

August 23, 2016

Mr. Jerry Dias  
President  
Unifor  
205 Placer Court  
Toronto, ON M2H 3H9

Dear Mr. Dias:

**Re: Estimate of the Economic Impact of the Detroit Three Automakers in Canada**

The C<sub>4</sub>SE is pleased to provide Unifor with this estimate of the economic contribution of the Detroit Three Automakers production facilities in Canada.

This analysis builds on our previous analysis of the estimated economic impact of the potential closure of GM's assembly plant in Oshawa, and our earlier assessments of the risks associated with a collapse of the sector in 2009 and the benefits of subsequent government support for the industry. As before, this analysis was conducted using the C<sub>4</sub>SE's Provincial Economic Modeling System.

In this study we estimate the impact to the economy of the permanent removal of the Detroit Three automakers operations in Canada. It is worth noting that the economic contribution analysis is based on these companies operations in 2015 but, with higher production expected in 2016, this is likely to be an underestimate of the current value of these plants.

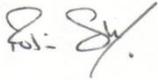
In 2015, 24,600 workers with the Detroit Three automakers produced 1.3 million vehicles, 1.1 million engines and added \$5.8 billion to the nation's GDP. Removing their contribution to the economy leads to...

- **Short-term:** GDP falls by up to \$26 billion with a loss of up to 150,000 jobs and a decline in government revenues of up to \$4.7 billion a year
- **Long-term:** Ontario's economy is permanently reduced by to \$21 billion and 38,000 jobs while government revenues are permanently reduced by up to \$3.9 billion
- **Standard of living:** Average labour income in Ontario is permanently reduced by up to \$1,600 a year

- **Multipliers:** In the short-run, up to 7 jobs are lost for each Unifor job and, in the long-term, GDP falls between \$3.60 and \$4.00 per dollar of Unifor generated GDP lost

Thank you for the opportunity to conduct this assignment.

Sincerely,



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Robin Somerville  
Director,  
The Centre for Spatial Economics

# The Economic Contribution of the Detroit Three Automakers Operations in Canada

**Robin Somerville**

Director

The Centre for Spatial Economics

prepared for  
**Unifor**  
August 2016



*Furthering the Understanding of Demographic and Economic Change in Canada's Provinces and Sub-Provincial Regions*

# Purpose & Approach

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- ❖ **Purpose:** This study estimates the economic contribution of the Detroit Three automakers operations in Canada
- ❖ **Approach:** The analysis is conducted by permanently removing activity equivalent to their 2015 operations in Canada from the economy using the C<sub>4</sub>SE's provincial economic modelling system
- ❖ **Scenarios:** The analysis includes a high and a low estimate based on purchases of auto parts produced in Ontario of either 20 or 30% respectively
- ❖ **Comment:** The economic contribution analysis is based on these companies operations in 2015; production is expected to be higher in 2016 which would raise these estimates

# Summary of Results

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- ❖ **Direct impact:** In 2015, 24,600 workers with the Detroit Three automakers produced 1.3 million vehicles, 1.1 million engines and added \$5.8 billion to the nation's GDP. Removing their contribution to the economy leads to...
- ❖ **Short-term:** GDP falls by up to \$26 billion with a loss of up to 150,000 jobs and a decline in government revenues of up to \$4.7 billion a year
- ❖ **Long-term:** Ontario's economy is permanently reduced by up to \$21 billion and 38,000 jobs while government revenues are permanently reduced by up to \$3.9 billion
- ❖ **Standard of living:** Average labour income in Ontario is permanently reduced by up to \$1,600 a year
- ❖ **Multipliers:** In the short-term, up to 7 jobs are lost for each Unifor job and, in the long-term, GDP falls between \$3.60 and \$4.00 per dollar of Unifor generated GDP lost

# Canada's Motor Vehicle Industry in 2015

❖ **Unifor assembly worker employment in 2015 with the Detroit Three companies was 18,900 plus 1,500 production-related salaried workers accounting for 50% of total employment**

Direct Impact of Detroit Three Assembly Plants in 2015		
	Detroit Three	Canada
Shipments (\$millions)	31,164	58,203
Value Added (\$millions)	4,237	7,913
Production (thousands of units)	1,293	2,283
Labour Compensation (\$millions)	2,296	4,555
Employment (number)	21,000	41,660

❖ **The Detroit Three companies accounted for 57% of the 2.3 million units produced in Canada in 2015**

❖ **The Detroit Three assembly operations are estimated to have added \$4.2 billion to Canada's GDP and to have paid wages and salaries of \$2.3 billion in 2015**

#### *Data Sources*

*Shipments: Statistics Canada matrix 304-0014 for Canada and author's estimates for the Detroit Three*

*Value Added: author's estimates*

*Production: Ward's Automotive for the Detroit Three and the OICA for Canada*

*Labour compensation: Statistics Canada's matrix 383-0031 for Canada and author's estimates for the Detroit Three*

*Employment: Statistics Canada's matrix 383-0031 for Canada and Unifor estimates for the Detroit Three*

# Motor Vehicle Parts Industry Assumptions

- ❖ **Detroit Three engine plants employ 3,600 and generate \$1.5 billion in GDP**
- ❖ **Parts are estimated to account for 67% of vehicle production costs**
- ❖ **Parts produced in Ontario for use by the Detroit Three assembly plants are estimated to be between 20 and 30% of that value**
- ❖ **The analysis assumes the parts industry's production is permanently reduced by the value of these sales**

Direct Impact of Detroit Three Engine Plants in 2015		
	Detroit Three	Canada
Shipments (\$millions)	4,757	5,904
Value Added (\$millions)	1,495	1,855
Production (thousands of units)	1,063	1,323
Labour Compensation (\$millions)	339	434
Employment (number)	3,600	4,600

#### *Data Sources*

*Shipments: Statistics Canada matrix 304-0014 for Canada and author's estimates for the Detroit Three*

*Value Added: author's estimates*

*Production: Unifor estimates*

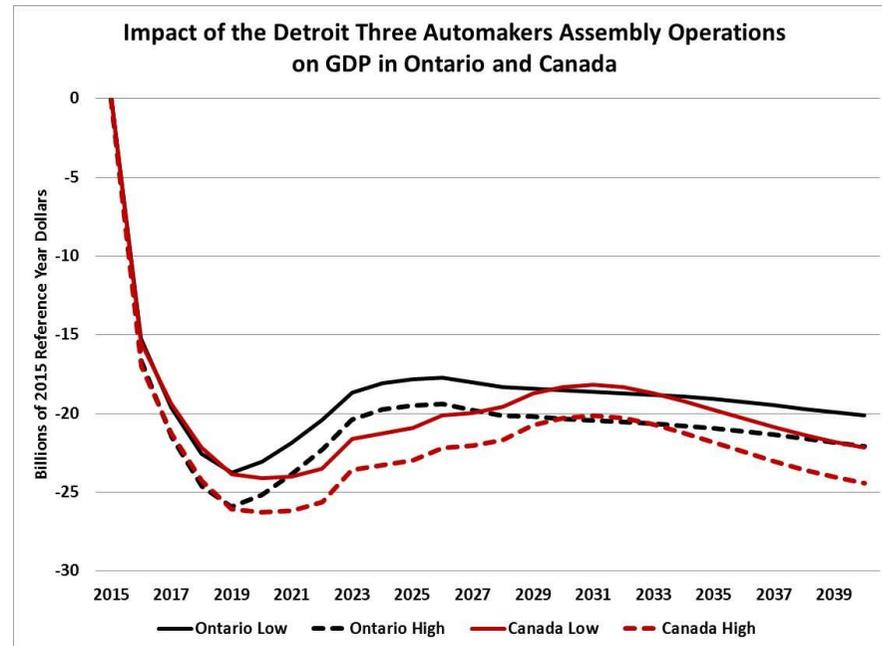
*Labour compensation: Statistics Canada's matrix 383-0031 for Canada and author's estimates for the Detroit Three*

*Employment: Unifor estimates*

Parts Purchased by Detroit Three in 2015		
Scenario:	20%	30%
Parts Purchased (\$millions)	20,964	20,964
Produced in Ontario (\$millions)	4,193	6,289
Value Added in Ontario (\$millions)	1,484	2,226

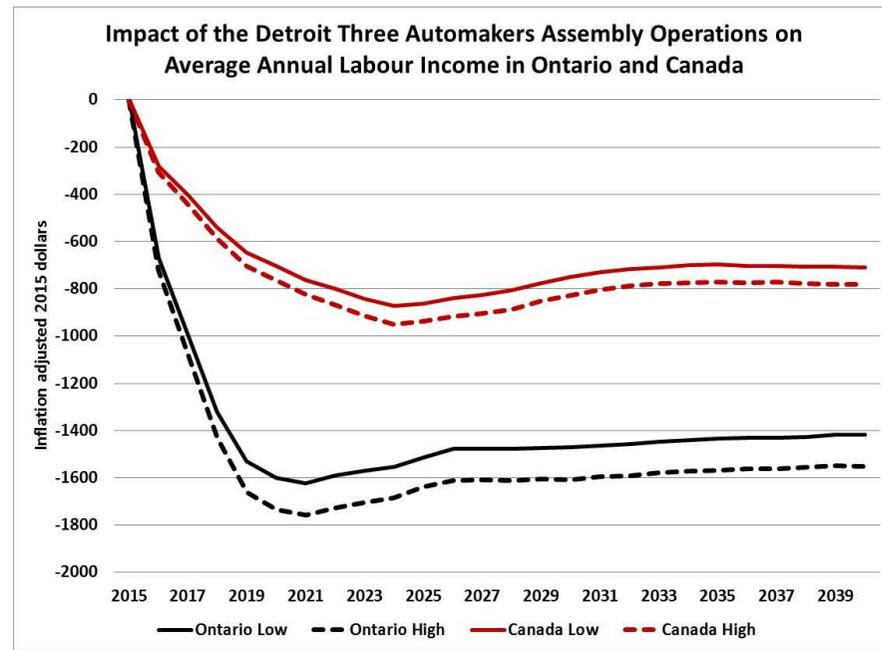
# Detroit Three Automakers Contribution to GDP in Ontario and Canada

- ❖ **Canada's GDP declines by as much as \$26 billion after 5 years with Ontario accounting for nearly all of the loss**
- ❖ **Ontario's long-term GDP is reduced by between \$19 and \$21 billion a year – or about 2% of the province's economy**
- ❖ **In the long-term, Canada's economy contracts between \$3.60 and \$4.00 per dollar of Unifor generated GDP lost**



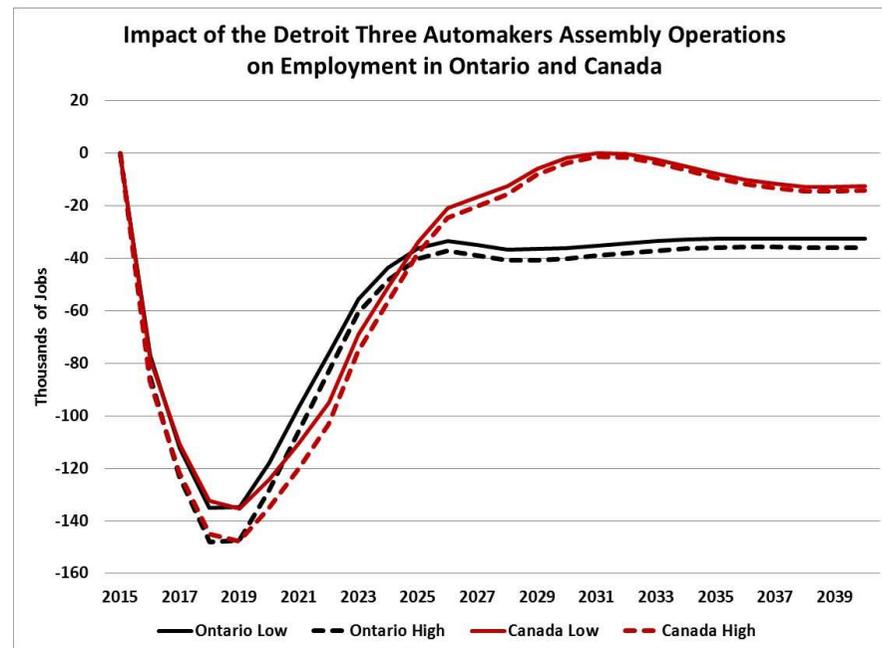
# Detroit Three Automakers Contribution to the Standard of Living in Canada

- ❖ The loss of high-wage manufacturing jobs reduces Ontario's average annual labour income by between \$1,400 and \$1,600 a year
- ❖ Lower wages in Ontario reduce average labour income nationally by over \$700 and by between \$270 and \$300 a year in the rest of the country



# Detroit Three Automakers Contribution to Employment in Ontario and Canada

- ❖ **Canada's employment falls by up to 150,000 after 3 years with nearly all the loss occurring in Ontario**
- ❖ **Ontario's long-term employment is permanently reduced by between 34 and 38 thousand jobs**
- ❖ **A decline in Unifor employment leads to a loss of up to 7 times as many jobs in total in the near-term**



# Summary of Results

Summary of the Economic Impact of the Detroit Three Automakers Operations in Canada								
Difference from the Baseline Scenario	Low Case Scenario Impact				High Case Scenario Impact			
	2016	2017	2018	Average Annual 2019-40	2016	2017	2018	Average Annual 2019-40
<b>GDP (millions of 2015 dollars)</b>								
Ontario	-15,219	-19,623	-22,539	-19,420	-16,672	-21,463	-24,627	-21,272
Canada	-15,455	-19,372	-22,174	-20,756	-17,008	-21,267	-24,283	-22,844
<b>Employment (thousands)</b>								
Ontario	-77.0	-112.4	-135.2	-48.6	-84.6	-123.2	-148.0	-53.5
Canada	-78.5	-110.7	-132.3	-34.1	-86.8	-121.9	-145.1	-38.1
<b>Average Annual Labour Income (2015 dollars)</b>								
Ontario	-670	-999	-1320	-1487	-722	-1078	-1432	-1620
Canada	-281	-404	-540	-753	-306	-440	-589	-825
<b>Government Tax Revenue (millions of 2015 dollars)</b>								
Government of Ontario	-725	-1,541	-2,058	-1,621	-963	-1,841	-2,398	-1,937
Federal Government	-958	-1,563	-1,903	-1,528	-1,315	-1,990	-2,341	-1,969

### **Note on Government Tax Revenue**

**Federal and provincial personal income tax, social insurance payments and sales tax revenues are all negatively affected by the decline in personal income. In the current version of the C<sub>4</sub>SE's Provincial Economic Modelling System, corporate income tax payments rise as labour's share of output falls leaving corporate revenues higher than in the baseline scenario. As a result, the net impact on overall government tax revenues is lower than may be expected.**

# Economic Multipliers

Economic Multipliers from the Detroit Three Automakers Operations in Canada								
Impact Relative to 2015 Unifor GDP or Employment	Low Case Scenario Multiplier				High Case Scenario Multiplier			
	2016	2018	2019	Long-term 2019-40	2016	2018	2019	Long-term 2019-40
<b>GDP per dollar of direct GDP</b>								
Ontario	2.66	3.93	4.14	3.39	2.91	4.30	4.52	3.71
Canada	2.70	3.87	4.16	3.62	2.97	4.24	4.55	3.99
<b>Employment per direct job</b>								
Ontario	3.4	6.0	6.0	2.2	3.8	6.6	6.6	2.4
Canada	3.5	5.9	6.0	1.5	3.9	6.5	6.6	1.7
<b>Government Tax Revenue per dollar of direct GDP</b>								
Government of Ontario	0.13	0.36	0.40	0.28	0.17	0.42	0.46	0.34
Federal Government	0.17	0.33	0.35	0.27	0.23	0.41	0.43	0.34

## ***Comparison to GM Oshawa (2015) Study***

***Detroit Three assembly plant employment in Canada is 5 times that used for the GM Oshawa study but value added is just 4 times as much. This shift is a result of revisions in shipments data and a small improvement in methodology. The short-term impacts on GDP, employment and labour income are all about 4 times that of the Oshawa study but are about 5 times higher in the long-term. Government tax revenue impacts are about 4 times higher in the long-term but only about 2 to 3 times higher in the short-run due to changes in the C4SE's provincial economic modelling system (see discussion on previous slide).***

***for more information please contact:***

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