

INFORUM ECONOMIC SUMMARY: POTENTIAL JOB LOSSES FROM RESTRUCTURING THE U.S. AUTO INDUSTRY

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Detroit-Three Bankruptcy: While impact would be severe, oft-quoted job loss figures are misleading and overstated says a University of Maryland economist. In the worse case scenario, peak job dislocation from restructuring would be half of the 3 million commonly cited.

In recent weeks, the Detroit Three (GM, Ford, and Chrysler) automobile manufacturers, the United Auto Workers, and elected officials have been reporting that a simultaneous “shutdown of one or more U.S. automakers could eliminate up to 3.3 million U.S. jobs.¹” However, the threat of widespread damage from closure is much less severe than this commonly cited number. According to Inforum Executive Director Jeff Werling, “There have been two studies showing that Detroit Three bankruptcy would eliminate up to 3 million jobs. Unfortunately, underlying these figures is an assumption that 100 percent of total U.S. auto manufacturing capacity would be offline. There is little creditability to this assumption under any plausible scenario, either in the short term or, especially, over the long haul.”

First, bankruptcy in the short term will not mean Detroit Three manufacturing will halt completely. Even in the depths of the worst recession in recent decades, domestic manufacturers still would account for more than 30 percent of domestic sales and over 40 percent of domestic production. “It will be important to keep the assembly lines moving under bankruptcy, if only to generate cash to facilitate the ultimate restructuring,” said Werling.

A more important issue, according to Werling, is to put to rest the ridiculous notion that motor vehicle manufacturing itself might disappear from U.S. soil over the long run. “North America is the automotive world’s largest and most dynamic market. Significant global vehicle manufacturers must have substantial operating presence in this most important market, if only to be close to the customer in a fiercely competitive arena. They also must have access to the world’s best manufacturing, research, and development talent housed in supply chain partners and in universities. Finally, much of the Detroit Three manufacturing capacity is among the most advanced and efficient in the world, and surely would play an operating role in the future North American market, no matter the ultimate ownership reshuffling that might result from restructuring.”

Inforum reviewed the commonly cited 3 million plus job-loss figures reported for bankruptcy or liquidation of the Detroit Three. First is a study conducted by Robert Scott of the Economic Policy Institute (EPI), a Washington DC think-tank, which was quoted above. A second, similar study by the Center of Automotive Research (CAR) in Michigan found that a 100 percent shutdown of U.S. auto capacity also would affect almost 3 million jobs.² Employing commonly used and credible models of the U.S. economy, these studies quantified primary job losses at automobile factories

¹ Robert Scott, “When Giants Fall: Shutdown of one or more U.S. automakers could eliminate up to 3.3 million U.S. jobs,” Economic Policy Institute Briefing Paper #227, December 3, 2008.

² David Cole, Sean McAlinden, Kristin Dzielick, and Debra Maranger Menk, “The Impact on the U.S. Economy of a Major Contraction of the Detroit Three Automakers, Center for Automotive Research Memorandum,” November 4, 2008.

(direct impacts), secondary job losses at parts manufacturers and car dealerships (indirect impacts), and tertiary job losses in other seemingly unrelated sectors. These tertiary effects reflect the job losses induced by expenditure reductions by workers dislocated in the first two rounds of losses. These impacts also are known as “income” or “respond” effects.

The EPI paper presents three scenarios that assume alternatively a complete shutdown of shutdown of GM only (which, in 2007, made up roughly 28 percent of North American manufacturing); a shutdown of the Detroit Three (about 70 percent of domestic capacity); and a total shutdown of the U.S. auto industry (100 percent), including plants of other manufactures such as Toyota, Honda, and Nissan (transplants). Total job loss estimates for these three scenarios, including indirect and “respond” losses, were 914 thousand, 2.1 million, and 3.3 million jobs, respectively.

Economists at Inforum conducted similar analysis using LIFT, the research group’s dynamic, interindustry model of the U.S. economy. LIFT has been developed and used for over 40 years, and its detailed industry structure and dynamic macroeconomic framework makes it well suited to investigate issues such as restructuring in the U.S. automobile industry. The Inforum analysis also simulated three scenarios, alternatively assuming that the coming restructuring would eliminate 20 percent, 40 percent, or 60 percent of Detroit Three capacity. It quantified direct and indirect job losses, as well as jobs lost through the income effect, over the six-year period 2009 to 2014.

LIFT is a dynamic macroeconomic model that reacts to any given shock through time, eventually pushing the economy back to full employment equilibrium. In this case -- a major motor vehicle supply shock occurring in the midst of a severe recession -- the model finds that removing any particular level of capacity in 2009 reverberates over time to create peak negative employment impacts by 2011. In particular, job losses due to the income effect grow over the first three years of the scenario. In subsequent years, however, job dislocation begins to decrease as the economy recovers and workers find jobs in other sectors. Eventually the aggregate job impacts are close to zero. In order to illustrate these time sensitive impacts, the table below includes results for 2011, the peak level of job loss, and the mean loss over 2009 to 2014 simulation horizon.

Table 1: Job Losses from Retiring Various Levels of Detroit Three Capacity
(peak is for 2011, mean is average over 2009-2014)

	20% retirement		40% retirement		60% retirement	
	peak	mean	peak	mean	peak	mean
Direct jobs	-48	-54	-88	-92	-131	-134
Indirect jobs	-165	-120	-297	-229	-426	-333
Respond/Spinoff jobs	-612	-323	-1126	-627	-1687	-932
Total employment impact	-826	-498	-1512	-948	-2244	-1398

The numbers are large. If 20 percent of Detroit Three capacity is retired in 2009, the peak total job loss would be 826 thousand in 2011. Given 40 percent or 60 percent shutdown, the totals are 1.5 million and 2.2 million, respectively. These figures confirm that the current and continuing restructuring of the industry will be very painful indeed.

These figures are comparable to certain scenarios considered in both the ESI and CAR studies, but they clearly contradict predictions of 3 million jobs lost. Given the assumption that 40 percent of Detroit Three manufacturing capacity would be eliminated, Inforum's model computes mean direct, indirect, and tertiary job loss estimates of 92, 229, and 627 thousand, respectively, by 2011. Similar figures were reported in the EPI study, assuming closure of GM alone and where GM currently owns about 40 percent of Detroit Three capacity. The corresponding EPI numbers are 53, 284, and 577 thousand jobs, respectively. Given the alternative assumption that 60 percent of capacity will be dismantled (equivalent to about 42 percent of total capacity, including foreign-owned plants), the Inforum study estimates losses of 134, 333, and 932 thousand jobs, respectively. For the same year and given 50 percent shutdown of total domestic capacity (including foreign-owned plants), the CAR study predicts direct, indirect, and spillover impacts of 120, 312, and 574 thousand jobs, respectively.

This close comparability of the direct and indirect impacts is not surprising, because each of the models draw from similar inter-industry databases for the U.S. economy. The LIFT model shows a distinct tendency to produce somewhat higher income-effect job losses than do the other two models. This may be because the LIFT model conducts this simulation within the context of very slow growth in an economy where alternative jobs would be hard to find, at least in the near term.

Ultimately, the studies are distinguished most clearly by the credence of their underlying assumptions. As Werling concludes, "It seems implausible that 100 percent of U.S. auto production would be idled, even in the most severe U.S. recession. Yet the most widely cited total job loss figure, "up to 3 million," is based on such an unrealistic assumption. Though I think that much of it would be replaced down the road, in the near term a 40 percent retirement of current Detroit Three capacity is the most that could be imagined. This could mean a peak level of dislocation for up to 1.5 million workers, hardly a trivial impact. But it is less than a half of the estimate commonly quoted in the media."

ADDITIONAL INFORMATION:

This material was presented at the 2008 Inforum Outlook Conference, which was held at the University of Maryland on December 9. About 60 professionals from government, private industries, consulting groups, and academia attended the annual event. In addition to summaries of current economic conditions and prospects for the future, the conference featured reports on Inforum's work on health care and energy policy and provided analysis of the recent election results and the incoming administration's staff and policies. Details, including more information on the current forecast, can be found at: <http://www.inforum.umd.edu/organization/conferences/outlook2008/outlook2008.html>

Inforum stands for the INterindustry FORecasting at the University of Maryland. Since its founding forty years ago, Inforum has been dedicated to improving business planning, government policy analysis, and the general understanding of the economic environment. For information regarding Inforum's research, contact Jeffrey F. Werling, Executive Director of Inforum and Faculty Research Associate in the University of Maryland's Department of Economics. He may be reached at (301) 405-4607 or werling@econ.umd.edu.

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