

**Case 4:  
Automotive Industry Bail-out  
Versus  
Cash for Clunkers (Scrappage Scheme)**

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**Summary**

This case study compares two recent government interventions to stabilize the United States automotive industry: the automotive industry bail-out and the cash for clunkers program.

The automotive industry in the United States has been seeing reduced sales over the last three decades. The influx of foreign competitors and declining economy in the U.S. has brought the Big Three auto companies (Ford, Chrysler and General Motors (GM)) to the brink of bankruptcy and collapse. These companies were unable to adapt to their reduced market share through expensive contract claims and legislative protection against termination of excess dealers. The most prominent reason that the Big Three continued to see reduced sales was due to lack of rejuvenation of their products and not following the trends of consumers' needs for smaller, more fuel efficient vehicles. In mid-December 2008, the U.S. government continued their bail-out schemes used on the banking industry to save GM, Chrysler and GMAC from collapse as those companies worked towards bankruptcy protection through Chapter 11 proceedings. The bail-out of these three companies resulted in a total of 73.35 billion dollars with the addition of policies forcing the companies to create restructuring plans for their management infrastructure (US Treasury 2009).

Cash for clunkers was a \$3 billion rebate program sponsored by the federal government which paid car owners money to trade-in in their old, gas-guzzling cars for a rebate check towards a new car. Car owners who traded in their clunkers received a rebate check for \$3,500 or \$4,500. 700,000 cars were bought as a result of the program in less than 30 days which represented 10.6 percent increase in car sales (USDOT Press Release 2009).

Requirements for “clunkers”: The vehicle must,

- Have been manufactured less than 25 years before the date you trade it in and, in the case of a category 3 vehicle, must also have been manufactured not later than model year 2001,
- Have a "new" combined city/highway fuel economy of 18 miles per gallon or less,
- Be in drivable condition,
- Be continuously insured and registered to the same owner for the full year preceding the trade-in (U.S. Treasury 2009).

### **Annotated List of Actors**

U.S. Automakers, the Big Three: primarily GM, Chrysler and GMAC

Foreign Automakers

U.S. Federal Government headed by Presidents Bush and Obama

U.S. Economy downturn

Automotive industry unions and employees, and employees in related industries (e.g. automotive parts manufacturing employees, car dealership employees)

Taxpayers

Car-owners eligible for Cash for Clunkers program

### **Timeline**

**September 29, 2008:** The House of Representatives rejects the \$700 billion TARP rescue bill by a 228-205 vote.

**September 29, 2008:** The Dow falls 777.68 points to mark its largest one-day point loss in history. The decline is spurred by the House of Representative's rejection of the \$700 billion rescue plan.

**October 1, 2008:** The Senate passes an amended proposed bailout bill, putting pressure on the House to do the same.

**October 3, 2008:** The House votes in favor of bailout (at this time for the banking industry). President Bush applauds the government for “acting boldly” to prevent a Wall Street crisis from continuing.

**November 14, 2008:** Bush pushes for a speedy release of loans to the automakers in the amount of \$25 billion. Some controversy arises with the Democrats saying “\$700 billion

rescue package was never intended to help automakers and shouldn't be now.” –Dana Perino

**December 19, 2008:** \$17.4 billion in loans will be distributed to GM and Chrysler in exchange for concessions from carmakers and their workers.

**January 2009:** Cash for Clunkers bill is proposed to stimulate the economy and help the environment through getting gas-guzzling vehicles off the road.

**February 17, 2009:** GM and Chrysler request further funds in the order of \$5 billion.

**March 30, 2009:** President Obama insists for true change in the management of GM, and requires CEO, Rick Wagoner to resign. Also Obama reveals he has other plans to save the auto industry.

**April 30, 2009:** Chrysler announces it will file for bankruptcy protection after failed proceedings for hedge funds to write-off debts.

**June 1, 2009:** GM enters bankruptcy protection through Chapter 11 proceedings. The U.S. government agreed to provide the company up to \$30.1 billion more in exchange for 60 percent stake in the company when it emerges from bankruptcy.

**July 1, 2009:** Cash for Clunkers (CARS) was formally passed into legislation; the following 24 days were devoted to standardizing the rules of the program by the Department of Transportation. Any trade-ins from this date on would be eligible for the program.

**July 10, 2009:** GM emerges from bankruptcy and has begun operations as a newly structured company.

**July 24, 2009:** The green light was given on the CARS program and dealerships across America immediately started promotions and making deals. After a week the funds were depleted and Congress promptly passed an additional \$2 billion dollars towards the program due to its wide-spread success. Total program funding: \$3 billion.

**August 25, 2009:** The final deadline for car dealerships to submit the proper CARS paperwork for all eligible sales. CARS Program ends.

## **Part 1: Automotive Industry Bail-outs**

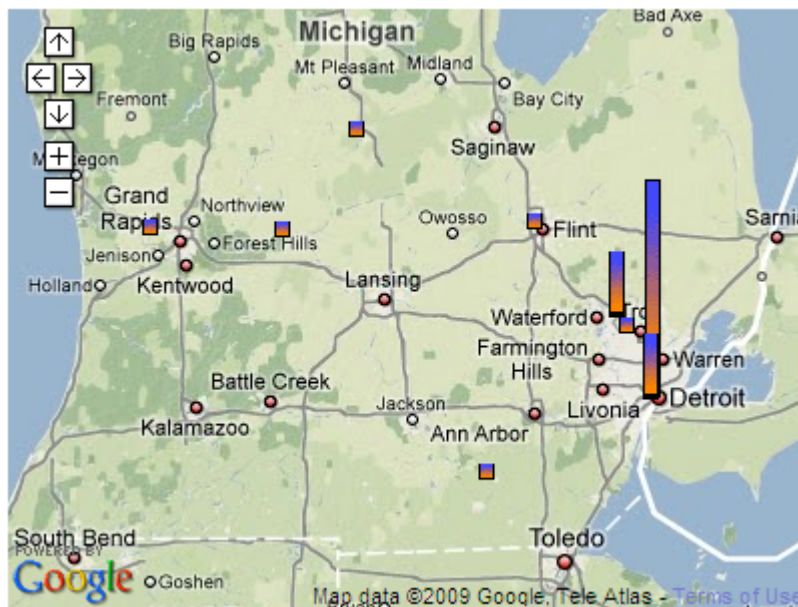
### **1.1. Historic Scene Before the U.S. Auto Industry Bail-outs in 2008**

The automotive industry has been experiencing reduced profits for many decades. Chrysler was saved from bankruptcy in the 1980s with a bailout of approximately 1.5 billion dollars. Chrysler was forced to ask Uncle Sam for assistance due to the oil embargos in the late 1970s. Even at this time, all of the Big Three companies were losing sales to foreign companies who were offering cheaper, more fuel efficient vehicles. The bailout of Chrysler did save the company from imminent death, but without any federal guidelines concerning re-structuring of the company, this bailout only gave the company a 9 year band-aid solution (Ritholtz 2008). Without policy change for Chrysler, Ritholtz argues that the company should have been allowed to fail, bringing the opportunity for another company to buy the remaining assets. With a new set of management in charge, a refurbished Chrysler may not have needed a second bailout in 2008. Potentially, a stronger Chrysler would have forced the GM and Ford to recognize the need for more

fuel-efficient vehicles, in order to remain competitive with their fellow American manufacturer. However, this turn of events did not occur, and instead the experience helped shape the 2008 bailout of GM, Chrysler and GMAC with the federal restructuring requirements and recovery plans required by the companies to ensure rejuvenation and future success.

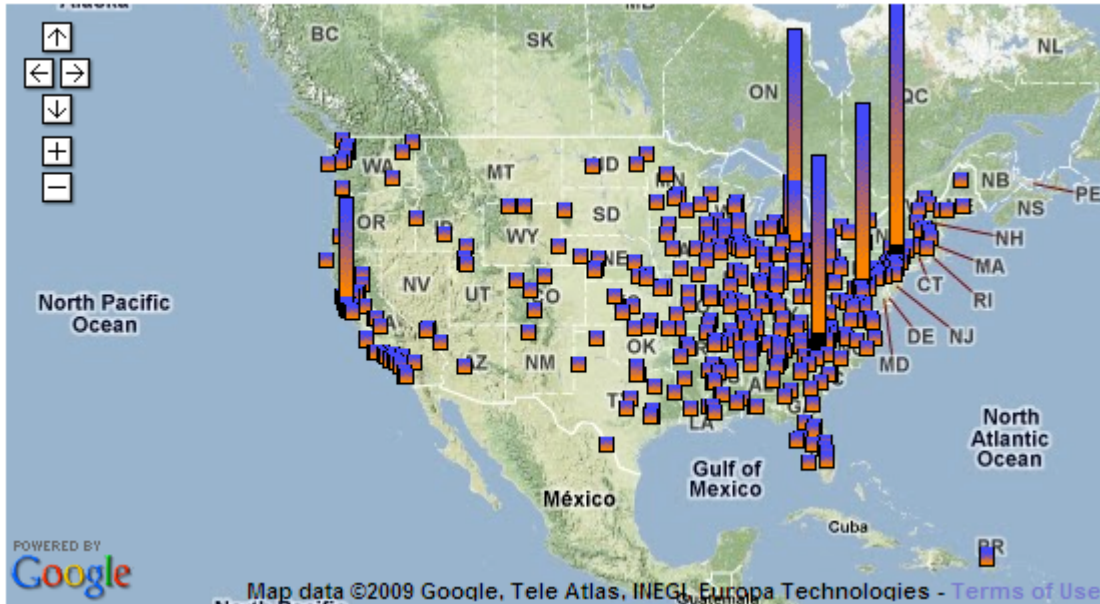
Although GM did not require federal assistance before 2008, the company was pulled thin through un-unionized labor, 7,000 dealerships nationwide and far too many brands to uphold (Levine 2008). GM was unable to consolidate the company in reaction to their dwindling market share due to a myriad of contractual claims by dealers, suppliers and the vast infrastructure of firms that depended on the company (Levine 2008). In addition to the contractual claims spreading the company thin, many of the dealers were also protected from termination by state laws. The cost for GM to close some dealers would have been in the range of billions of dollars (Levine 2008). Additionally, the labor laws forced GM to pay compensation to workers displaced from factories due to automation of the factories. Comparatively, the costs of health care coverage and compensation of employees between GM and foreign automakers vastly reduced GM's ability to remain competitive.

The U.S. government began the mass bail-outs in 2008 with the banking industry. Figure 1 below shows the amount of bail-out funds distributed throughout the U.S. by bars on the cities those companies are located. Note that although the automakers discussed are centered in Detroit many of the supporting suppliers and arterial firms are located throughout the U.S., as shown in Figure 2.



**Figure 1: Auto industry central location in Detroit with bars indicating amount of funds received by U.S. government.**

Source: <http://bailout.propublica.org/main/list/state/MI>



**Figure 2: Nationwide distribution of bail-out funds.** Note that Detroit does not even register in comparison to some of the bank bail-out totals.

Source: <http://bailout.propublica.org/main/map/index>

## 1.2. Reasoning behind the Auto Bail-outs

The reasoning behind saving the Auto industry was a multi-faceted. The government felt that if the American auto industry were allowed to become bankrupt, the economic effect would be disastrous. The failure of the Big Three would not only affect the unemployment numbers in Detroit, but across the nation as the failure would trickle down to the smaller suppliers that depended on those companies. The potential widespread effect would eliminate the reported new auto manufacturing jobs numbering to 91,000 located in Alabama, Tennessee, Kentucky, Georgia, North Carolina, Virginia and Texas. (Gramm, 2008).

The U.S. government enacted a form of protectionism policy by saving the auto industry. Since the government has a long-term goal of creating energy based policy in the future based on employment, the auto industry needed to remain afloat in order to complete these goals. From the government's point of view, it is only logical to utilize employers that already are trying (be it slowly) to create more fuel-efficient vehicles and have the knowledge and expertise to do so instead of subsidizing other companies that would be less effective at reaching some ultimate goals (Weisenthal 2008). By protecting national 'assets' that could potentially help the U.S. achieve future policies the government was not only helping the companies but helping themselves reach their own domestic goals.

The government also wanted the public to see that not only colossal corporate giants were deserving of bail-out funds (such as many of the banks). By supporting the blue-collar worker via the auto industry, the government's reaction in these troubled economic times can be argued as 'fair' (Weisenthal 2008). Granted, this rationalization may appear to confusing, how can to government be acting in a 'fair' manner without assisting other industries that are suffering, such as the steel or retail industry? The difference is that the auto industry along with its workers has shown the ability to drastically reform their structure if only the government from the top-down gave the industry the means to achieve a stable financial platform to build-on (Weisenthal 2008).

All of these considerations ended in GM receiving 50.4 billion dollars, Chrysler with 12.5 billion dollars and GMAC another 12.5 billion dollars. However, as discussed further in the next section, the relief money did not come without requirements that each company had to meet in order to continue to receive government support (ProPublica 2009).

### **1.3. Bail-out Results – Restructuring Requirements**

Although the bail-out did save GM, Chrysler and GMAC from imminent bankruptcy, the true measure of success is how the companies were forced to restructure their management and allowed the companies to cut-out many of the resource draining arterial firms and brands. Another requirement that later fueled the CARS program were initiatives that each of the auto-makers had to focus future car models to have improved fuel efficiency and to promote further research and development to help with future sales.

In the plan for GM, the leadership was asked to have drastic restructuring of the management to begin the rejuvenation process. The government now holds 60% of stock shares for GM, which allowed Obama to dictate that in order for the restructuring to begin the CEO would need to step down. The other board members will also be experiencing pay-cuts and will not receive bonuses for at least the next 5 years. This requirement may seem harsh, but considering that the average GM board member received \$250,000 in yearly salary, the company can use such streamlining (Levine, 2008). The plan also states that GM needs to strive for technological leadership by increasing research and development in order to manufacture highly-efficient vehicles that are reliable, safe and durable. This research and development will also help create free cash flow within the company by investing now for their future success. The government used the term, 'sustainable profitability' to describe that business cycle process (US Treasury 2009). After the completion of GM's Chapter 11 proceedings, many of the more inefficient binding contracts were nullified, but to ensure that the company does not fall into that same problem they are also required to work towards a healthy balance sheet. In basic terms, the company needs to continue to substantially reduce their outstanding debt through the restructuring of company's management.

In July of 2009, GM announced its emergence from bankruptcy after receiving Chapter 11 bankruptcy protection earlier in the month. A portion of GM's success came from the CARS program, but primarily the restructuring of the management and freedom from previously binding contracts with laborers, brands and unnecessary infrastructure firms brought the companies size and expenses down to correspond with their reduced market share (Poyzner, 2009).

Meanwhile, Chrysler's viability plan came to much different requirements than GM. The government, although helping both companies, wanted to help each by use of specialized plans to address the individual needs of the separate corporations. The government analysis of Chrysler's plan shows overtly optimistic trends and in the end it was determined that Chrysler could not function competitively as a stand-alone company. Thankfully, Chrysler had already proposed a partnership with Fiat. By combining resources the two companies would be better able to achieve the products required to compete in the global auto market. The alliance was slow to be accepted by the government due to concerns that if a rapid transformation of Chrysler being owned by Fiat would not allow American stockholders to cash-out. The partnership therefore was required to be more gradual. The environmental requirements were not dictated as clearly for Chrysler as for GM because Fiat already has sufficiently competitive technology. The deal between Fiat and Chrysler, although a very feasible solution, has been relatively slow with progress in comparison to GM's revival. This is due to strict federal requirements for the two companies to pass before the government will continue to financially back Chrysler. These requirements include reorganization quotas and financial quotas concerning balancing sheets, stock and a more detailed future operations plan.

As both companies are in their individual viability plans may have different means to succeed. One unifying theme was the motivation to move the U.S. auto industry towards creating competitive fuel-efficient vehicles.

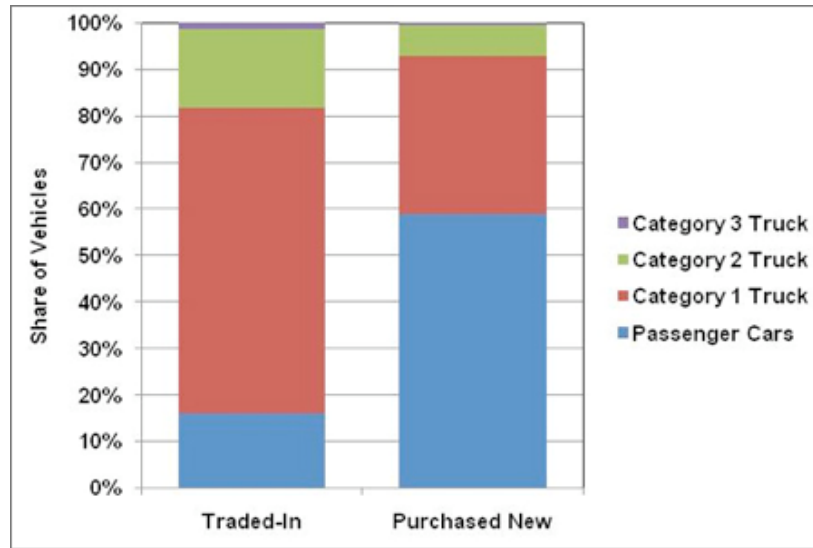
## **Part 2: Cash for Clunkers Program**

Cash for clunkers was a \$3 billion rebate program in July and August of 2009 sponsored by the federal government which paid car owners money to trade-in in their old, gas-guzzling cars for a rebate check towards a new car. Appendix A describes the eligibility requirements for the program in more detail.

### **2.1. Fuel Economy Improvement**

The CARS program resulted in a fuel economy improvement for the fleet. The fuel economy of the cars traded-in was 15.8 miles per gallon while the fuel economy for the newly purchased vehicles was 24.9 miles per gallon (USDOT Press Release). Another study found that the Cash for Clunkers program improved the average fuel economy of all vehicles purchased in August by 0.9 miles per gallon (Sivak and Schottle

2009). In addition, the type of cars traded-in and bought new were strikingly different as seen by the graph below.



Source: US Dept of Energy

## 2.2. Scrappage Scheme

The scrappage scheme was a scrappage program in the United Kingdom that preceded the cash for clunkers program that was very similar to the resulting cash for clunkers. For a car older than 10 years, the car owner received 2,000 pounds for a new car. Half of this is paid by treasury and half is paid by the car dealers. The total for the program was 300 million pounds. One slight difference is that cars are bought for the program based on their weight. In the cash for clunkers program, new cars are judged on their miles per gallon. Table 1 below presents a summary of international scrappage schemes.

## 2.3. Scrappage Programs as Economic Stimulus

Larry Summers, a former Treasury secretary, argues that policies for economic stimulus should be "timely, targeted and temporary" and "speedy, substantial and sustained." The question is how does cash for clunkers stimulus fit these categories. In general, government stimulus programs fail to be speedy or timely because of their slow lag time. On the other hand, tax incentives are speedier but are often not properly targeted to maximize stimulation of the economy. A previous study on the tax rebates of 2001 found that consumers spent 20-40 percent of their rebate in the first three months after the rebate was issued and (Gross 2009). If these numbers are transferred to cash for clunkers, the \$3 billion in rebates would lead to approximately \$2 billion in sales in six months.

There has been a lack of consensus over whether the cash for clunkers program provided any sort of sustained economic stimulus. This disagreement exists because of

the recent nature of the program and the inability to do complicated economic analysis. Therefore, proponents and opponents have relied mostly on simple statistics and anecdotes. Proponents point to the increased number of car sales and overall retail sales while the program was in effect. Consumer interest in car-buying has definitely peaked because of the program. "There appears to be significant trickle-down effects for dealers from the Cash for Clunkers program," says Paul Taylor, the chief economist for NADA, the National Automobile Dealers Association. "The program has increased traffic even from those who don't qualify" (Whitelaw 2009). From Taylor's point of view, the program is increasing interest in car-buying across the board. Car dealers believe that getting an individual in the showroom is a step towards a sale even if they do not qualify. In addition, companies like General Motors upped their production in order to meet the demand of the program. This led to additional workers for the company (Vlasic 2009).

Opponents argue that there is little return on investment for the taxpayer. The \$3 billion may have helped almost 700,000 cars get sold but how many of those carbuyers would have bought a car anyway this year and merely sped up their purchase time? Since this is unknown, there have been many estimates thrown about. John Quelch from Harvard University argues that most of these sales would have occurred anyway and consumers merely shifted their buying into this period when they could receive a good deal (Quelch 2009). The New York Times cites an economist who concludes that only 200,000 of the 700,000 new cars were additional sales that would not have occurred otherwise (Vlasic 2009).

#### **2.4. Extent of Economic Impact**

Multiple sources attempted to quantify the amount of money that was spent as a result of cash for clunkers. Using an average of \$25,000 for the cost of new cars bought, the 700,000 new cars bought as a result of the program resulted in approximately \$17.5 billion in economic activity. In addition to this money spent is \$875 million in sales tax revenue. Applying a fiscal multiplier effect, one expert believes that the program resulted in a net impact of over \$25 billion (Sczcesny 2009).

However, this method does not account for cars that would have been bought anyway. Paul Taylor from NADA argues that 40 percent of cars bought as a result of cash for clunkers were bought by individuals who would not have bought a car in this calendar year. Assuming this is true and that new cars averaged \$25,000 dollars, cash for clunkers resulted in \$7 billion in revenue based on a \$3 billion dollar investment. If only 20 percent of new cars were bought by individuals who would not have bought a car otherwise, that results in \$3.5 billion in revenue compared to a \$3 billion spent.

#### **2.5. Complaints about the Program**

The program proved to be immensely popular with the public. The original \$1 billion allocated for the program was used up in less than a week for a program that was scheduled to last three months. However, commentators have concerns regarding the program. Quelch argues that the program merely enabled automakers to obviate huge

markdowns on new automobiles. In addition, he argues that the idea of low-income individuals trading in their dangerous and dirty clunkers for new cars is a myth. Car loans are still difficult to get with bad credit. In fact, low income individuals might even be worse off because the price of used cars has been increased due to the program (Quelch 2009).

Administratively, many consumers and dealerships complained about the process for reimbursement and qualifying for the program. At the end of the program, the majority of dealerships had still not been reimbursed for their claims by the federal government leaving dealerships in economic trouble despite the successful sales. Even proponents of the program such as Jess Toprak of truecar.com believed the program was difficult to manage. He stated, “On the other hand, the clunker program was overly complicated, a nightmare to manage for dealers and difficult to understand for consumers. I would give the pure sales impact of the program an A and the administration of the program a D” (Szczesny 2009).

Additionally, there were concerns over the environmental effects of the program. All clunkers were destroyed. However, some of the drivable cars could have been resold as a used car cheaply. Andrew Davis, director of the Environmental Transport Administration said:

*Car scrapping initiatives are often mistakenly labeled as green because they subsidize the purchase of cars that are usually, more fuel-efficient than those they replace, but the schemes are by their nature wasteful and routinely fail to take into consideration the amount of energy required to build a vehicle in the first place (www.eta.co.uk).*

## **2.6. Qualitative Effects on Car Preference**

The previous issues presented on cash for clunkers questioned the sustained economic stimulus of scrappage schemes. One study argues that scrappage programs such as cash for clunkers have persistent effects when it comes to the qualitative valuation of types of cars. Based on scrappage programs in Spain, the authors found that preference for cleaner burning diesel cars was accelerated by the scrappage programs. However, this represented a continuation of a trend towards more fuel-efficient cars where diesel cars had a significant market share. Moreover, the authors believe that cash for clunkers will be unable to influence consumer preferences towards hybrid cars because of their small market share.

**Table 1: International Scrappage Schemes (Allan et al.)**

<b>Program Location</b>	<b>Stated Goal of Program</b>	<b>Duration</b>
Sweden	Reduce vehicle abandonment and reduce GHG emissions	1976 - present
U.S.: Los Angeles Region	Reduce criteria pollutant emissions	1990, 1993
Greece	Reduce criteria pollutant emissions	1991 - 1993
U.S.: Delaware	Reduce criteria pollutant emissions	1992
U.S.: Illinois	Reduce criteria pollutant emissions	1993
Hungary: Budapest	Reduce criteria pollutant emissions	1993 - present
Denmark	Reduce criteria pollutant emissions	1994 - 1995
France	Reduce criteria pollutant emissions	1994 - 1995
Ireland	Reduce criteria pollutant emissions	1995 - 1997
Norway	Reduce criteria pollutant emissions	1996
Canada: Vancouver	Reduce criteria pollutant emissions	1996 - present
Italy	Reduce criteria pollutant emissions	1997
Germany	Stimulate auto industry	2009 - present
United Kingdom	Reduce criteria pollutant emissions and stimulate auto industry	2009 - present
U.S.: Texas	Reduce criteria pollutant emissions	2009 - present
Austria	Stimulate auto industry	2009 - present
Germany	Stimulate auto industry	2009 - present
France	Stimulate auto industry and reduce GHG emissions	2009 - present
Italy	Stimulate auto industry and reduce GHG emissions	2009 - present
Portugal	Stimulate auto industry and reduce GHG emissions	2009 - present
Romania	Stimulate auto industry	2009 - present
Spain	Stimulate auto industry and reduce GHG emissions	2009 - present
Luxembourg	Stimulate auto industry and reduce GHG emissions	2009 - present
Cyprus	Stimulate auto industry and reduce GHG emissions	2009 - present
Slovakia	Stimulate auto industry	2009 - present
U.S. (CARS)	Stimulate auto industry and reduce GHG emissions	2009 - present

### **Part 3: Comparison of Cash for Clunkers and Car Industry Bailout Approaches**

The recent CARS program and car industry bailouts represent two different approaches of direct government intervention to stabilize the automobile industry. Table 2 below highlights some major differences between these two approaches in terms of scale of funding, recipients of funding, and environmental and social goals. In terms of funding, the scale of the car industry bailout is one order of magnitude greater than the CARS program. However, in terms of the direct recipients of funding, the CARS program is several orders of magnitude greater than the car industry bailout. Both approaches were expected to indirectly provide benefits to a large number of players, including automobile manufacturing employees, employees in industries related to automobile manufacturing (for example, employees in mining and energy), and people who live in urban areas with high levels of air pollution. However, the CARS program directly involved a much greater number of players (participating consumers and dealers) than the car industry bailout (the Big Three corporations). In terms of social and

environmental goals, there are differences in the two approaches. For social stability, both approaches aimed to preserve existing domestic jobs in the automobile manufacturing industry. However, while the car industry bailout focused on protecting jobs at domestic companies, the cash for clunkers program applied to both domestic and foreign companies with markets in the United States; consumers could apply the cash for clunkers rebates to vehicles produced by U.S.-based or internationally-based manufacturers. For environmental protection, the CARS program aimed to reduce carbon-dioxide emissions through improved fuel-economy of the nationwide vehicle fleet, while the car industry bailout aimed to directly stabilize automotive manufacturers' research and development operations in fuel-efficient and alternative-fuel designs.

The two approaches (larger funding directed “top-down” to few players as in the car industry bailout versus smaller funding directed “bottom-up” to consumers as in the CARS program) have some distinct advantages and disadvantages in meeting different goals. From an administration perspective, one disadvantage of the cash for clunkers program’s large number of players is an increase in administrative cost (Quelch 2009). However, from a political perspective, an advantage of the cash for clunkers program’s large number of players is its popularity; many taxpayers were eligible for the cash for clunkers program, and 700,000 taxpayers received rebates. From an environmental perspective, the cash for clunkers program has an advantage in time-scale; the cash for clunkers program improved the overall fuel-economy of the national vehicle fleet quickly (if modestly), whereas the car industry bailout’s research and development initiatives to improve the fuel-economy of the national vehicle fleet will occur over a period of several years.

**Table 2. Comparison of Cash for Clunkers and Car Industry Bailout in United States.**

	<b>Cash for Clunkers</b>	<b>Car Industry Bailout</b>
<b>Total Funding (October 2009)</b>	\$3 Billion	\$73.35 Billion
<b>Time Frame</b>	August 2009	December 2008 to 2016
<b>Direct Recipients of Funds</b>	Participating dealers and consumers (700,000 transactions).	General Motors Chrysler GMAC, LLC
<b>Social Goals</b>	Protect domestic jobs. Provide incentive to consumers to replace existing clunker with more fuel-efficient vehicle.	Protect domestic jobs and companies.
<b>Environmental Goals</b>	Reduce carbon-dioxide emissions through increased fuel-economy of vehicle fleet.	Continue corporate research and development operations in fuel-efficient and alternative-fuel vehicles.

### **3.1. Comparison of Cash for Clunkers and Car Industry Bailout Effectiveness**

Although the long-term impacts of the CARS program and car industry bailouts have yet to be studied, it is possible to compare the effectiveness of these programs in short-term costs and benefits. The costs of both programs are expressed in taxpayer dollars, and benefits could be measured in environmental outcomes and in business generated. Accounting for environmental benefits, an August 2009 analysis from the University of Delaware predicted a net cost of \$2,000 to U.S. taxpayers per cash for clunkers transaction (Abrams 2009). The effectiveness of the car industry bailout will likely not be known for years to decades; it remains to be seen whether the restructuring of the companies will be successful and whether the companies will be able to meet the obligations of the bailout over the prescribed seven year period.

### **3.2. Comparison of Cash for Clunkers and Car Industry Bailout to Alternative Strategies**

The cash for clunkers and car industry bailouts represent two approaches of direct government intervention in the automobile industry that have been implemented. However, there exist other potential approaches. In addition to the cash for clunkers and car industry bailouts, the U.S. Congress considered tax credits for new automobile purchases and a bailout of automotive parts manufacturers (Brunel 2009).

First, the U.S. Congress considered two bills for tax credits for new automobile purchases in 2008, and eventually signed a tax credit into law with the February 2009 stimulus package (American Recovery and Reinvestment Act), which grants a tax deduction for purchase of new light-duty vehicles. Second, automotive-part manufacturers have petitioned U.S. Congress for a bailout similar to the Big Three bailout. Third, some politicians argued for a non-interventionist or business-as-usual approach. Although there is uncertainty in predicting what would have happened had a business-as-usual approach been selected, some research groups have attempted to predict the impacts of the business-as-usual approach. For example, the Center for Automotive Research (based in Michigan) predicted that a 50% decline in the Detroit Big Three in the year 2008 would have resulted in 2.5 million job losses (both direct and indirect) in the year 2009 (Cole 2008). Other groups have suggested that the impacts of the non-interventionist approach would have been less drastic; the car manufacturers would have been bought out by competitors, and jobs would have recovered (Levine 2009).

## **Part 4: Conclusion**

In 2009, in the wake of international financial crisis, the U.S. Congress signed into law two large-scale measures to assist the declining automobile industry: the cash for clunkers program and the car industry bailout. Both measures included economic as well

as environmental objectives, but the measures differed in their direction; the cash for clunkers program was directed at consumers whereas the car industry bailout was directed at the financial wings of General Motors and Chrysler corporations. Some short-term analyses have been performed on the economic and environmental impacts of these programs, but the long-term impacts, in particular for the car industry bailout, remain to be determined.

**Appendix A:**

**Cash for Clunkers at a Glance**

**What Are the mpg\* and Vehicle Category Requirements?**

<b>If my trade-in vehicle is a...</b>	<b>Then the new vehicle I buy must be a ...</b>	<b>My new vehicle must get an mpg* of at least ...</b>	<b>My new vehicle's mpg* must be higher than my trade-in vehicle's mpg* by...</b>	<b>And the credit will be...</b>	
<b>Passenger Automobile</b> (must have an mpg* of 18 or less)	Passenger Automobile	22 mpg*	4-9 mpg* 10 mpg* or more	\$3,500 \$4,500	
	Category 1 Truck	18 mpg*	2-4 mpg* 5 mpg* or more	\$3,500 \$4,500	
	<b>Category 1 Truck:</b> (must have an mpg* of 18 or less)	Passenger Automobile	22 mpg*	4-9 mpg* 10 mpg* or more	\$3,500 \$4,500
<ul style="list-style-type: none"> <li>SUVs with a GVWR<sup>†</sup> of less than 8,500 pounds (Chevrolet Blazer, Ford Explorer, etc.)</li> <li>Pickups with a GVWR<sup>†</sup> of less than 8,500 pounds and a wheelbase<sup>^</sup> of 115 inches or less (Ford Ranger, Toyota Tacoma, etc.)</li> <li>Passenger vans and cargo vans with a GVWR<sup>†</sup> of less than 8,500 pounds and wheelbase<sup>^</sup> of 124 inches or less (Dodge Caravan, Honda Odyssey, etc.)</li> </ul>	Category 1 Truck	18 mpg*	2-4 mpg* 5 mpg* or more	\$3,500 \$4,500	
	<b>Category 2 Truck:</b> (must have an mpg* of 18 or less)	Passenger Automobile	22 mpg*	4-9 mpg* 10 mpg* or more	\$3,500 \$4,500
		Category 1 Truck	18 mpg*	2-4 mpg* 5 mpg* or more	\$3,500 \$4,500
Category 2 Truck		15 mpg*	1 mpg*	\$3,500	

<ul style="list-style-type: none"> <li>and a wheelbase^ greater than 115 inches (Ford F-150, Chevy Silverado, etc.).</li> <li>• Passenger vans and cargo vans with a GVWR of 8,500 pounds or less and a wheelbase^ greater than 124 inches</li> </ul>	Truck	2 mpg* or more	\$4,500
<b>Category 3 Truck:</b>	Category 2 Truck	15 mpg*	NA‡ \$3,500
<ul style="list-style-type: none"> <li>• Very large vans, SUVs and pickup (cargo bed of 72 inches or more) trucks w/ GVWR† 8,500-10,000 pounds (Chevrolet C/K 3500, Ford F-350)</li> </ul>	Category 3 Truck	NA‡	However, the new vehicle must be similar in size or smaller than the trade-in

**Appendix B:**

**Discussion Questions:**

1. Discuss how alternative strategies besides federal subsidy would have transpired? Are other policies such as consolidation, nationalization, rejuvenation feasible solutions?
2. In hind-sight, should the TARP funds been used to bail-out the Big Three? Discuss why the government did not assist other troubled industries.
3. Is this a cost-effective investment of government funds for the public?
4. How much of a role should the public's acceptance of a program play in policy?

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