COMET Corrected

SPEA

February 2018
Overview

- The TCO model described in section 9 of the IU report - A Macroeconomic Study of Federal and State Automotive Regulations with Recommendations for Analysts, Regulators, and Legislators - produces several outputs. One of them is the fuel savings, which serves as an input to the COMET scenarios in the REMI model.

- The IU team discovered a coding error in the TCO’s calculation of the COMET fuel savings that feeds into the REMI model.

- The IU team has since corrected this coding error and produced new REMI results. Because the COMET fuel savings are much more than previously reported, the corrected REMI results show smaller negative impacts on total employment, GDP, and disposable income.
Objective

- Attached are the figures and tables that are affected by the coding error.
- Each original graph published in our report is paired with a graph based on the correct fuel savings.
- The only difference between the Figures labeled “Original” and “Corrected” is the COMET scenario. All other scenarios are unaffected.

- All graphs labeled as “Original” are obtain from: Carley, S., Duncan, D., Graham, J.D., Siddiki, S., and Zirogiannis, N. (2017). *A Macroeconomic Study pf Federal and Automotive Regulations: With Recommendations for Analysts, Regulators, and Legislators.* School of Public and Environmental Affairs, Indiana University, Bloomington
REMI results
Those Figures include five different scenarios each. The first, “2012 EPA”, uses data published in the Environmental Protection Agency’s 2012 Regulatory Impact Assessment (RIA) and does not include the ZEV standard. The second, “2012 NHTSA”, similarly uses data from the National Highway Traffic and Safety Administration’s 2012 RIA and does not include the ZEV standard. These two scenarios represent the “2012 perspective”, whereas the remaining three represent the “2016 perspective”. The “2016 Low” and “2016 High” scenarios are based on NHTSA “2016 perspective” data, including fuel price adjustments, NRC (2015a) technology cost adjustments (one of a smaller magnitude and the other of a larger magnitude), and does include the ZEV standard. Finally, the “2016 COMET” is based on technology costs produced through the Cost Optimization Modeling for Efficiency Technologies (COMET) model, using EPA data, as well as fuel price adjustments. All five scenarios include three causal mechanisms to capture the impacts of federal and state regulations: (1) a price premium; (2) a corresponding investment in supply chain innovation; and 3) savings from reduced gasoline expenditures.
Figure 8.12: Difference in Employment Between Baseline and Fuel Savings Scenarios - Original
Figure 8.12: Difference in Employment Between Baseline and Fuel Savings Scenarios - Corrected
Figure 8.13: Difference in GDP Between Baseline and Fuel Savings

Scenarios - Original

- 2012 EPA
- 2012 NHTSA
- 2016 Low
- 2016 High
- 2016 COMET
Figure 8.13: Difference in GDP Between Baseline and Fuel Savings Scenarios - Corrected
Figure 8.14: Difference in Disposable Personal Income Between Baseline and Fuel Savings Scenarios - Original
Figure 8.14: Difference in Disposable Personal Income Between Baseline and Fuel Savings Scenarios - Corrected
Figure 8.16: Difference in Employment Between Baseline and Combined Regulatory Scenarios - Original
Figure 8.16: Difference in Employment Between Baseline and Combined Regulatory Scenarios - Corrected
Figure 8.17: Difference in GDP Between Baseline and Combined Regulatory Scenarios - Original
Figure 8.17: Difference in GDP Between Baseline and Combined Regulatory Scenarios - Corrected
Figure 8.18: Difference in Disposable Personal Income Between Baseline and Combined Regulatory Scenarios - Original
Table 8.1: Macroeconomic Modeling Results, Cumulative 2017-2025 and 2017-2035

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017 - 2025</th>
<th>2017 - 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP - Original</td>
<td>-92.6</td>
<td>-52.1</td>
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<tr>
<td>GDP - Corrected</td>
<td>-54.1</td>
<td>137.5</td>
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<tr>
<td>PDI - Original</td>
<td>-45.1</td>
<td>22.7</td>
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<tr>
<td>PDI - Corrected</td>
<td>-22.3</td>
<td>168.2</td>
</tr>
</tbody>
</table>

Note: These results pertain to the COMET scenario only. GDP and PDI are in billions of 2009 dollars.