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Bankruptcy of Detroit's Big Three Automobile Companies: New Economic Impact Estimates

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Ford, General Motors, and Chrysler rely heavily on an economic impact study by the Center for Automotive Research (CAR) in making their case for a financial bailout. This report claims that the simultaneous failure of these three companies would result in a loss of 3.3 million jobs nationally in the same year as the company shutdowns.[1] However, this estimate is based on highly dubious assumptions.

When these same questionable assumptions are run through a widely understood and respected model of the economy, the dramatic spin-off results are not produced.[2] Instead, only the Big Three auto companies and their immediate suppliers suffer job losses in the first year.

The Shortcomings of the CAR Model. The model used by CAR to produce its economic impact estimates employs input-output analysis to predict how changes in one industry—in this case the automotive industry—will affect different areas of the economy. This specific economic model was developed by the Regional Economic Modeling Institute (REMI) and contains detailed information about the economy's industries, including the values of what industries buy from each other, the value of what each industry produces, the purchases by consumers and government, the taxes collected, and the output by government.

The REMI model, however, is essentially static. That is, it does not mimic how consumers or producers would adapt to changes in structure or policies or how the indirect employment effects may play out over time. In other words, the model does not have a feedback loop to take into account such changes at either the state or the industry level.

Another shortcoming of the CAR model is its uneven treatment of trade. It assumes the U.S. needs to import more vehicles and parts. However, if imports are increased to the degree they suggest, this should put downward pressure on the U.S. dollar. The lower dollar should increase the volume of goods U.S. exporters are able to sell, thus raising U.S. employment and incomes in exporting industries.

It is common practice for firms to continue operations while under the supervision of a bankruptcy court. Thus, the CAR simulation assumptions are unrealistic. The estimates assume a 100 percent contraction of the auto industry in 2009, meaning all car purchases will be imports. They assume this will result in an immediate domino effect in 2009. Although they assume that this raises the price of imports, they make no other assumptions regarding the relative price changes of substitute goods in the United States. For example, it does not appear that any price effects were assumed about new cars versus used cars. Thus, the model avoids including the

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first-year behavior of automobile consumers when faced with higher prices.

Dynamic Analysis Estimates. Analysts at The Heritage Foundation ran dynamic simulations of the effect on the U.S. economy of a reduction of automobile supply due to the bankruptcy of the Big Three automakers. They used the Global Insight Short Term U.S. Macroeconomic model, which is a structural dynamic equilibrium model.

These simulations fail to confirm the 3.3 million jobs lost in 2009 found by the CAR model, because all of the indirect employment and spin-off effects do not happen in the first year of bankruptcy. Instead, companies and their employees adapt to the changing conditions. For example, the loss of new car supply could drive individuals to the used car market. This would open opportunities for auto-body shops and car parts. The increase in imported cars also lowers the value of the dollar, giving opportunities for exporting industries to expand and absorb some of the lost jobs.

Indeed, the assumptions employed by CAR are so unreasonable that its "worst case" scenario is wholly impossible. They assume that the Big Three simultaneously declare bankruptcy and shut down in 2009 and cease operations for a year. This assumption is divorced from bankruptcy reality. The usual practice in large-scale bankruptcies is for the petitioners to continue operations but at a reduced level. Because the automakers have suggested that they are at least 30 percent short of needed cash flow, a more reasonable assumption would be to reduce Detroit production levels by that percentage in 2009, 2010, and 2011 (the three years covered by the CAR study).[3]

When the more realistic assumption is made, the estimate of employment loss plummets to 453,000 jobs in the first year, a figure 86 percent lower than CAR's estimate. In other words, the CAR report inflates estimated job loss by a factor of more than seven.

Responsible Estimates. It is not surprising that large employment losses should come from a model that employs amazingly unreasonable assumptions and permits virtually no adaptations by consumers or other producers. Thus, Congress should be extremely careful in its use of the CAR study. Responsible economists would not argue that simultaneous bankruptcies by the Big Three would leave the economy unaffected, but neither would they suggest that such an unfortunate development would produce calamitous employment changes on the order claimed by the CAR analysts. At a minimum, these employment effects would not happen all in the same year. The longer it takes the effects to play out, the more time there is for individuals to make adjustments and absorb the capacity of laid-off workers and capital.

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1. David Cole, Sean McAlinden, Kristen Dziczek, and Debra Maranger Menk, "CAR Research Memorandum: The Impact on the U.S. Economy of a Major Contraction of the Detroit Three Automakers," Center for Automotive Research, November 4, 2008, at *http://www.cargroup.org/documents/FINALDetroitThreeContractionImpact_3__001.pdf* (December 8, 2008).
2. Analysts at the Center for Data Analysis used the U.S. Macroeconomic Model maintained by Global Insight, Inc. The methodologies, assumptions, conclusions, and opinions in this CDA Report are entirely the work of CDA analysts. They have not been endorsed by and do not necessarily reflect the views of the owners of the Global Insight (GI) model. The GI model is used by leading government agencies and Fortune 500 companies to provide indications to policymakers of the probable effects of economic events and public policy changes on hundreds of major economic indicators.
3. One argument put forward for a bailout is that consumers will not purchase vehicles from bankrupt companies. We believe that the last few months of negative press regarding the viability and quality of the Detroit automakers has done more damage than bankruptcy would. Indeed, a formal and organized restructuring would probably be a positive signal to consumers that the Big Three can resolve their financial difficulties.