td>Railroads</td>
<td>Railroads</td>
<td></td>
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<tr>
<td>Bridges built across narrows</td>
<td>Bridges built across narrows</td>
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<tr>
<td>Ferries &amp; steamboats</td>
<td>Ferries &amp; steamboats</td>
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<tr>
<td>Vehicles, parts, supplies centrally located</td>
<td>Vehicles, parts, supplies centrally located</td>
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<thead>
<tr>
<th>Industrialist</th>
<th>Facts</th>
<th>Summary Statement</th>
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</thead>
<tbody>
<tr>
<td>Collaboration with 150 university, college &amp; research centers</td>
<td>Collaboration with 150 university, college &amp; research centers</td>
<td>Very positive business atmosphere with supportive government, skilled workers, research support, access to resources, transportation network, proximity to markets</td>
</tr>
<tr>
<td>Welcoming business atmosphere</td>
<td>Welcoming business atmosphere</td>
<td></td>
</tr>
<tr>
<td>Low labor &amp; health costs</td>
<td>Low labor &amp; health costs</td>
<td></td>
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<tr>
<td>Low tax rates</td>
<td>Low tax rates</td>
<td></td>
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<tr>
<td>Secure infrastructure</td>
<td>Secure infrastructure</td>
<td></td>
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<tr>
<td>Skilled &amp; educated workers—engineers</td>
<td>Skilled &amp; educated workers—engineers</td>
<td></td>
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<tr>
<td>Access to resources</td>
<td>Access to resources</td>
<td></td>
</tr>
<tr>
<td>Financial center of Toronto</td>
<td>Financial center of Toronto</td>
<td></td>
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<tr>
<td>High standard of living</td>
<td>High standard of living</td>
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**Why is southern Ontario a valuable manufacturing region?**

Southern Ontario has the physical features, population characteristics, transportation network, and business atmosphere to be a valuable manufacturing region. It is an established area within the central manufacturing area of North America.
Building a Car Activity: Teacher Directions

Students will understand that mass-producing an item (economy of scale) is a more efficient process than making a single product one at a time. In addition, the idea of opportunity cost (or comparative advantage) will be clear. Students will realize that they do not have all the resources and they need to either focus on one product or trade to complete the product.

Students will be given bags with some materials to begin the task and $50 in “monopoly money”, but they will need to purchase and trade for other materials. Students will be provided a direction sheet to review the task and will have 10 minutes for the first round. Let students pause after the first round to discuss their work, both within the group and the entire class. Students will continue for another 10 minutes in the second round, but the vendor should run out of materials. The teacher may be the vendor or students may fulfill the task.

After the second round, use the discussion questions to review the task. Discuss the concept of opportunity cost. Ask how this applies to the Canada-United States automobile manufacturing industry. How might it apply to the trade of other goods?

Preparation:
- Print the handout, “Building a Car Activity”, for students
- Make a poster of “Costs” for the vendor
- Copy “monopoly money” so each group has $50 in small bills and the vendor has $1000
- Fill a lunch bag for each student group with selected limited materials
- Make stencils of the standard car and the sports car

Teaching Steps:
1. Show a completed model of a standard car and a sports car.
2. Review the student directions.
3. Give each group a paper bag with various limited materials of white paper and colored paper (except black, green, and red), scissors, glue stick, and pencil so every group will have to purchase supplies to complete the standard car. Also, one group may have an additional pencil or glue stick or colored paper. (White paper should not actually be used; no cars will be accepted that are white.)
4. In round #1, give students 10 minutes to complete the vehicles.
5. Discuss progress in groups and as a class.
6. In round #2, give students another 10 minutes, but the vendor will run out of supplies.
7. At the end of round #2, identify the number of cars produced and pay the groups. Each group will pay you (the teacher as vendor) $100 to include $50 for resource costs and $50 for labor wages. The remaining money is their profit.
8. Complete the discussion

Notes:
Each group begins with $50. They may earn:
- $50 for each certified standard car
- $60 for each certified green sports car
- $70 for each certified red sports car

Students will have white paper in their bag, but cannot make any white cars. (They can make additional stencils if they realize that could be possible.) Making the sports car will be challenging because they will need to make round tires and the stencil does not include the outline for the tires. This will become a quality-control issue for some groups. The red paper is a scarce resource and it is more expensive. A third round may be conducted if the class period is longer.
 Costs:
• Standard Car Stencil $10
• Scissors $5
• Glue Stick $5
• Pencil $1
• Various Colored Paper $1

These materials may only be purchased and will not be in the provided bag of resources:
• Sports Car Stencil $30
• Black Paper $5
• Green Paper $5
• Red Paper $10

Discussion Questions:
1. How many vehicles did you successfully complete?
2. How much money did you earn?
3. To complete the cars, did you each make an individual car or did you cooperate to make many cars? Did it make a difference? Why? (Discuss economy of scale)
4. Did anyone take a particular role to help the group with their task, such as manager, buyer, or inspector of finished vehicles? Did it make a difference? Why?
5. What successes and frustrations did you have?

Follow-up Discussion Questions:
• How was the choice of automobile production determined? Did the choice change in round #2? Why?
• Did the lack of resources from the vendor or trade with other groups limit or change your production? How was this situation resolved?
• If the various groups were to coordinate the task, how would auto production change?
• Why might countries work together to produce a product? (Discuss comparative advantage)
• Why might Canada and the United States work together in the automobile industry? Would they coordinate on other products? Why?
Building a Car Activity

The purpose of this task is to investigate the production of vehicles by constructing vehicles in small groups. Your task is to produce as many high quality certified vehicles that are complete and accurate as possible. Each vehicle must pass inspection before it will be certified and allowed onto the market.

You may choose to produce the standard car, the sports car, or both vehicles. You will have 10 minutes to produce your vehicles. Each finished vehicle will have black wheels. The car may not be white because white-colored cars have saturated the market and consumers will not purchase white-colored vehicles. Be sure to review the provided models as needed.

You will begin with $50 and can earn $50 for each certified standard car. You may earn $60 for each certified green sports car and $70 for each certified red sports car. At the end of production, you will pay $50 in costs for the resources you received and you will pay $50 in wages for the workers. The remaining money is your profit.

- Earn $50 for each certified standard car
- Earn $60 for each certified green sports car
- Earn $70 for each certified red sports car

You will be given resources, but will be able to purchase additional raw materials (paper), machinery (scissors, glue stick, pencil), and technology (sports car stencil) to make your vehicles from the vendor. However, the vendor may not have enough materials due to production or transportation problems.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Item</th>
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<th>Item</th>
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<tbody>
<tr>
<td>$10</td>
<td>Standard Car Stencil</td>
<td>$30</td>
<td>Sports Car Stencil</td>
</tr>
<tr>
<td>$5</td>
<td>Scissors</td>
<td>$5</td>
<td>Black Paper</td>
</tr>
<tr>
<td>$5</td>
<td>Glue stick</td>
<td>$5</td>
<td>Green Paper</td>
</tr>
<tr>
<td>$1</td>
<td>Pencil</td>
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<td>Red Paper</td>
</tr>
<tr>
<td>$1</td>
<td>Various Colored Paper</td>
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Complete the following chart:

<table>
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<tr>
<th>Round</th>
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<th>Standard Car Earnings</th>
<th>Sports Car Earnings</th>
<th>Total Earnings</th>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#2</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Total Earnings</th>
<th>Cost of Resources</th>
<th>Wages of Workers</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- $50</td>
<td></td>
<td>- $50</td>
<td></td>
</tr>
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VEHICLE STENCILS
Canada's Automobile Bailout

The National Government of Canada and the Provincial Government of Ontario contributed $4 billion to keep Chrysler Canada and General Motors Canada functioning. (Ford did not participate in the bailout.) The bailout has been compared to the $12 billion the U.S. provided during the 2008 recession because the 20% of bailout monies that Canada provided is equal to the 20% of auto production conducted in Canada. The Canadian automotive industry campaigned to save Chrysler and the 9,400 autoworkers with the threat that failure could lead to the collapse of Canada’s automobile manufacturing sector.

Since the Auto Pact of 1964 that coordinated the automobile industry between Canada and the United States, the Canadian automobile industry has grown extensively. The Auto Pact was especially vital to the auto industry in Ontario because of the province’s dependence on that industry. The Pact was modified with the adoption of the North American Free trade Agreement (NAFTA) and ended with the ruling of the World Trade Organization. However, the NAFTA regulations superseded the Auto Pact and resulted in limited changes to the U.S.-Canada partnership in the automobile industry.

The automobile industry in Canada is the country's largest manufacturing sector with 900,000 jobs tied directly and indirectly to it. Thus, the collapse of the auto sector could potentially affect millions of Canadians, but greatly affect the province of Ontario where 400,000 people work in the auto industry and where all of Canada’s auto assembly plants are located.

Meanwhile, Chrysler and General Motors have been closing plants and laying off workers and sales of automobiles have fallen by 15%, causing the loss of 15,000 auto-related jobs. Yet, non-U.S. automobile manufacturers are having record sales in Canada and are half of all Canada auto sales.

Excerpted from the Following Resources:
“Whose Auto Bailout Is Most Expensive? Go Canada!”; Time World; May 6, 2009
“Canada Agrees to Its Own Auto Bailout”; New York Times; December 20, 2008
“Canada’s Auto Industry Imperiled”; The Washington Times; April 28, 2009

Canada’s Automobile Industry History
• Canada’s automobile manufacturing began in 1904 with a Henry Ford plant in Windsor, Ontario.
• U.S. branch plants were established in Canada, but most manufacturing still occurred in the U.S. The manufacture of automobiles was fragmented and, with World War II, coordination was necessary.
• The Auto Pact (Canada-United States Automotive Agreement) was signed in January 1945 for broader free trade between the two countries—eliminate tariffs and regulations that limit or prevent trade. The Pact created a single North American manufacturing sector and enabled Canada to compete internationally.
• The European Union and Japan filed a complaint with the World Trade Organization (WTO) for unfair business practices. The WTO agreed and in 2001 ruled that the Auto Pact broke global trade rules.
• In January 1994 the North American Free Trade Association (NAFTA) became effective linking Canada, the U.S. and Mexico closely in trade, including the automobile manufacturing sector. Thus, the ruling against the Auto Pact did not affect the Canada-U.S. automobile manufacturing.
Where is Your Car Made?
Trading Partners

• Canada is our largest trading partner
• We share the world’s largest bilateral trading relationship
Country Shares of Total US Trade (2010)

- Canada: 18%
- China: 16%
- Mexico: 14%
- Japan: 12%
- Germany: 10%
- UK: 8%
- Korea: 6%
Canada is the most important export destination for 70% of the 50 states—including Minnesota!
Canada’s Rank for States’ Exports of Goods

1. Canada is the state’s #1 export market
2. Canada is the state’s #2 export market
3. Canada is the state’s #3 export market

Legend:
- 3: over 300,000 jobs
- 2: 200,000 – 300,000 jobs
- 1: 150,000 – 199,999 jobs
- 4: 140,000 – 149,999 jobs
- 5: 100,000 – 139,999 jobs
- 6: 75,000 – 99,999 jobs
- 7: 50,000 – 74,999 jobs
- 8: 30,000 – 49,999 jobs
- 9: 20,000 – 29,999 jobs
- 10: 10,000 – 19,999 jobs
“Making Things Together”

- Many products cross the border several times during production. A final product often has significant content from both countries.
- More than 40% of Canada-U.S. trade is within-firm trade (e.g., Ford & General Motors).
Rear Suspension Assembly

General Motors Theta Program - Chevy Equinox / Pontiac Torrent

(Assembled by Martinrea in London Ontario and Shipped to Cami Automotive in Ingersoll Ontario)
Canada’s Automotive Industry

• The automotive industry is Canada’s largest manufacturing sector and is 17% of North America vehicle production.
• Canada is the world’s 6th largest exporter of automotive products.
• Canada produces many different cars including:
Manufacturing is Across Nations
Shipment of Resources Depends on Two Nations
Ontario is the center of Canada’s auto industry, producing over 2 million vehicles in 2012.

The province of Ontario produces more vehicles than the state of Michigan.

The major locations in southern Ontario include Windsor, Oshawa, London, Waterloo, & Toronto.

Major companies include Chrysler, Ford, General Motors, Honda, Toyota, Denso, Linamar, & Magna.

Companies collaborate with 150 university, college, & research centers.

Large number of skilled engineers.
Competitive Advantage

- Welcoming business environment
- Highly educated & skilled workers
- Lower labor costs—wages & health care
- Sound economy
- Financial stability
- Low tax rates
- Research & development
- Secure infrastructure
- High standard of living
General Motors Manufacturing Facilities

- The General Motors Oshawa Assembly Plant has 2 production lines
  - The Flex Line builds the Chevrolet Camaro, Camaro Convertible, Camaro ZL1, Buick Regal (eAssist & GS)
  - The Consolidated Line assembles the Chevrolet Impala & Equinox
Honda of Canada Mfg, Alliston Ontario

- Plant 1 builds Civic Coupe & Sedan; Plant 2 builds CR-V, Acura MDX, ZDX & Civic Sedan
- Produced 234,052 vehicles (2011)
- Employs 4200 personnel
Japan’s Automobiles are Built throughout Southern Ontario
• More trade flows between Windsor, Ontario and Detroit, Michigan than through any other border crossing in the world.
• Trucks carry 80% of Canada's trade with the U.S.—one truck crosses the Canada-U.S. border every 2 seconds
Historical Maps

1755

1852

1881

1912
Panoramic Maps of Ontario

Brantford; 1875

Chatham; 1870

St. Thomas; 1896

Port Huron & Sarnia; 1867
Where Should a New Bridge be Built?
Detroit-Windsor Tunnel Crossing

• By 1870, Detroit was debating building a bridge versus a tunnel between Detroit & Windsor.
• Railroads favored a bridge while ships felt a bridge would threaten navigation because of the high masts of sailing ships on the Detroit River.
• In 1910 the Michigan Central Railway Tunnel was completed.
• But it did not reduce desire for vehicle travel across the Detroit River, especially after the huge growth of the auto industry
Detroit-Windsor Tunnel Crossing

• The vehicle tunnel opened in 1930. It’s a mile long and 75 feet below the Detroit River
• 9 million vehicles use the tunnel annually
• The Tunnel is jointly owned by the city of Windsor, Ontario and by a private U.S. company
Ambassador Bridge Crossing

• Completed in 1929, it’s 2 miles long with 4 lanes
• In 2010, 7 million vehicles crossed the bridge
  – Car crossings expected to increase 57% by 2035
  – Truck crossings expected to increase 128% by 2035
• Currently, traffic coming off the bridge in Windsor must travel through residential & commercial areas
• It is the busiest North America border crossing & carries 25% of U.S.-Canada trade
The bridge is owned by the Detroit International Bridge Company, which is a private firm owned by billionaire Manuel “Matty” Moroun
## U.S.-Canada Tolls

### United States and Canada Crossings: Passenger Vehicle Toll Rates

<table>
<thead>
<tr>
<th>Crossing</th>
<th>Passenger Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambassador Bridge</td>
<td>$4.75</td>
</tr>
<tr>
<td>Detroit-Windsor Tunnel</td>
<td>$4.00</td>
</tr>
<tr>
<td>Queenston-Lewiston Bridge</td>
<td>$3.25</td>
</tr>
<tr>
<td>Rainbow Bridge</td>
<td>$3.25</td>
</tr>
<tr>
<td>Seaway International Bridge</td>
<td>$3.25</td>
</tr>
<tr>
<td>Whirlpool Rapids Bridge</td>
<td>$3.25</td>
</tr>
<tr>
<td>Peace Bridge</td>
<td>$3.00</td>
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<tr>
<td>Sault Ste. Marie International Bridge</td>
<td>$3.00</td>
</tr>
<tr>
<td>Blue Water Bridge</td>
<td>$3.00</td>
</tr>
<tr>
<td>Ogdensburg-Prescott Bridge</td>
<td>$2.75</td>
</tr>
<tr>
<td>Thousand Islands Bridge</td>
<td>$2.50</td>
</tr>
</tbody>
</table>
Michigan Exports

• Michigan exports $44 billion products/year
• 25% of Michigan’s manufacturing jobs depend on exports
• The largest foreign trading partner of Michigan is Canada
Is a New Bridge Needed?

• Can’t afford a new bridge
• Special interests are behind a new bridge
New Bridge Needed

• Ford Motor Chairman Bill Ford said: "Ford alone sends about 600 trucks a day across the bridge and they get hung up often, particularly on the Windsor side. Any time you get hung up like that, it costs you time and certainly costs you money" he said.

• Michian Governor Snyder said a separate bridge between Detroit & Windsor is needed, even if Moroun carries out his plans to add a second span. "I still believe we're in a crisis," he said. "There's no time to wait."
"We Canadians have a lot of trouble getting our minds around the do-nothing option," said Roy Norton (Canada Consul General in Detroit) questioning the rationale behind maintaining "...a death watch on an 83-year-old bridge with (our) fingers crossed"
New International Bridge

• Canada & Michigan collaborative project will ease traffic between countries—June 2012
• It will provide an alternative to the busiest Canada-U.S. border crossing
“Our Government is taking the measures necessary to facilitate trade & investment between Canada & the United States in order to generate jobs, economic growth & long term prosperity,” said Canada’s Prime Minister Stephen Harper. “This new bridge will reduce congestion at this critical Canada-U.S. border crossing, support the creation of new export related jobs & investment opportunities along the Quebec City–Windsor Corridor, increase the competitiveness of the North American manufacturing sector, and provide thousands of construction jobs in Ontario & Michigan.”

The project will be funded by the Canadian Government
Bridges Two Countries
Collaboration Continues