

NORTHERN ILLINOIS UNIVERSITY

The Economic Impact of Cash-For-Clunkers

A Thesis Submitted to the

University Honors Program

In Partial Fulfillment of the

Requirements of the Baccalaureate Degree

With Upper Division Honors

Department Of

Accountancy

By

Andrew J. Gorup

DeKalb, Illinois

May 2010

University Honors Program

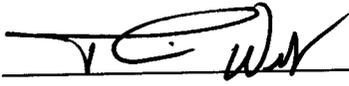
Capstone Approval Page

Capstone Title (print or type)

The Economic Impact of Cash-for-Clunkers

Student Name (print or type) Andrew J. Gorup

Faculty Supervisor (print or type) Dr. West

Faculty Approval Signature  _____

Department of (print or type) Accountancy

Date of Approval (print or type) 12-1-09

HONORS THESIS ABSTRACT THESIS SUBMISSION FORM

AUTHOR: Andrew J. Gorup

THESIS TITLE: The Economic Impact of Cash-for-Clunkers

ADVISOR: Dr. West

ADVISOR'S DEPARTMENT: Accountancy

DISCIPLINE:

YEAR: 2010

PAGE LENGTH: 23

BIBLIOGRAPHY: Yes

ILLUSTRATED:

PUBLISHED (YES OR NO): No

LIST PUBLICATION:

COPIES AVAILABLE (HARD COPY, MICROFILM, DISKETTE):

ABSTRACT (100-200 WORDS):

The Consumer Assistance to Recycle and Save (CARS) program, more commonly referred to as "Cash-for-Clunkers", was created to stimulate the economy and to have more fuel-efficient cars on our nation's roadways. In the summer of 2009, in what may turn out to be the worst period of the housing/credit crisis related recession; the Federal Government appropriated a total of \$2.88 billion in vendor rebates for the purchase of new fuel-efficient automobiles with the trade-in to be destroyed. The goal of my research is to examine how the Cash-for-Clunkers program impacts different groups of people, from the family buying a new car to the U.S. and Foreign automobile manufacturers. I also examine the first-level of indirect groups, such as used car buyers and the U.S. taxpayer. Finally, I describe whether or not the goals of the Cash-for-Clunkers program were met.

The Economic Impact of Cash-for-Clunkers

A Tiered Examination of the Major Participants in the 2009 CARS PROGRAM

Andrew J. Gorup

11/24/2009

The Consumer Assistance to Recycle and Save (CARS) program, more commonly referred to as “Cash-for-Clunkers”, was created to stimulate the economy and to have more fuel-efficient cars on our nation’s roadways. In the summer of 2009, in what may turn out to be the worst period of the housing/credit crisis related recession; the Federal Government appropriated a total of \$2.88 billion in vendor rebates for the purchase of new fuel-efficient automobiles with the trade-in to be destroyed. The goal of my research is to examine how the Cash-for-Clunkers program impacts different groups of people, from the family buying a new car to the U.S. and Foreign automobile manufacturers. I also examine the first-level of indirect groups, such as used car buyers and the U.S. taxpayer. Finally, I describe whether or not the goals of the Cash-for-Clunkers program were met.

Table of Contents

Introduction.....	4
Economic Environment	5
Recession.....	5
Recession (continued)	6
History of the Program.....	7
Origin of Idea.....	7
Legislative History	8
CARS Program Details.....	9
CARS Program Goals.....	9
Method.....	10
Data	10
News Reports/Commentaries	10
Participation in Program	10
Results	11
Automobile Market.....	11
Top Selling & Most Traded Cars	12
Trade-Ins.....	12
Purchases	12
Discussion.....	13
Direct Participant Groups.....	13
New Car Buyers	13
Car Dealers	13
Foreign and Domestic Automobile Manufacturers.....	15
Indirect Participant Groups	16
Used Car Buyers	16
U.S. Taxpayers	17
Meet Program Goals?.....	18
Stimulate New Car Purchases	18
Increase fuel-efficiency	18
Insight into the United States Federal Government	19

Summary	20
Bibliography.....	21
Table of Figures	23

Introduction

To better understand the context of the CARS program, I will first examine the economic environment in which this program started and ended. From there, I will establish a timeline of CARS, describe the goals of the program, and survey the impact of the CARS program on different groups of people.

The purpose of studying CARS is two-fold. CARS was a relatively small program, but it still provides insight into larger United States Federal Government programs and operations. More importantly, this study seeks to find out how people were affected by this program. The groups of people I determined to have had primary interactions with the program were participant consumers, car dealerships, car manufacturers (foreign & domestic) and the Federal Government. The two groups of people that had secondary interactions that I will examine are the taxpayers and the used-car buyers.

The recent timing of CARS allows me to easily recall the media madness that surrounded the program. As I will discuss later, the amount of time between the bill being signed by the President and the program going into effect was relatively short. The majority of my research comes from 3 types of sources: news, commentary, and financial data. I utilize news sources from various cities in order to gain a national consensus of the program. I look at commentaries of both people in support of and against the program. Finally, I consult economic data such as sales figures in order to understand the financial impact of the program.

Economic Environment

Recession

The United States economy was in the midst of a recession at the time the CARS program was signed into law. Unemployment was rising and those who kept their jobs conserved their financial resources. There may be numerous reasons for what caused the recession, but a lack of credit in the financial markets and a steep decline in the value of real estate are the primary causes.

The inflation-adjusted values of home prices in Figure 1 reveals a bubble that began to form in the late 90's and eventually burst around 2007. Mortgage-backed securities, which grouped a large amount of mortgages together, lost most or all of their value as soon as the realization occurred that people would not be able to make payments and that the mortgages themselves were overstated. An avalanche effect occurred, which caused many banks to fail.

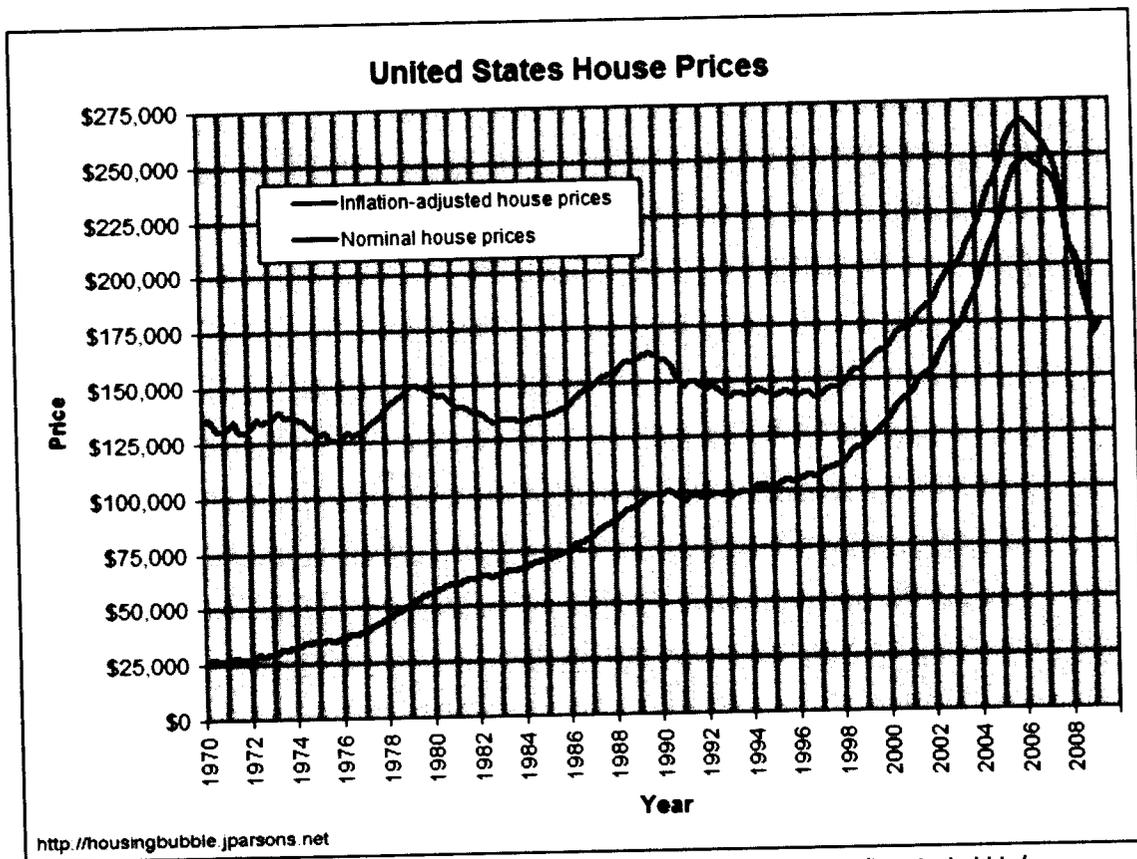


Figure 1 United States Home Prices - <http://mysite.verizon.net/vzeqrguz/housingbubble/>

Recession (continued)

When economic conditions are bleak, unemployment rises and people begin to save their money. Sales of new and expensive items drop. Unemployment, historically, has had a strong correlation with new car sales as is shown in the chart below.

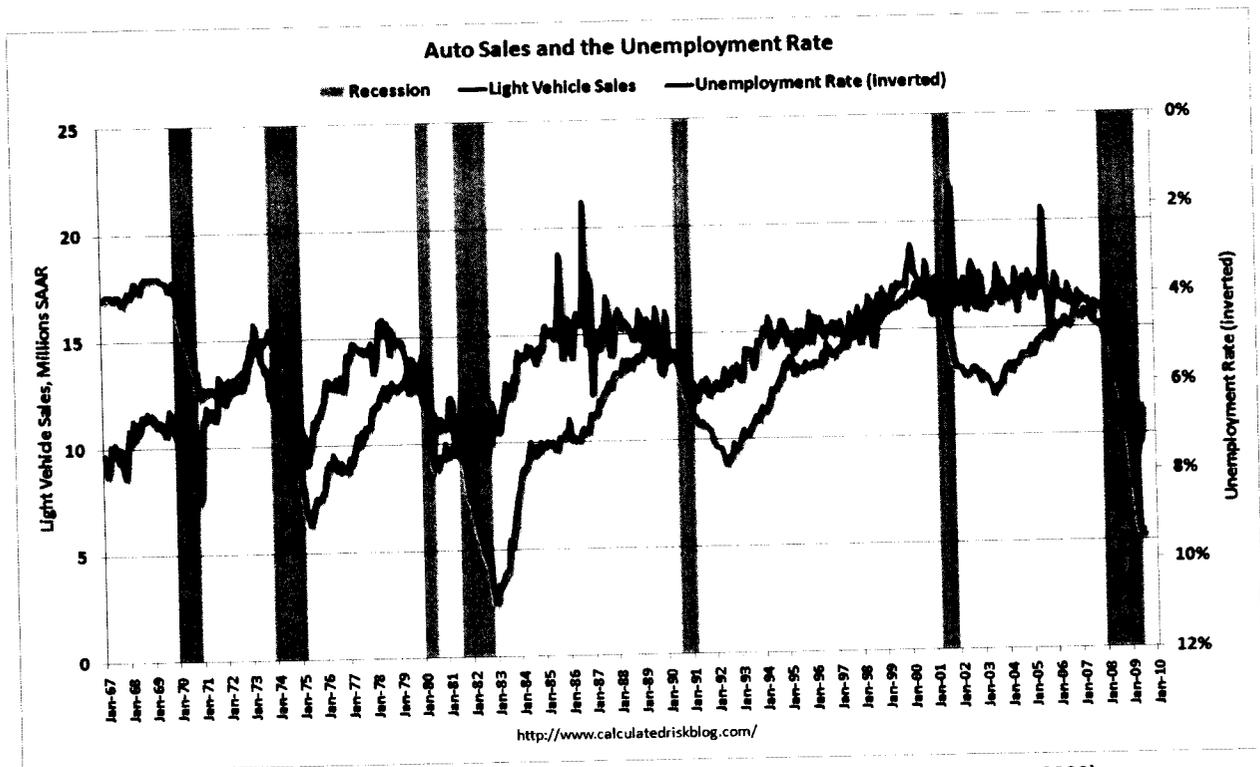


Figure 2: New Car Sales & Unemployment Rate - (Auto Sales and Unemployment Rate, 2009)

From what has happened in the past, it was likely that new car sales were going to be in trouble for at least as long as the economy was not growing and unemployment was high. Proponents of an incentive-based program for new cars cited figures such as this to support their claim. Given that United States employment in the automobile industry is approximately four million people (Bureau of Labor Statistics, 2009) a significant drop in new car sales can have an even greater impact on U.S. jobs.

History of the Program

The United States Consumer Assistance to Recycle and Save (CARS) program is commonly referred to as "cash-for-clunkers". In short, a cash-for-clunkers program is a government-sponsored rebate given to people that trade in their old fuel-inefficient cars and purchase new, more fuel-efficient cars. Each governmental entity that initiates a cash-for-clunkers program has specific rules and rebate amounts, but for the most part each program has the same goals.

Origin of Idea

There is not a single person who is given credit for developing the idea for a cash-for-clunkers program but there are various groups that have levied strong support for a clunkers program. European countries have already initiated a program in 2008. Supporters of a similar program in America had suggested we follow the European's lead prior to the summer of 2009.

France was the first to implement a nation-wide program in December 2008, with Germany, Italy, Britain, Romania, Austria, the Netherlands, Spain and Serbia following shortly after (The Wall Street Journal, 2009). Germany is examined more than other countries because it is Europe's largest economy, and it is based largely on automobile production and exports.

The German 'clunker' program, offered about \$3000 (Scherzer, 2009) for an old vehicle, and provided a total of about \$7 billion total (The Wall Street Journal, 2009). Taking into account annual car sales and GDP, the German program was much larger than the U.S. version. Fox, 2009, estimates the German clunker program to be equivalent to a \$30 billion program in the United States.

Germany has a number of differences with the United States that are important when comparing a similar cash-for-clunkers type program. Gas prices are much higher in Germany, and in March 2009 were around \$6.00 per gallon. In addition, Germany has enacted a tax on carbon emissions that began in the summer of 2009 (Westley, 2009).

In the United States, voices in support of a cash-for-clunkers program came from various sources, most of whom tended to support Democrat politicians. The Center for American Progress Action Fund and SmartTransportation.org co-authored a paper that outlined the need for a program in 2008. Highlights of the C.A.P.A.F. and SmartTransportation.org paper included a listing of three benefits of a cash-for-clunkers program; creating or retaining significant numbers of U.S. auto sector jobs, reducing our nation's oil dependence, and saving consumer

dollars at the pump. Also, the idea of transferring wealth to poorer people is described on page 2 (Center for American Progress Action Fund and SmartTransportation.org, 2008), "Cash for Clunkers is a means of getting funds into the hands of those who are most economically distressed."

Alan Blinder, professor of economics at Princeton wrote an editorial "A Modest Proposal: Eco-Friendly Stimulus" in July 2008 for the New York Times. The three reasons he listed as to why the United States should pass a cash-for-clunkers program were that as a result our country would have a cleaner environment, more equal income distribution, and an effective economic stimulus. Alan Blinder has supported and advised Democratic politicians in the past, which is important because of the relatively inexistent support for a cash-for-clunkers program by incumbent Republicans.

Legislative History

Bill H.R. 2346, titled "Making supplemental appropriations for the fiscal year ending September 30, 2009, and for other purposes" was introduced to the House of Representatives on May 12, 2009, and was sent to the White House after Senate approval on June 19. President Obama signed the bill into law on June 24. TITLE XIII, to be referred to as the 'Consumer Assistance to Recycle and Save Act of 2009' outlines the creation of the CARS program. The subsection that was most of most interest was the final one, j, and it is as follows (Library of Congress, 2009):

Appropriation – There is hereby appropriated to the Secretary of Transportation \$1,000,000,000, of which up to \$50,000,000 is available for administration, to remain available until expended to carry out this action.

The date for the program to end was originally set to be November 1, 2009, or whenever funds ran out. However, overwhelming response to the program caused the first billion dollars to be used in less than a week. The batch-style processing of rebates by the National Highway Traffic Safety Administration (NHTSA) meant that the value of rebates could throughout a given day exceed the amount appropriated.

An additional \$2 billion was approved by the President for the CARS program on August 7, however it came with some controversy. There were 6 amendments proposed, any of which would have shut down additional funding. The final vote was 60-37. On August 20th, the program was announced to conclude on August 24th at 8:00PM EDT.

CARS Program Details

A majority of the details of the CARS program had to do with the qualifications required to receive the rebate, and how much the rebate was worth. The eligibility requirements for the clunker or car being traded in were as follows (CARS.GOV):

- Manufactured no more than 25 years before trade-in date
- Have a combined highway/city fuel mileage of no more than 18 miles per gallon
- Be drivable
- Have insurance and registration to the owner for at least 1 year preceding trade-in date

The reasoning behind the last 2 rules was to make sure that cars that are were being driven consistently were replaced. This fulfilled the goal of the CARS program to lessen dependency on oil by having cars be more fuel-efficient.

CARS provided consumers with 1 of 2 rebate amounts, \$3500 or \$4500. The rebate amount was based on the amount of increase in average fuel-efficiency between the vehicle that is traded in and the new vehicle. If the new car averaged 4 miles-per-gallon (MPG) higher than the used car, a \$3500 rebate was provided. If the MPG average is 10 or greater, than a \$4500 rebate was provided (Library of Congress, 2009).

CARS Program Goals

There were two goals of the CARS program. First, CARS was described as a way to boost an economy in a recession. Second, the program increased fuel-efficiency of the cars on the road. Transportation Secretary Ray LaHood, on July 27, 2009 described the goals (United States Department of Transportation, 2009), "With this program, we are giving the auto industry a shot in the arm and struggling consumers can get rid of their gas-guzzlers and buy a more reliable, fuel-efficient vehicle. This is good news for our economy, the environment and consumers' pocketbooks."

Method

Data

To understand the effectiveness of the program I consulted various forms of data. I found data regarding sales by car brand and model, government data in regards to the program, and information gathered by other non-government agencies. Throughout the program, in my search for a new, CARS eligible car I spent time browsing by make and model, as well as eventually comparing cars in the dealerships.

News Reports/Commentaries

By searching and collecting news stories from across the country, I was able to formulate a general nationwide feeling or attitude held by the participants in the program. Interviews by reporters with people who had different interactions with the program allow me to understand reactions, to which I can compare with economic statistics in order to compile a well-rounded analysis.

Participation in Program

In the process of trading in my qualifying SUV for a new car and CARS rebate, I visited a variety of dealerships. The car brands of the dealerships I visited were Chevrolet, Chrysler, Ford, and Honda. The process of looking into the program, visiting dealerships and talking to salespeople provided me with a good understanding of specifics of the program.

The process of trading in my old SUV for a new car allowed me to experience first-hand the CARS program. Between talking to car dealership employees, compiling the paperwork and ultimately buying the car, I furthered my knowledge of the program.

Results

Automobile Market

The automobile market experienced a surge of new car sales because of the CARS program. As shown in Figure 3, the July and August sales numbers were much higher than the months before. The numbers are listed as a seasonally adjusted annual rate (SAAR) which adjusts the data based on seasonality allowing the viewer to be able to compare month-to-month with greater ease. The month immediately following the conclusion of the CARS program, September, was one of the worst months for new vehicle sales since the early 80's recession.

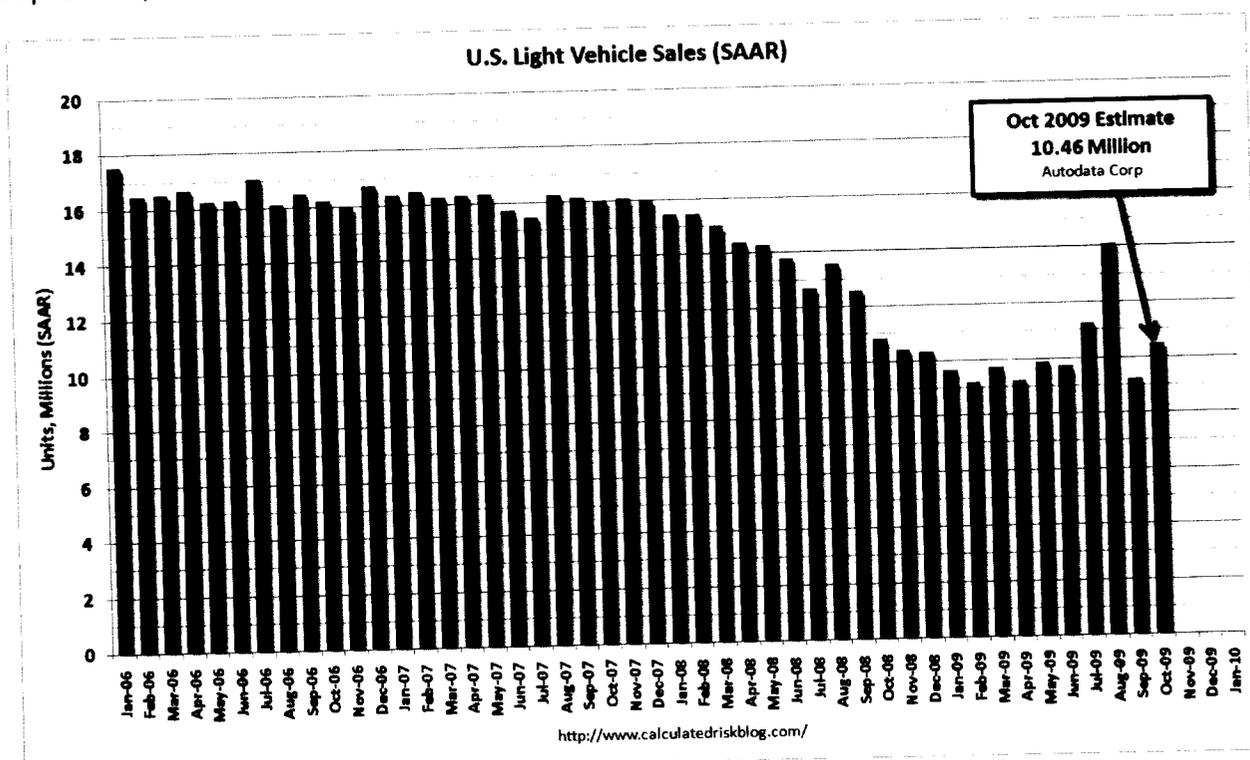


Figure 3: U.S. Light Vehicle Sales As of October 2009 - (Light Vehicle Sales 10.5 SAAR in October, 2009)

A total of \$2.88 billion in rebates were provided to consumers throughout the CARS program towards the purchase of just under 700,000 vehicles (United States Department of Transportation, 2009).

Top Selling & Most Traded Cars

Trade-Ins

The trend throughout the CARS program was SUVs were traded in for small cars. The top five trade-ins through the CARS program are shown in Figure 4.

Trends for trade-ins also changed dramatically when the CARS program was implemented. Edmunds.com reported an increase from 39% to 51% in the number of new-car purchases that included a trade-in. Also, only 9% of trade-ins prior to CARS implementation were qualified for rebates under the guidelines.

Top Trade-Ins
1. Ford Explorer 4WD
2. Ford F-150
3. Jeep Grand Cherokee
4. Ford Explorer 2WD
5. Dodge Caravan

Figure 4: Top CARS trade-ins – CARS.GOV

Throughout CARS, 39% of the trade-ins were qualified to receive a rebate (Edmunds.com, 2009). Michelle Krebs, an Edmunds.com Senior Analyst wrote, “Interestingly, all buyers, regardless of trade-in, are opting for smaller, more fuel-efficient cars at a higher than usual rate.”

As months pass and sales numbers are calculated, whether or not the CARS program has a long-term effect on people’s choice for various brands of cars will be determined. The short nature of the program caused spikes in statistics not generally seen, so it will take time for the numbers to smooth out.

Purchases

Small 4-door cars were the most popular vehicles purchased throughout the CARS program. Figure 5 lists the top 5 vehicles sold in the CARS Program. The high demand for these cars meant that selection was limited and often customers were not able to get the perfect match for options and styles.

Top Sellers
1. Toyota Corolla
2. Honda Civic
3. Toyota Camry
4. Ford Focus
5. Hyundai Elantra

Figure 5: Top 5 CARS Purchases - CARS.GOV

Discussion

Direct Participant Groups

The direct participant groups of the CARS program were the people who had the most involvement with the program. The automobiles were produced by companies based in different countries and sent to the car dealers who not only sold the cars but dealt with the paperwork required to receive the rebate taken off the price of the new car at the time of purchase.

New Car Buyers

New car buyers enjoyed a wonderful thing, a \$3500 or \$4500 trade-in value for their old car to be received at the time of purchase of a new car. The average rebate per car purchased was about \$4170. The average MSRP of the top-5 cars sold was about \$16,100, which means most consumers enjoyed a nearly a 26% discount in price. That does not include manufacturer or dealer incentives, or options added to the car. Edmunds.com estimates the average value of the clunker's traded in to be \$1,475, which is over 2.5 times the average rebate.

The tax consequences of purchasing a new car with a clunker rebate depend on which state the vehicle was purchased in. Some states required sales tax to be paid on the entire amount, excluding the clunker rebate. Other states levied a sales tax on only the final price paid for the car.

Car Dealers

Some car dealerships experienced tremendous increases in sales, while others were left out. Due to the restrictions on average miles-per-gallon and MSRP (maximum \$45,000 of the new car), not all dealers enjoyed the program. However, dealers that sold fuel-efficient, low-priced cars sold a great deal of their inventory. Also, Edmunds.com estimated a 20% increase in gross profit for dealerships throughout the time of the CARS program.

Car dealers that had large inventory levels before the CARS program were much better off than dealers with limited inventory levels. Chrysler had the most problems with inventory levels. Steven Beahm, VP Sales Operations for Chrysler, said his company had a 28-day supply of vehicles, which was the lowest figure in decades (Szczeny, 2009). Joseph Szczeny in 2009, adds, "Chrysler, however, appears to have had insufficient inventory in stock at dealers to take

advantage of the surge in new-car shoppers.” Chrysler’s smallest vehicle, the Caliber, was practically sold out by the end of the program (Simon, 2009).

When my brother and I visited dealerships to purchase a new car through the CARS program, we visited a Dodge/Chrysler dealership that only had one 4-door CARS eligible car remaining. We test-drove the car on Thursday, and on Friday we returned to talk about purchasing the car, but it was already sold.

Problems with the National Highway Transportation Safety Administration’s servers affected dealers receiving payment on-time. The Associated Press reported on August 19, 2009, “Hundreds of auto dealers in the New York area have withdrawn from the government’s Cash for Clunkers program, citing delays in getting reimbursed by the government.” Mark Schienberg, President of the Greater New York Automobile Dealers Association said, “This is a cash-dependent business.” Only 2% of rebates had been repaid as of August 19, 2009 Mr. Schienberg added (Strumpf, 2009).

Delayed payment was not a problem in the New York city area alone. In Chicago, Mai Martinez interviewed dealership employees and owners. Lou Tornabeni of Ettleson Hyundai said as of August 31, 2009, “Out of 142 deals they owe us for, we’ve gotten paid on seven.” On the same date, Carm Scarpace from Westfield Ford said his dealership had been paid 1 rebate out of 102 deals they’ve completed (Martinez, 2009). In Ohio, Chuck Eddy from a Chrysler dealership, was owed \$390,000 for over 100 CARS rebates, and had not received a dollar as of August 25, 2009. On that same date, Jim Arrigo, owner of 2 south Florida Chrysler dealerships, was owed over \$1 million and had only been paid for six rebates (Associated Press, 2009). Rebate repayment problems were eventually resolved and by September 25, 2009, 98% of approved requests had been paid (United States Department of Transportation, 2009).

Foreign and Domestic Automobile Manufacturers

Domestic automakers experienced a growth in sales but they did not sell nearly as many cars as the Japanese manufacturers did. Shown in Figure 6 are the top six manufacturers and the percentage of cars sold through the CARS program.

These manufacturers comprised 80% of all new cars sold through CARS. Bernard Simon described the situation as, “The US’s cash-for-clunkers scheme, designed to bolster Detroit’s embattled carmakers, is turning out to be an even bigger boom for their Japanese rivals.”

Manufacturer	% Sold
Toyota	19.4%
GM	17.6%
Ford	14.4%
Honda	13.0%
Nissan	8.7%
Hyundai	7.2%

Figure 6: % of CARS sales – CARS.GOV

Only 2 of the top 10 vehicles purchased through CARS were American-made, and those models were the Ford Focus and Ford Escape. Also, of all CARS purchases, 38.6% were cars produced by the “Big 3” American Producers Ford, Chrysler and GM (United States Department of Transportation, 2009).

Another impact of the CARS program is a reduction of domestically produced cars on American roads. Domestically produced SUVs, pick-up trucks, and minivans filled the top-10 list of the most-traded in cars (Simon, 2009).

Figure 7 shows nearly a year’s worth of market share data for the top 5 U.S. manufacturers. Toyota and Honda both increased in market share in July and August as a result of the clunker program.

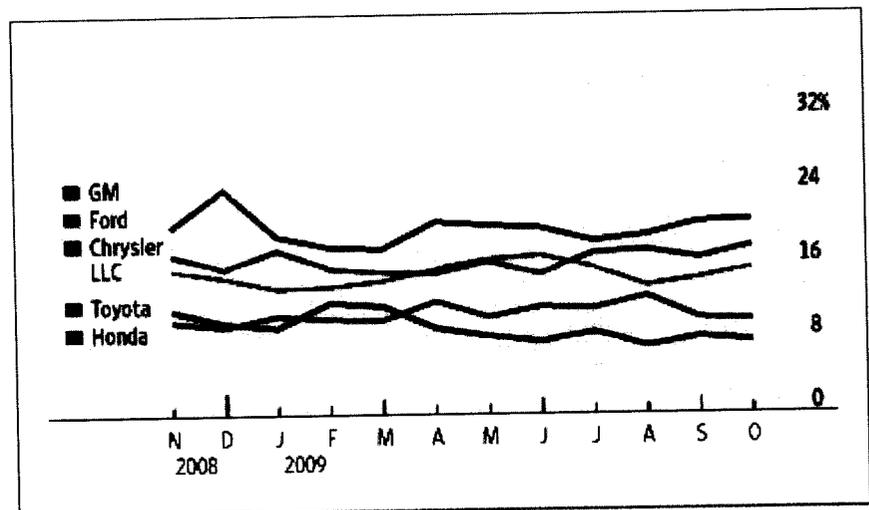


Figure 7: % Market Share by Mfg. – www.wsj.com

Indirect Participant Groups

Used car buyers and the United States taxpayers are the two groups of people with the most involvement in the CARS program that did not purchase, sell, or produce a new car. The used car buyers are affected by the removal of almost 700,000 cars from the United States roadways, and the United States taxpayers are the ones who will ultimately pay for the program in some form or another.

Used Car Buyers

For every clunker rebate received, a working car was destroyed. While the cars that were destroyed may not have been in the greatest shape, and probably had no more than a few years left of use, they were in working condition. The nearly 700,000 cars that were destroyed had an impact on the used car market, because some of those cars would have been sold to other people had they not been traded in for the CARS rebate.

The Manheim Consulting Used Vehicle Value Index, which measures the prices of used cars being sold, hit an all-time high in September 2009, the month following the conclusion of CARS, shown in Figure 8. The September index rating of 118.5 is based on used car prices from January 1995, when the index was set at 100. At the beginning of 2009, the index was listed at 101.7 (Manheim Consulting, 2009).

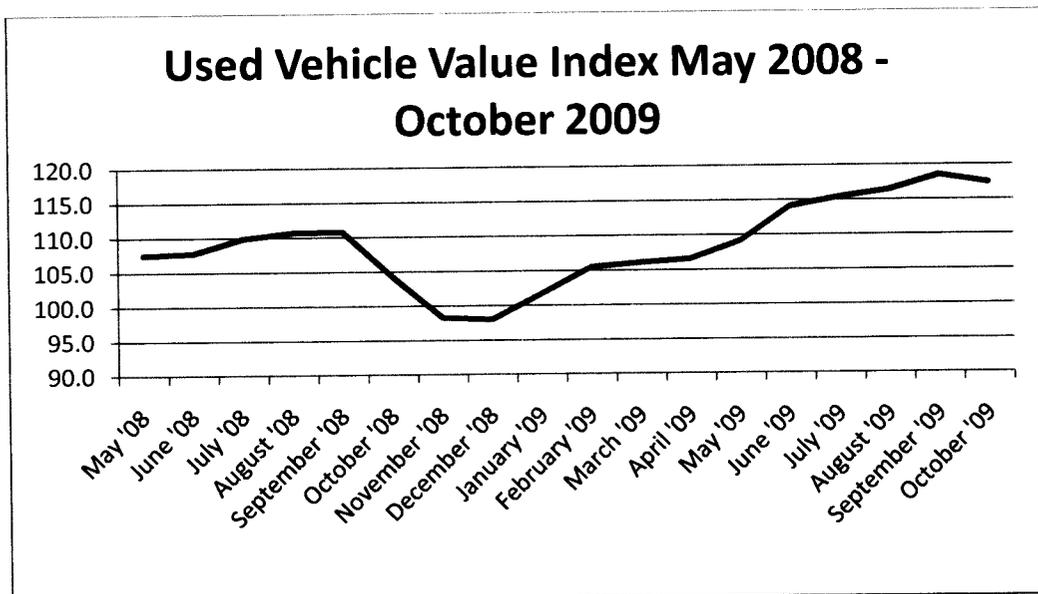


Figure 8: Used Vehicle Value Index - (Manheim Consulting, 2009)

Alec Gutierrez, a Kelly Blue Book Senior Analyst described the impact of CARS on used car buyers, "It's going to drive prices up of some of the most affordable vehicles we have on the road" (Woodyard, 2009). Furthermore, Mike Williams, owner of a used car dealership said, "The \$3,000 - \$5,000 car is just gone" (Woodyard, 2009).

U.S. Taxpayers

The money used to pay CARS rebates will from the taxpayers of the United States. While the Federal Government has been and will continue to be in nearly unprecedented levels of debt, over \$12 trillion in 2009 (Knoller, 2009), the taxpayers will eventually pay off the almost \$3 billion cash for CARS program. If not paid for by the taxpayers, then printing more money will occur, which causes inflation. Christopher Westley, Economics professor at Jacksonville State University, wrote on August 11, 2009, "the losers here are the poor and the lower middle class... they will see supply (of used cars) shrivel...the poor also pay in the form of higher prices resulting from the inflation that will be required to finance the program...inflation is a tax, and a regressive one at that."

One estimate of the cost to taxpayers was issued by a leading automobile information website, Edmunds.com. They projected the cost to taxpayers for the CARS program to be \$24,000 per car sold. This dollar amount was calculated by taking into account the forecasted new vehicle sales without a CARS program and comparing it to the actual amount of cars sold. Therefore, Edmunds.com estimates that about 125,000 cars were sold incrementally, or as a direct result of the program.

Meet Program Goals?

Stimulate New Car Purchases

The CARS program significantly increased new car sales in the 2 months it was effective. However, the question remains as to whether or not this program simply moved demand up a few months, by incentivizing people to purchase new cars earlier than they planned. The net result of moving up demand would then be essentially nothing.

However, in a time of recession, where consumption and production drop, and jobs are lost, perhaps the CARS program was just what the large automakers needed. As more data is gathered, clearer results of the macro-economic impact of this short-lived program will be available.

Increase fuel-efficiency

The goal of having more fuel-efficient cars on the road was accomplished. Records were broken in the area of fuel-efficiency.

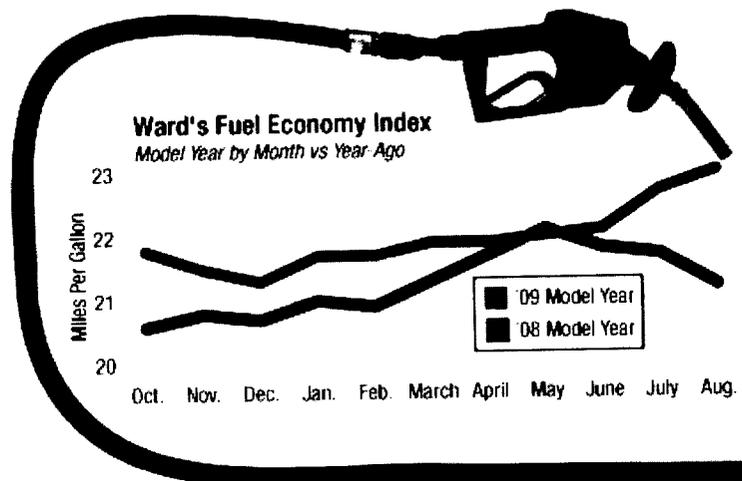


Figure 9: New Car Fuel Economy by MPG - (Sousanis, 2009)

In the August of 2009, the highest recorded index for the fuel-efficiency of new cars sold was reached. This comes as a direct result of the CARS program, given that nearly 700,000 fuel-efficient cars were purchased because of the requirements to improve fuel efficiency in order to be eligible for a rebate. The average MPG of vehicles sold in August 2009 set a new all-time high at 23 MPG. This number is an 8% increase from a year previous (Sousanis, 2009).

Insight into the United States Federal Government

The CARS program provided some insight into a government program, however because it was small in terms of the overall size of the Federal Government not too much should be taken from the program. Issues surrounding the government's effectiveness as well as whether or not such a program should even be implemented should be addressed.

The significant underestimates of the CARS program duration, which led to server problems and dealers not being paid quickly, have some relevance to the Federal Government's operations. While CARS was a small program, that leads to the notion that a small program should be able to be run smoothly. If an organization cannot simply give away \$3 billion or so, then how can it effectively manage other aspects of itself?

In addition, a larger question stems from the CARS program, which is, should the government even be incentivizing activities at its will? In terms of a "free-market economy", how is it fair to every other participant in the marketplace, if the overseer and enforcer of fair market practices is providing 15-25% instant rebate on a large-ticket item? Why not cash-for-refrigerators?

Summary

After sifting through the most current data the short-term effects of CARS are well-known. Some notable short-term items resulting from CARS program are:

- Highest fuel-efficiency rating for new cars sold in a month in August 2009
- Highest used-vehicle index price since 1995
- Most new car sales in the month of August 2009, since May 2008

Automobile manufacturers enjoyed a pleasant boost in sales, and most were left with little inventory. The dealerships that sold the CARS-eligible vehicles did not have to haggle with the customers and therefore made a higher than average profit on most sales. The customers received an average of \$4,170 for trading-in vehicles with an average value of under \$2,000 while at the same time purchasing a more fuel-efficient vehicle, leading to a lighter fuel bill.

The CARS program had a less drastic affect on U.S. Taxpayers and used car buyers. Taxpayers will end up financing the \$2.88 billion that was given in rebates. Used car buyers in the \$10,000 and under price-range saw a rise in prices to a level not experienced at anytime in the last 14 years. The taxpayers and used car buyers were the two groups to not benefit from the CARS program, and the extent of the detriment they've received will not be known for some time.

While the CARS program was short-lived and surrounded by all sorts of varying opinions, it had a significant economic impact on the groups of people involved. From the teenager looking to get a cheap used car to the line worker at a foreign or domestic auto manufacturing plant, the effect of CARS was felt worldwide.

Bibliography

- (2009, June). Retrieved from <http://mysite.verizon.net/vzeqrguz/housingbubble/>
- Amadeo, K. (2009, October 29). Recession Is Over, Thanks to Stimulus. Associated Press. (2009, August 25). Dealers Hope for Payment as Clunkers Program Ends. Washington, District of Columbia.
- Associated Press. (2009, August 21). Toyota Corolla still Cash for Clunkers top seller. Washington, District of Columbia.
- Auto Sales and Unemployment Rate*. (2009, August 10). Retrieved from Calculated Risk Blog: <http://www.calculatedriskblog.com/2009/08/auto-sales-and-unemployment-rate.html>
- Blinder, A. S. (2008, July 27). A Modest Proposal: Eco-Friendly Stimulus.
- Boles, C. (2009, August 7). Senate Adds \$2 Billion to 'Clunkers' Plan. Washington, District of Columbia.
- Bureau of Labor Statistics. (2009, October). *Automotive Industry: Employment, Earnings, and Hours*. Retrieved November 11, 2009, from Bureau of Labor Statistics: <http://www.bls.gov/iag/tgs/iagauto.htm>
- Callahan, E. L. (2009, July 31). 'Cash for Clunkers' Suspended? Funds Already Running Out. Center for American Progress Action Fund and SmartTransportation.org. (2008, November 20). Cash For Clunkers: Accelerated vehicle recovery as a green stimulus strategy to retain automotive industry jobs, reduce oil dependence, and save consumer dollars at the pump.
- Edmunds.com. (2009, October 28). Cash for Clunkers Results Finally In: Taxpayers Paid \$24,000 per Vehicle Sold, Reports Edmunds.com. Santa Monica, California.
- Edmunds.com. (2009, August 9). Edmunds.com Evaluates "Cash for Clunkers," Determines Program Generated 19.6 Million SAAR Shopping Rate. Santa Monica, California.
- Edmunds.com. (2009, September 22). *Edmunds: Inside Line - Mexico: Buyers Not Biting, So Cash for Clunkers Program Gets Incentives Added*. Retrieved October 15, 2009, from www.edmunds.com/insideline.
- Fox, J. (2009, August 5). Life on the other side of cash for clunkers.
- Helperin, J. (2009, February 18). *Stimulus Package Allows Tax Deduction on New Cars Bought through 2009*. Retrieved October 10, 2009, from Edmunds: Daily: <http://blogs.edmunds.com/strategies/2009/02/stimulus-package-allows-tax-deduction-on-new-cars-bought-through-2009.html>
- Johnson, K. (2009, March 31). German Lessons: Is Cash-for-Clunkers the Answer to U.S. Auto Woes?
- Jonathan Karl, H. K. (2009, August 6). Congress Passes \$2 Billion Extension of Cash for Clunkers Program.
- Kirschbaum, E. (2009, September 2). German 'cash for clunkers' out of gas just before vote.
- Knoller, M. (2009, March 17). National Debt Hits Record \$11 Trillion.

Library of Congress. (2009, May 12). House Report 111-151 - Making Supplemental Appropriations for the Fiscal Year ending September 30, 2009, and For Other Purposes. Washington, District of Columbia.

Light Vehicle Sales 10.5 SAAR in October. (2009, November 3). Retrieved from Calculated Risk Blog: <http://www.calculatedriskblog.com/2009/11/light-vehicle-sales-105-million-saar-in.html>

Manheim Consulting. (2009, October). Used Vehicle Value Index - Current Monthly Index. Atlanta, Georgia.

Martinez, M. (2009, August 31). *Car Dealers Still Waiting on 'Clunkers' Cash.* Retrieved October 12, 2009, from CBS 2 Chicago: <http://cbs2chicago.com/local/Cash.for.clunkers.2.1155470.html>

Scherzer, L. (2009, July 27). Is the U.S. becoming more like Europe?

Simon, B. (2009, August 17). Cash-for-clunkers boost Japanese car sales.

Sousanis, J. (2009, September 25). *August Light-Vehicle Sales Achieve Record Fuel-Efficiency Rating.* Retrieved October 15, 2009, from WardsAuto.com: <http://www.autoblog.com/2009/09/30/average-new-car-fuel-mileage-hits-record-high-in-august-spurred/>

Strumpf, D. (2009, August 19). NY Dealers pull out of clunkers program.

Szczesny, J. (2009, September 2). Chrysler Still the Laggard, Despite Cash for Clunkers. The Wall Street Journal. (2009, September 3). Germany's Cash for Clunkers Program Runs Out.

United States Department of Transportation. (2009, August 26). Cash for CLunkers Wraps up with Nearly 700,000 car sales and increased fuel efficiency, U.S. Transportation Secretary LaHood declares program "wildly successful". Washington, District of Columbia.

United States Department of Transportation. (2009, August 20). Secretary LaHood Announces Wind Down to Hugely Popular CARS Program.

United States Department of Transportation. (2009, July 27). Transportation Secretary Ray LaHood Kicks-Off CARS Program, Encourages Consumers to Buy More Fuel Efficient Cars and Trucks. Retrieved from U.S. Department of Transportation.

Valdes-Dapena, P. (2009, August 21). Cash for Clunkers Ending: With money running out, \$3 billion Cash for Clunkers program will end on Monday. The tally so far: 457,000 cars and \$1.9 billion in rebates. New York City, New York.

Valdes-Dapena, P. (2009, October 29). Clunkers: Taxpayers paid \$24,000 per car. New York City, New York.

Westley, C. (2009, August 11). The "I Hate the Poor" Act of 2009.

Woodyard, C. (2009, August 8). *Clunkers program could drive used car prices up.* Retrieved from USA Today: http://www.usatoday.com/money/autos/2009-08-09-cars-cash-clunkers_N.htm?loc=interstitialskip

Woolhouse, M. (2009, September 19). Car showrooms quiet after clunkers clamor ends: Dealers add other incentives in bid to entice buyers. Boston, Massachusetts.

Table of Figures

Figure 1 United States Home Prices - <http://mysite.verizon.net/vzeqrguz/housingbubble/> 5

Figure 2: New Car Sales & Unemployment Rate - (Auto Sales and Unemployment Rate, 2009) .. 6

Figure 3: U.S. Light Vehicle Sales As of October 2009 - (Light Vehicle Sales 10.5 SAAR in October, 2009) 11

Figure 4: Top CARS trade-ins – CARS.GOV 12

Figure 5: Top 5 CARS Purchases - CARS.GOV 12

Figure 6: % of CARS sales – CARS.GOV 15

Figure 7: % Market Share by Mfg. – CITE** 15

Figure 8: Used Vehicle Value Index - (Manheim Consulting, 2009) 16

Figure 9: New Car Fuel Economy by MPG - (Sousanis, 2009)..... 18