

Jeff Cardoni
 Professor Cafruny
 Levitt Center Research Project
 Summer 2010

US Auto Industry Reform

Abstract

America's automotive industry makes up \$1 in \$10 of the nation's economy.¹ Car manufacturing is at the core of the country's military and industrial base, and it has been described by management thinker Peter Drucker as "the industry of industries."² The large number of diverse inputs, including steel, plastic, rubber, and glass, necessary to build a single car create myriad jobs in other industries, and the Center for Automotive Research (C.A.R.) notes that "no other single industry links as closely to the U.S. manufacturing sector or directly generates as much business and overall employment."³ Still more importantly, the mobility of goods and services enabled by the automobile is at the core of American economy. With 820 vehicles per 1,000 people,⁴ the motorization of the U.S. is so intense that it is in a "peer group of one"⁵ within the G-7 nations. Authors Ian Carson and Vija Vaitheeswaran accurately describe America's cars as "capitalism on wheels,"⁶ an observation that is supported by the way U.S. motorization grew with the country's GDP.

1 Carson, Iain, and Vija Vaitheeswaran. *Zoom: The Global Race to Fuel the Car of the Future*. New York: Hachette Book Group USA, 2007. Print. p.21

2 Carson and Vaitheeswaran, p.21

3 Cole, David, et al, *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

4 The World Bank, World Development Indicators. "Motor vehicles (per 1,000 people.)"
 <<http://data.worldbank.org/indicator/IS.VEH.NVEH.P3>>

5 Jones, Alex Taylor III. *Sixty to Zero: An Inside Look at the Collapse of General Motors—and the Detroit Auto Industry*. New Haven: Yale University Press, 2010. Print. p.3

6 Carson and Vaitheeswaran, p.21

In 2008, when the entire domestic auto industry was on the brink of extinction, the Center for Automotive Research estimated a worst-case scenario in which 2.95 million jobs would be eliminated in the first year following a complete collapse of U.S. car companies.⁷ Another estimate places the total number of U.S. jobs tied to the production and servicing of domestic and international automobiles, building and maintaining roads, supplying fuel, and governing infrastructure at 17 million.⁸ About 20% of US retail sales are cars, and the industry represents 20% of the output of the manufacturing sector. In the face of bankruptcy, the government decided that American auto manufacturers were also too big to fail.

Unlike GM and Chrysler, though, Ford was not about to fail. It was the only American car company to avoid government aid and the ensuing bankruptcy that GM and Chrysler experienced nonetheless. Clearly, Ford made changes before the financial crisis that helped the company remain solvent while GM was about to fail. This paper will examine the differences between the recent decisions of GM and Ford and consider how these business practices affected the current state of the companies and how they will fare in the coming years. The first section examines the recent history of the auto manufacturers and analyzes the differences between the changes, or lack thereof, that Ford and GM made in the last few years. It also examines how each company dealt with outside influences in the form of international competition and labor relations.

The second part of the paper looks at the near future and finds that many of the causes of the current recovery of the domestic auto industry are only temporary fixes or a result of cyclical

⁷ Cole, et al

⁸ Mitchell, William J.; Borroni-Bird, Christopher E.; and Burns, Lawrence D. *Reinventing the Automobile: Personal Urban Mobility for the 21st Century*. The MIT Press: Cambridge, 2010. Print. p.12

changes in the economy. It also briefly considers the international scope of automotive manufacturing and the interrelated nature of domestic manufacturers.

The paper concludes that though these two domestic manufacturers have made many helpful changes, the industry as a whole is on the verge of a much more fundamental transformation. In the coming decades, it is unlikely that they will exist in their current state, if at all.

I. Recent history: why GM required a government loan and Ford did not

1.1 Introduction

In the wake of the near collapse of the US automobile industry and the bankruptcies of GM and Chrysler, it seems that American car companies are recovering handily. In the second quarter of 2010, GM posted a healthy profit of \$1.3 billion,⁹ up from \$865 million in the first quarter of 2010, though the company had not turned an annual profit since 2004.¹⁰ By April 21, 2010, GM had repaid all of the TARP funds that it borrowed from the U.S. government, five years ahead of schedule.¹¹ GM is now preparing to become a public company again by the fourth quarter of 2010.¹²

In the first quarter of 2010, Chrysler's net loss was down to \$197 from a net loss of \$2.7 billion in the fourth quarter of 2009.¹³ Additionally, Chrysler saw an operating profit of \$143

9 Snavely, Brent. "A Company Comparison: Ford results twice GM's \$1.3B quarter." *The Detroit Free Press*, 13 August 2010. <<http://www.freep.com/apps/pbcs.dll/article?AID=/20100813/BUSINESS01/8130319/1210/BUSINESS01/Ford-results-twice-GMs-1.3B-quarter&template=fullarticle>>

10 Bunkley, Nick. "GM Posts Profit as Sales Rise 40 Percent." *The New York Times*, 17 May 2010. <<http://www.nytimes.com/2010/05/18/business/18auto.html>>

11 Executive Office of the President. "A Look Back at GM, Chrysler, and the American Auto Industry." 21 April 2010.

12 Bunkley, Nick. "GM Posts Profit as Sales Rise 40 Percent."

13 Krebs, Michelle. "Chrysler Posts First-Quarter Operating Profit." *Edmunds Auto Observer*, 21 April 2010.

million after payment of onetime costs associated with restructuring. In the second quarter of 2010, the company's loss dropped a little bit to \$172 million, while the operating profit increased to \$183 million.¹⁴ The company's goal is to break even in 2010.¹⁵

Meanwhile, Ford earned a profit of \$2.1 billion in the first quarter of 2010, and in the second quarter it recorded a \$2.6 billion profit that was exactly double GM's profit.¹⁶ Ford claimed that its decision to decline government loans placed it at a competitive disadvantage relative to its American rivals, which were able to eliminate enormous amounts of debt.¹⁷ Indeed, Ford finished the second quarter with \$27.3 billion in debt, as compared to GM's \$8.16 billion in debt.¹⁸ Nonetheless, there is widespread agreement that Ford's status as the only Detroit automaker to not receive a bailout has bolstered the company's image, helping it to outperform its US counterparts.¹⁹

Given these very different outcomes, it is worth considering the decisions that led Ford to so much more success than its domestic counterparts. Over the history of the US auto industry, it seems that there have been clear concepts that helped one automaker or another rise to success. In 1913 Henry Ford improved upon Ransom Olds' patented assembly line to create the moving assembly line. Ford's innovation, along with the \$5 workday, propelled the company to

<http://www.autoobserver.com/2010/04/chrysler-posts-first-quarter-operating-profit.html>

14 Durbin, Dee-Ann. "Chrysler posts smaller quarterly loss: CEO says the company still has more tough work ahead." *Associated Press*: 9 August 2010. <<http://www.msnbc.msn.com/id/38622721/ns/business-autos/>>

15 Gardner, Greg. "Chrysler loses \$197M in first quarter but sees 2010 profit." *USA Today*, 21 April 2010. <http://www.usatoday.com/money/autos/2010-04-21-chrysler-earnings_N.htm>

16 Snavely, Brent. "A Company Comparison: Ford results twice GM's \$1.3B quarter."

17 Lareau, Jamie. "Ford CEO Alan Mulally: Industry leader of the year." *Automotive News*, 12 July 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100712/OEM02/307129983>>

18 Snavely, Brent. "A Company Comparison: Ford results twice GM's \$1.3B quarter."

19 Executive Office of the President

dominate automotive manufacturing worldwide.²⁰ In 1923, Alfred P. Sloan, Jr. “invented mass marketing” by recognizing that “cars were vehicles for aspiration as well as transportation. Under Sloan, GM created a social ladder of brands...”²¹ Sloan’s philosophy of a “car for every purse and purpose”²² led GM to dominate US market, peaking with 51% of all US sales in 1961.²³ Then, in 1983, Chrysler essentially invented the minivan, pulling the company into profitability after years of crisis.²⁴ Building on the largely irrational buying habits of American consumers, namely, the tendency to purchase cars to meet peak needs instead of typical needs, Chrysler went on to popularize the SUV with the Jeep Grand Cherokee.²⁵

Despite these and other innovations, though, the automobile has changed very little in over a century. Auto manufacturers worldwide, not pharmaceutical or technology companies, are the largest spenders on research and development.²⁶ Even with a steady stream of incremental development, the car itself is fundamentally the same as it was in 1910. It is still mechanically driven, mechanically operated, fueled by oil, and operated as a stand-alone unit consisting of an engine in the front conveying power back through a transmission system to the wheels.²⁷ According to C.A.R., “The need to constantly innovate and remain competitive drives

20 Ingrassia, Paul. *Crash Course: The American Automobile Industry's Road from Glory to Disaster*. Random House: New York, 2010. Print. p.304

21 Ingrassia p.15

22 Hughes, Charlie and Jeanes, William. *Branding Iron: Branding Lessons from the Meltdown of the US Auto Industry*. Racom Books: Chicago, 2007. Print. p.156

23 Ward’s Automotive Group. “U.S. Total Vehicle Sales Market Share by Company, 1961-2009.” Penton Media, Inc., WardsAuto.com/ReferenceCenter.

24 Ingrassia p.82

25 Lutz, Catherine and Fernandez, Anne. *Carjacked: The Culture of the Automobile and its Effect on Our Lives*. Palgrave Macmillan: New York, 2010. Print. p.72

26 Carson and Vaitheeswaran p.16

27 Mitchell, Borroni-Bird, Burns p.3

both domestic and international automotive manufacturers to focus on R&D,” yet all of this development has been focused on small variations on the same basic design. Thus the last hundred years of technological breakthroughs have only served to make slow, evolutionary changes in the automobile.²⁸

Despite the slow pace of automotive progress, American manufacturers in particular seem to have been afflicted by a kind of product sclerosis in the past few decades. International competitors managed to use better production methods to build cars that improved at a rate that outstripped the glacial pace of US manufactures. Indeed, each time an American car company experienced a real breakthrough, such as Ford’s Taurus in 1985, temporary profitability was followed by a period of complacency and eventual losses. Automotive journalist Paul Ingrassia notes that “Throughout the 1980s and 1990s, every time the Big Three and the UAW returned to prosperity, they would succumb to hubris and lapse back into their old habits... The cycle reached its peak at the beginning of the new millennium, when the Big Three plunged from record profits to breathtaking losses in just five years.”²⁹ In this context, the Detroit Three’s current recovery seems temporary at best.

Nonetheless, Ford and GM have both made long-overdue changes that will hopefully help them remain profitable in the coming years. Though Ford’s \$23.5 billion loan in 2006 was ostensibly the reason that the company did not need bailout money,³⁰ Ford’s decision to take such a loan and the way in which it allocated the funds were part of a larger body of changes that

28 Mitchell, Boronni-Bird, and Burns p.13

29 Ingrassia p.11

30 Congressional Research Service. CRS Reports for Congress. *U.S. Motor Vehicle Industry: Federal Financial*

Assistance and Restructuring. By Stephen Cooney, et al. Washington, D.C.: 2009. *GalleryWatch CRS*

Reports. Web. 10 Feb. 2010. P.6 <<http://www.fas.org/sgp/crs/misc/R40003.pdf>>

helped it recover faster and more completely than GM. Both have eliminated unnecessary brands, improved product quality, cut labor costs, and replaced ineffectual executive teams. However, Ford made many of these difficult changes before GM, and it made them much more thoroughly. It remains to be seen if Ford, or any American manufacturer, will be able to sustain long term profitability in an industry where much more change is still behind schedule. Many problems remain for the domestic auto industry, and many of the drivers of their current recovery are untenable, temporary fixes.

1.2 Chrysler

While GM and Ford have made impressive, if still incomplete, strides to restore profitability, Chrysler remains in the red and without any true reform. Chrysler is currently the least competitive domestic automaker, the least domestic American automaker, and the least likely to have significant success in the coming years. An analysis of Chrysler's turnaround does not have as much to offer because Chrysler has not really undergone as great a turnaround.

First, Chrysler's results in 2010 demonstrate that the company has not been as successful making the difficult changes that GM and Ford made to eliminate dealerships, excess capacity, and brands. Instead of eliminating redundant brands, Chrysler has created additional brands. The company created a separate "Ram Truck" nameplate for its more commercially-oriented vehicles, the 1500, 2500, and 3500 pickups, and the 3500, 4500, and 5500 chassis-cab trucks.³¹ One of GM's biggest potential mistakes in its restructuring was its failure to eliminate its redundant GMC brand, and Chrysler is actively and needlessly making the same type of mistake.

³¹Alterman, Eddie. "Chrysler's Future: Ram Brand." *Car and Driver Blog*. 4 Nov. 2009. Web. 7 Aug. 2010
<<http://blog.caranddriver.com/chryslers-future-ram-brand/>>

As it repeats the errors of other domestic manufacturers, Chrysler seems to be well behind its competition. Chrysler could have learned from GM's mistake and at least stopped creating brands if it wasn't going to eliminate any. The company could have even learned from its own failed attempt to create the Eagle brand in the 1990s. Eagle cars were initially rebadged American Motors cars which were eventually "replaced with vehicles built on Chrysler assembly lines and which differed from the Dodge Intrepid only in their badge, minor styling differences, and the availability of all-wheel drive."³² Though the Ram Truck brand does not sell the same products as Dodge, it creates an unnecessary branch of a company in "a move that sounds more like a simple corporate restructuring than any real shake-up."³³ For an auto manufacturer that is still dealing with millions of dollars in losses, it seems inane to promote the director of Chrysler's Denver Business Center, Fred Diaz, Jr., to CEO of a new, uncalled for division of the company.³⁴

Today Chrysler is no longer a part of the defunct Big Three, but it is not really a part of the renamed Detroit Three, either. The company is run by Fiat CEO Sergio Marchionne and 20% owned by Fiat, with this stake set to increase to 51% once the company meets key targets and pays back all of its loans to the US government. Now that Chrysler is controlled by a foreign company, it seems to be more like a U.S. transplant manufacturer, such as Toyota, Honda, or Volkswagen, than a true U.S. company. Furthermore, Chrysler has been controlled by foreign companies before, as with the so-called merger with Daimler-Benz in 1998. As the least

32 Hughes and Jeanes p.28

33 Johnson, Erik. "Chrysler Announces Dodge Ram Brand, Shuffles Some Executives." *Car and Driver Car News*. 5

Oct. 2009. Web. 7 Aug. 2010. <<http://blog.caranddriver.com/chrysler-announces-dodge-ram-brand-shuffles-some-executives-car-news/>>

34 Johnson, Erik. "Chrysler Announces Dodge Ram Brand, Shuffles Some Executives."

domestic part of the domestic auto industry, Chrysler again seems somewhat less relevant to an analysis of the future of the industry in the U.S.

Chrysler is presently the smallest and least competitive car company in Detroit, the least American auto manufacturer in the city, and the least likely to be successful in the future, especially given its history as the least viable and least domestic auto manufacturer in Michigan. Marchionne recently admitted that it is unlikely that the company will turn a profit in 2010.³⁵ In addition to the company's confusion over the Ram Truck brand, the company's strongest products continue to be the large vehicles that are particularly vulnerable to oil price volatility and which are unlikely to survive the coming changes in the auto industry. The Ram 1500 has been one of the company's most successful models, and the newly separated Ram brand was the best performer of Chrysler's four brands in the 2010 J.D. Power and Associates APEAL (Automotive Performance, Execution, and Layout) Study.³⁶ Still, Ram Truck was below average in the study, while Chrysler was third from last and Jeep was dead last. Currently, Chrysler's strongest model is also a large vehicle- the redesigned Grand Cherokee.

Even though Chrysler's future seems bleak, Marchionne, its new CEO, has accomplished an impressive corporate turnaround before. He is responsible for the transformation of Fiat that began in 2004,³⁷ when the Italian company "was perceived by many as a failing lethargic automaker that produced low-quality cars and was stymied by endless bureaucracies."³⁸ When

35 Reuters, "Chrysler to have difficulty turning '10 profit, CEO says." *Automotive News*. 23 August 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100823/OEM/100829943/1179>>

36 Gardner, Greg. "U.S. automotive brands outpace rivals in new J.D. Power survey." *Detroit Free Press*. 15 July 2010. <<http://www.freep.com/article/20100715/BUSINESS01/100715036/U.S.-automotive-brands-outpace-rivals-in-new-J.D.-Power-survey>>

37 Buss, Dale. "Fiat CEO Marchionne Has Led an Unlikely Turnaround." *Edmunds AutoObserver*. 21 January 2009. <<http://www.autoobserver.com/2009/01/fiat-ceo-marchionne-has-led-an-unlikely-turnaround.html>>

38 Gumbel, Peter. "Chrysler's Sergio Marchionne: The Turnaround Artista." *Time Magazine*. 18 June 2009. <<http://www.time.com/time/magazine/article/0,9171,1905416,00.html>>

Marchionne took control of Chrysler, he followed almost exactly the same procedures as he did to begin his turnaround at Fiat, separating the company's brands into distinct business units and promoting younger managers.³⁹ It is not impossible that Marchionne may be able create the same kind of repeat turnaround success as Ford's Alan Mulally. Thus far, though, his strategy seems to be completely contrary to Mulally's "One Ford" approach, and his results are just the opposite, as well.

1.3 Important Changes

Ford seemed to avoid government loans because it took out a \$23.6 billion loan in 2006, before credit conditions tightened, but this loan was just one of many important changes at Ford. In 2006, Ford CEO Alan Mulally's decision to hedge against a possible slump in Ford sales stood in stark contrast to GM CEO Richard Wagoner's decision to continue developing gas-guzzling full-size SUVs the year before, in 2005. Even as the price of gasoline was at a record high in March 2005, at \$2.11 a gallon, Wagoner "maintained that SUV sales were just suffering a temporary dip, and that GM would make up for any overall decline by increasing its market share. Wagoner "had bet on continued strong sales of SUVs, and it was too late to turn back."⁴⁰ Ford's decision to create a backup plan in the event of an economic slump was no accident, just as GM's choice to bet on the continued low price of gas was not simply bad luck. Economic slumps and high gas prices have inflicted deep damage on these companies before, as during the 1973 OPEC oil embargo. In the last decade, the two companies have clearly followed different plans.

39 Gumbel, Peter. "Chrysler's Sergio Marchionne: The Turnaround Artista."

40 Ball, Jeffrey and White, Joseph B. "Rising Gasoline Prices Threaten Viability of Biggest SUVs," *The Wall Street Journal*, March 22, 2005

In 2009, a study from the University of Michigan Transportation Research Institute identified four prerequisites for a corporate transformation that would be successful in the long-run. The researchers pointed to the need to (1) implement broad, deep, fast change, (2) replace the management team, (3) transform culture, and (4) build a portfolio of excellent products. William “Bill” Ford, Jr. can be credited with #2 on this list, as it was he who in 2006 took the initiative to step down as CEO of his company and hire an outsider who would bring in fresh perspective. Without replacing the upper-level management, the rest of these goals would never have been possible.

1.3a Speed and Size

Ford’s turnaround began with Bill Ford’s decision to seek out a new CEO for his struggling company. When the company lost \$12.6 billion in 2006, it broke the record for a single-year loss that GM had set in 2005.⁴¹ Though Bill Ford instituted a restructuring plan in 2005, he realized the need for more change if his company was to have a future. Meanwhile, Wagoner was simply trying to keep General Motors alive from one quarter to the next, as he admitted that “Nobody wants to be the guy who runs General Motors when it goes out of business.”⁴² In 2005 there were 17.4 million car sales in the US, an all-time record which only fell to 17.0 the following year.⁴³ If neither company was profitable under such conditions, it should have been clear that a serious change in the business plan was needed to stay in business.

41 Ingrassia p.189

42 Ingrassia p.170

43 Ward’s Automotive Group. “U.S. Vehicle Sales, 1931-2009.” Penton Media, Inc., WardsAuto.com/ReferenceCenter.

Even though Mulally is credited with fixing Ford, the change itself began with Bill Ford. Bob Lutz, the only individual to hold senior executive jobs at all three of the Detroit automakers, observed that, “We didn’t undergo fundamental change *by our own choice*. It was *forced* on us. The wisest of people or institutions seldom can deduce, on their own, that change is needed. And if they do, they never muster the courage to act on that need.”⁴⁴ Nonetheless, Bill Ford deduced that change was needed and mustered the courage to search for someone to help improve his company and take his position as CEO. After considering successful industry-insiders Carlos Ghosn of Renault and Dieter Zetsche of Mercedes-Benz, Ford hired Alan Mulally.

This decision represented a deep break with the way that domestic automakers had been managed for decades. In “Structural adjustment and conflicting recipes in the U.S. auto industry,” J.C. Spender notes that for years domestic auto firms were able to take advantage of U.S. law and that “Over the long run this led to a profoundly inward-looking industry culture that has seriously diminished these firms’ ability... to compete.”⁴⁵ Spender believes that the downfall of domestic automakers was largely their inability to be critical of themselves and the way that high-paid executives served their own interests. Ironically, Bill Ford was acting in his best interests when he hired an outsider as CEO, but he was also being self-critical. His ability to recognize that his performance was lacking and to look outside of his company and his own industry were what allowed Ford to break with the increasingly uncompetitive history of domestic automakers.

By contrast, even when Steve Rattner essentially asked Richard Wagoner to resign, Wagoner continued to believe that he could lead the company for at least a few more years.⁴⁶

44 Ingrassia p.11

45 Spender, J.C. “Structural adjustments and conflicting recipes in the US auto industry.” 2007. p.149

46 Ingrassia p.238

Even at the start of 2007, when GM had lost \$2 billion in a year of near-record sales, Wagoner stated that “Our entire GM team rose up to meet the collective challenges we face... Our performance was validation that we have the right strategy, and it’s working,” because the company had reduced its losses from \$10 billion the year before.⁴⁷ Wagoner’s lack of critical introspection made him incapable of changing a flawed business plan because he was unable to admit that there was a flaw in the first place.

Spender also notes that the type of change that took place at Ford is particularly difficult. He believes that such change “depends on the power of the institution’s managers to effect change, so there must be an analytically significant difference between the views of the managers and those of the rest of the system they are trying to change.”⁴⁸ Bill Ford’s decision is remarkable not only because of the self-criticism it required, but also because he realized that he needed someone who was not just better at managing a car company, but rather, someone who would do a different kind of managing entirely.

Alan Mulally certainly did go about managing the company in a much different way. Bill Ford’s initial hiring of Mulally had only fulfilled one criterion for a successful corporate turnaround. After taking over at Ford, it was up to Mulally to change the company’s culture and product portfolio as quickly and profoundly as possible, as noted in the University of Michigan study.

1.3b Managing risk

In addition to Mulally, there were many other highly competent leaders at Ford. As per #2 on the University of Michigan study, a successful turnaround would take more than just one

⁴⁷ Ingrassia p.194

⁴⁸ Spender p.130

skilled leader, but an entire executive team. Nine out of twenty-one of *Automotive News*' 2010 "All-Stars" were Ford employees, while only one GM employee won an award and no Chrysler employees were on the list. With this group of leaders at Ford, the company had clearly completed #2 on the list of turnaround criteria.

Then, in order to implement the first criterion on the University of Michigan study, "broad, deep, fast change," a large amount of liquidity was necessary. Not long after arriving at Ford in 2006, Mulally took out the \$23.6 billion loan that was largely responsible for saving Ford. Employees saw this as a huge "home improvement loan" to protect Ford from a slump in sales while allowing the company to continue to invest in new products.⁴⁹ The loan was somewhat controversial at the time because Ford had to pledge an enormous number of company assets as collateral, including the Blue Oval logo itself.⁵⁰ Some people also interpreted the loan as a sign of panic at Ford. Furthermore, the company had to pay off interest in the short term.

However, Michael McGrath, author of the book *Business Decisions!*, notes that companies must manage risk proactively in order to be successful, as Ford did, while "a lot of companies just don't do enough."⁵¹ When, in 2005, GM scrapped its plans for a new line of sedans in order to more quickly develop more profitable full-size SUVs and pickups,⁵² the company was leveraging its bets on cheap oil. Even as Hurricane Katrina was disrupting gas supply and increasing fuel prices across the country, the company chose to put aside development of its smaller Zeta platform in order to release vehicles that would consume more

49 Ingrassia p.189

50Lareau, Jamie. "Ford CEO Alan Mulally: Industry leader of the year."

51Armitage, Ian. "Ford CEO Alan Mulally: The turnaround specialist." *Manufacturing Digital*. 7 Mar. 2010. Web. <<http://www.manufacturingdigital.com/industry-focus/world-class-operations/ford-ceo-alan-mulally-turnaround-specialist>>

52 Ingrassia p.166

fuel. Fortunately, in 2008 executives voted unanimously to reject the multibillion dollar project to replace the full size GMT900 platform with the new CXX truck and SUV platform.⁵³

As GM was cancelling expensive programs for inefficient vehicles during the recession, Ford was investing across multiple vehicle categories to ensure that when the economy picked up, Ford would have something to offer consumers who had delayed vehicle purchases. Erich Merkle, president of Autoconomy, notes that “As we’re coming out [of the recession], they’ve got all this new product coming out in just about every category.”⁵⁴ Ford’s investment at a low point in the business cycle allowed the company to capitalize on the consequent upswing and gain market share for the first time since 1995.⁵⁵ If it had not acted as thoroughly, decisively, and quickly, the company would not have been able to capitalize on the economic upturn as well as it did.

1.3c Cultural Revolution

Next, Mulally had to transform the culture at Ford, as per #3 on the University of Michigan list. The year before he came to the company, in 2005, Ford began the “Way Forward” restructuring plan, which proclaimed that “Culture eats strategy for breakfast.”⁵⁶ For years, though, the culture of the US auto industry was one of careerism and complacency, which “poisons a company’s ability to design a culture focused on the outside world.”⁵⁷ With a career

53 Vlastic, Bill and Bunkley, Nick. “General Motors, Driven to the Brink.” *The New York Times*. 26 October 2008. Web. <http://www.nytimes.com/2008/10/26/business/26jane.html?_r=1>

54 Lareau, Jamie. “Ford CEO Alan Mulally: Industry leader of the year.”

55 Armitage, Ian. “Ford CEO Alan Mulally: The turnaround specialist.”

56 Hughes and Jeanes p.81

57 Hughes and Jeanes p.94

outside of the auto industry as an aeronautical engineer and executive at Boeing, Mulally certainly brought a different culture with him when he came to Ford. When he was asked how he would transform something as complicated as a car company, he replied that “An automobile has about 10,000 moving parts, right? An airplane has two million, and it has to stay up in the air.”⁵⁸ Mulally was not simply hired from outside the industry for the sake of being from outside the industry, as seemed to be the case with GM’s Ed Whitacre. Mulally was already proven to be both a skilled executive and a successful turnaround artist.

Meanwhile, it still seems that GM is unable to decide on a single executive to complete its recovery. Ed Whitacre was CEO of GM during most of the company’s turnaround, and to his credit, he did a relatively good job of implementing fast change, regardless of how broad or deep it was. Karl Strackle, vice president of global vehicle engineering, noted in June 2010 that “Ed and the whole executive team are making very quick decisions these days.”⁵⁹ This was most evident in vehicle development, where Whitacre managed to cut down the time to decide whether to build a new vehicle concept from about half a year to a matter of days.⁶⁰

Despite his accelerated decision-making in vehicle development, Whitacre nonetheless lacked the background of Mulally. While Mulally had already helped rescue one manufacturer and was experienced in exactly the same type of corporate restructuring that Ford and GM both needed, Whitacre possessed a different and less applicable skill set. The former CEO of AT&T was “the telecommunications industry’s best-known deal maker,” and over the course of ten

58 Kiley, David. “The New Heat on Ford.” *Bloomberg Businessweek*. 4 June 2007.
<http://www.businessweek.com/magazine/content/07_23/b4037036.htm>

59 Ibid.

60 Barkholz, David. “Whitacre got a bureaucratic company to move quickly—now new boss Akerson needs to create a vision.” *Automotive News*. 16 August 2010.
<<http://www.autonews.com/article/20100816/OEM02/308169963/1178#ixzz0wpqoCODS>>

years he oversaw seven large acquisitions.⁶¹ For a company like GM, which was already had acquired too many brands for its own good, Whitacre's forte was not as well-suited to a path breaking change in culture and product, even if he managed to speed things up. Peter D. Lorenzo of *Autoextremist* notes that

The differences between Mulally – an engineer who was intimately involved in the intricacies of leading a multifaceted team in the mass production of highly complex machines at Boeing – and Whitacre – a corporate bureaucrat enamored with the “art of the deal” – are so pronounced that any comparisons are simply misguided and wildly inappropriate.⁶²

Even if Lorenzo's criticism is a bit hyperbolic, it is clear that these were two different executives who led different types of turnarounds.

More importantly, Whitacre's tenure at the company was not long enough to continue to lead GM to success. After Richard Wagoner's nine-year stay at GM, the company has seen four CEOs in seventeen months, only ten of which were led by Whitacre. While it is important to have competent leadership at the top of a company, it is also important to have a consistent leader with a vision, and GM has had more than enough opportunities to find the right person. Experts in human resources note that CEOs will usually take two years to form a team and learn from initial mistakes, hit their prime in their fifth year, and continue to produce through the tenth

61 Snyder, Jesse. “Ex-AT&T boss Whitacre to be chairman of ‘New GM.’” *Automotive News*. 9 June 2009. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20090609/OEM02/306099897#ixzz0rhC3tAVT>>

62 De Lorenzo, Peter M. “A disastrous move for General Motors.” *The Autoextremist*. 27 Jan. 2010. <<http://www.autoextremist.com/current/2010/1/25/the-autoextremist.html>>

year.⁶³ Whitacre had 44 years to turn AT&T into a successful company, and it would be unreasonable to expect the same kind of results from his ten months at GM. Now GM has tapped the 61-year-old Daniel Akerson as its next CEO, and he is “expected to serve two to four years, allowing GM executives ample time to prove themselves.”⁶⁴ Unfortunately, two to four years will not allow Akerson time to reach his peak productivity as a CEO, but it will allow his subordinates time to fight for a promotion instead of for the good of the company.

Still, Wagoner demonstrated that all CEOs will not necessarily produce much over the course of nine years, but recently GM has only kept CEOs long enough to allow them to make a few mistakes and rearrange teams. This is not unique to GM, as the average CEO tenure is two to three years, and “it is not a winning strategy, but we watch it played out every day.”⁶⁵ Though Akerson has experience in overseeing turnarounds from his private equity firm, the Carlyle Group, he may not stay long at GM. A GM spokeswoman said that it was unclear if Akerson would even move to Detroit,⁶⁶ which is troubling given that Whitacre also never moved from his home in Texas.

GM’s board knew very well that Whitacre would not stay at the company long. Steve Rattner, the Obama administration’s top auto adviser, commented that Whitacre was doing the job as a public service and “didn’t want to be CEO or chairman. I don’t think he wants to do this

63 Hughes and Jeanes p.165

64Thompson, Chrissie. “GM develops candidates for next change at top, Reuss and Liddell seen as in-house front-runners.” *Automotive News*. 14 Aug. 2010. Web.
<<http://www.freep.com/article/20100814/BUSINESS01/8140313/1331/Business01/GM-develops-candidates-for-next-change-at-top#ixzz0wmQWdDNs>>

65 Hughes and Jeanes p.165

66 Thompson, Chrissie and Gardner, Greg. “Next GM CEO Dan Akerson is what company thinks Wall Street wants: a hard nosed financial guru.” *Detroit Free Press*. 13 August 2010. Web.
<<http://www.freep.com/apps/pbcs.dll/article?AID=/20100813/BUSINESS01/8130321/1331/Dan-Akerson-to-be-CEO-at-GM&template=fullarticle#ixzz0wWfWBIM>>

one day longer than he has to.”⁶⁷ Now, GM has continued to make very short-sighted decisions. The company’s board of directors made the decision because “there wasn’t time for an outside search,”⁶⁸ and because GM’s board believed that Akerson was the type of CEO that Wall Street investors wanted for the company’s IPO, which seems to indicate that Akerson’s affect on the long-term fortune of the company was a secondary consideration. Even if Akerson, an executive with the same sort of financial background as the underwhelming Wagoner, has the skills to help GM adapt in the coming years, it does not appear that GM’s board is capable of breaking with the sort of short-term decision making that has played a major role in the implosion of the US auto industry.

While GM’s short-sighted culture will be a problem for the company in the long term, cooperation and transparency were both at the core of the culture that Mulally encouraged at Boeing and instilled in Ford. These values had been instrumental to his work at Boeing since he began development of the 777 in 1990. As chief engineer and later vice president and general manager of the development of the Boeing 777, Mulally insisted that everyone involved in the project adhere to his mantra of “Working Together,” which “went far beyond suppliers... Engineers and production people no longer worked in isolation. They were put on teams to ensure that the 777’s design was one that lent itself to efficient manufacturing, too.”⁶⁹ This practice was echoed in Mulally’s new strategy at Ford. While Bill Ford’s “Moving Forward”

67 Shepardson, David and the Detroit News Washington Bureau. “Fritz Henderson ‘never had a chance’ as GM CEO: Longtime GM staffer and short-term CEO moving on after tumultuous tenure.” *The Detroit News*. 17 June 2010. <<http://detnews.com/article/20100617/AUTO01/6170335/Fritz-Henderson--never-had-a-chance--as-GM-CEO#ixzz0rh8uomG4>>

68 Bloomberg. “GM board, seeking to boost IPO, pressed Whitacre to either go or stay for years.” *Automotive News*. 12 August 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100812/OEM02/100819940/1178#ixzz0wUUUnS Xud>>

69 Thompson, Chrissie. “GM develops candidates for next change at top...”

plan of 2005 emphasized culture as a part of strategy, Mulally's "One Ford" plan actually brought a meaningful culture to underpin strategy. "One Ford" streamlined supplier networks and created a matched-pairs system, which utilizes teams of employees in both product development and purchasing.⁷⁰ The system has afforded Ford very open communication with its suppliers and helped the company to react more quickly to changing market conditions.

In this way, Mulally implemented a culture based on teamwork and communication. Hughes and Jeanes define culture as "who we are and how we do things,"⁷¹ and by fundamentally changing how Ford did things, Mulally transformed the company's culture. At Boeing, Mulally's "zeal for management—the relentless focus on planning, production, and embracing everyone as a team member—has gone well beyond the disciplines of lean manufacturing and continuous product improvement."⁷² Simply put, Mulally is the antithesis of the combative relationship among brand divisions and also between labor and management that characterized the US auto industry for years.

In years past, this relationship worked directly against the quality of the final product. In his memoir of working as a foreman at a Ford plant in the '70s and '80s, Robert Dewar describes Ford's attempt to solicit suggestions from its employees for how the company could improve production, known as the "Let's Talk" program. While the program was ostensibly a good idea, the culture at the company prevented it from working as planned. Dewar observed his superiors categorically reject their employees' suggestions because the managers were afraid of losing

70 Pope, Byron. "One Ford Strategy Streamlines Purchasing Operations." *Ward's AutoWorld*. 1 July, 2008. Web. <http://wardsautoworld.com/ar/auto_one_ford_strategy/>

71 Hughes and Jeanes p.94

72 Mecham, Michael and Velocci, Anthony Jr. "Alan R. Mulally is *Aviation Week and Space Technology's* Person of the Year." *Aviation Week*. 31 December 2006. <http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=awst&id=news/aw010107p1.xml>

their jobs by admitting that their operation was underperforming. Worse still, the managers knew that more efficient processes would result in job elimination, which would anger the UAW, and, consequently, the superiors who had to deal with union relations.⁷³

Today, Mulally encourages people to be truthful and forward with their problems by insisting that they not feel threatened for pointing out problems. He uses a system of red, yellow, and green cards to allow his managers to symbolize the level of severity of the issues that they are dealing with, even if the managers themselves are at fault. Mulally says that he wants his people to think that “I’m not the problem. I’ve got a problem... You have to make it safe to be ‘red’ or ‘yellow.’ The minute you intimidate somebody, [or] make it personal, then what color is it going to be next week? Green.”⁷⁴ This is troublesome because when problems are “Green,” individuals pretend that the problems do not exist and go right on producing inferior results, as Dewar describes.

At the Ford transmission plant in Sharonville, Ohio that the author worked at, foremen would simply assemble transmissions from defective components instead of falling short of their daily production quota. Dewar describes “watching the birth of 375 defective Ford vehicles”⁷⁵ when his boss ordered him to build torque converters with turbines that had been rejected by quality control. If a foreman missed his daily quota, his superiors would berate him. As a result of unresolved quality problems, foremen produced inferior transmissions that were ultimately recalled. Though this culture had begun to change at both Ford and other companies before Mulally came to the company, eradicating the type of practices that Dewar describes were a

73 Dewar, Robert J. *A Savage Factory: An Eyewitness Account of the Auto Industry's Self-Destruction*. Bloomington, IN: Authorhouse, 2009. Print. p.194-195

74 Mecham, Michael and Velocci, Anthony Jr. “Alan R. Mulally is *Aviation Week and Space Technology's* Person of the Year.”

75 Dewar p.64-65

priority for the new CEO. At Boeing, when one of Mulally's managers on the hugely successful 777 project ran over budget and behind schedule, he admitted that "We probably deserved to be roughed up a bit," but instead, Mulally "didn't beat [him] up. He was appreciative of my candor and incredibly encouraging."⁷⁶ Mulally's multicolored card program, tacky as it might sound, is just one example of how he attempted to bring this winning culture to Ford.

In contrast, GM has still demonstrated confusion about what its culture is and what sort of company it wants to be. In early June 2010, a leaked memo revealed that GM wanted to discourage use of the nickname "Chevy" in favor of the full name "Chevrolet." The public reacted with intense criticism, and GM's response was immediate and apologetic. A public statement explained that "In global markets we are establishing a significant presence for Chevrolet and need to move toward a consistent brand name for advertising and marketing purposes. The memo in question was one step in that process."⁷⁷ While the original memo was never meant to be public, it still represents a mishandling of an integral piece of brand identity at GM. One of GM's strengths has been in international markets, and while the company would do well to work on a consolidated strategy, as Ford has, it should not do so by diluting its brand in the US.

Ford's July 2010 release of the redesigned Explorer, the company has again shown that it is committed to a culture that is focused on building a strong brand. Decades ago, marketing expert Robert Prentice identified franchise building approaches to promoting a product, such as demonstrations, and franchise destroying approaches to promoting a product, such as discounting.⁷⁸ For years the domestic auto industry undermined the perceived value of its

⁷⁶ Mecham, Michael and Velocci, Anthony Jr.

⁷⁷ Chang, Richard S. "Backtracking, G.M. Says Please, Call it a Chevy." *The New York Times*. 10 June 2010. <<http://www.nytimes.com/2010/06/11/automobiles/11CHEVY.html>>

⁷⁸ Hughes and Jeanes p.51

products with deep discounts such as GM's Employee Discount Plan. With the July 2010 release of the new Ford Explorer, though, Ford has taken a risk that could redefine how cars are priced.

1.3d Products

The new Explorer is a prime example of how Mulally and his company have executed an excellent product portfolio, the fourth condition in the University of Michigan study. In June, Ford was the highest ranked mainstream auto brand in J.D. Power and Associates' well known Initial Quality Study.⁷⁹ The study measures the average number of design or defect complaints that consumers have in the first 90 days of owning a vehicle. GM and Chrysler also made large improvements in this study, and as a group the domestic automakers surpassed imports for the first time ever since J.D. Power created this study. Ford and GM both had the top models in three different segments.

Furthermore, in the Initial Quality Study for individual models, Ford's Focus held the top spot in the compact car segment, an area in which domestic manufacturers have been conspicuously lacking for years. Meanwhile, GM's best models were in more traditionally American segments, including SUVs and pickup trucks. A lack of quality small, efficient cars has been cited many times as the downfall of American automakers in tough economic times and during periods of high gas prices.⁸⁰ Ford's improvement in the small car segment is further evidence of how the company has managed risk by developing a more complete product portfolio.

79 Gopwani, Jewel. "In first, Detroit 3 tops import brands in quality. Ford leads the way as the No. 1 mainstream auto brand." *Detroit Free Press*. 17 June 2010. <<http://www.freep.com/article/20100617/BUSINESS/01/100617048/1318/In-first-Detroit-3-tops-import-brands-in-quality>>

80 Ingrassia, *Crash Course* pp.45-63: "Crummy Cars and CAFE Society."

At the same time, while GM's industry-leading SUVs are laudable, they are all based on the bulky GMT900 platform that the company developed in 2005 in the midst of rising gas prices. The similarities between the Chevy Tahoe/Cadillac Escalade SUVs and Chevy Avalanche/GMC Sierra are not nearly as severe as GM's badge engineering has been in the past, yet the company's best models are still in competing segments. The company's reliance on and investment in large SUVs represents a strategy that is risky both because it is focused on one type of vehicle and risky because sales of that vehicle are vulnerable to oil price swings.

Ford has attempted to remedy the same vulnerabilities in its bestselling SUV, and the new Explorer shows how Ford has managed its risk and completed its product portfolio by extending the small car philosophy up to its larger vehicles. This represents a continued attempt to correct "a series of misalignments between the market and Detroit's product portfolio, especially with respect to fuel economy."⁸¹ Manufacturers and industry observers have long recognized that improved fuel economy will require significant investments in terms of research and development, which may be risky in that consumers will not necessarily prefer more efficient cars in the future, especially if gas prices decrease. Now, Ford is hoping that its consumers will also appreciate the greater cost to manufacturing a more efficient SUV by selling the four cylinder Explorer at a higher price than the six-cylinder. Jim Farley, Ford's head of global sales and marketing, stated that "What's more important than the number we sell is that people see the value and that they're willing to buy the better, more highly equipped versions. That's the key for us."⁸² Rather than an instance of misguided pricing, the marketing of the new Explorer is an

81 McManus, Walter, Ph.D., and Rob Kleinbaum, Ph.D. "Fixing Detroit: How Far, How Fast, How Fuel Efficient."

University of Michigan Transportation Research Institute: JSTOR. June 2009.

82 Bloomberg. "Ford to ask buyers to pay more for smaller engine in new Explorer." *Automotive News*. 26 June 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100726/OEM/100729911/1424#ixz0uo0vIZMF>>

example of how Ford is selling vehicles based on value, rather than on discounts, as American manufacturers have done in the past.

Unfortunately, the last time GM implemented such a strategy was with the 2004 Pontiac GTO, in which a superior six-speed manual transmission commanded a \$695 markup over the standard four-speed automatic, even though this was inconsistent with the conventional practice of charging less for a “standard,” or manual, transmission.⁸³ This made sense in a muscle car, which would be expected to attract more performance-oriented buyers. Unfortunately, despite its performance bargain and innovative pricing, the GTO and the entire Pontiac brand were stunning examples of GM’s failed attempts at badge engineering.⁸⁴

In moving from badge engineered products to more valuable vehicles, a transformed product portfolio was inseparable from a transformed culture. If culture is “who we are and how we do things.” Then Hughes and Jeanes believe that “Product is the ‘you’ that the world sees.”⁸⁵ To that end, Ford is attempting to present the world with a more consistent picture of itself, and in the meantime saving a lot of money with the globally integrated “One Ford” strategy. To this end, Ford has brought the subcompact Fiesta back to the U.S. market, albeit not without compromises. A recent *Car and Driver* review found that the car lacked the level of performance of the European Fiesta even though it was very similar overall.⁸⁶ Furthermore, the Fiesta will not be offered with a diesel engine in the U.S., but this appears to be more a

83 Robinson, Aaron. “2004 Pontiac GTO- Road Test: Lusty performance disguised in a phone-company fleet car.” *Car and Driver*. December 2003. <http://www.caranddriver.com/reviews/car/03q4/2004_pontiac_gto-road_test>

84 Hughes and Jeanes p.104-106

85 Hughes and Jeanes p.111

86 Swan, Tony. “2011 Ford Fiesta SEL – Mini Test Road Test.” *Car and Driver*. August 2010. p.122-123. Print.

consequence of how federal taxes on diesel fuel affect American consumers' tastes and preferences.

Meanwhile, GM's only subcompact is tepid Chevrolet Aveo, a rebadged Daewoo. *Automobile* magazine describes the car as having "a driving experience that places the Aveo5 at least five years behind its competitors in terms of refinement"⁸⁷ as of 2009. The highly anticipated Chevrolet Cruze compact is still months off. Once it debuts, GM plans to sell the car alongside the Chevrolet Cobalt for at least a few years.⁸⁸ After years of brand and model redundancy, it seems absurd that Chevrolet would still decide to sell two competing models at the same time, especially when the Cruze is underpinned by a newer, lower-cost version of the Cobalt's architecture.⁸⁹ This is an example of one of the steps that GM has still not taken to reduce redundant costs.

For years, the company's proverbial light at the end of the tunnel has been the Chevy Volt Extended-Range Electric Vehicle (E-REV). The Volt has become a halo car for Chevrolet, aimed at creating hype and improving the company's image. Although GM touted the car when it was applying for a government loan, "despite all the hype and hope heaped on the Volt, Rattner and Bloom found it simply irrelevant to saving General Motors."⁹⁰ However, it is very likely that the first generation of the car will not generate any profit for GM, even though the car is significantly more expensive than its only competitor, the Nissan Leaf.⁹¹ Though GM's

⁸⁷Tingwall, Eric. "Reviews: 2009 Chevy Aveo5." *Automobile Magazine*. <http://www.automobilemag.com/reviews/driven/0808_2009_chevy_aveo5_subcompact_hatchback_review/powertrain.html>

⁸⁸ Quigora, Tony. "Chevy's New Small Car: Chevy's new sipper." *Car and Driver*. September 2008. <http://www.caranddriver.com/news/car/08q3/chevy_s_new_small_car-car_news>

⁸⁹ Ibid.

⁹⁰ Ingrassia p.238

⁹¹ Staff and wire reports. "GM to price Chevy Volt EV at about \$40,000." *Automotive News*. 27 July 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100727/OEM/100729899/1186#ixzz0utRXKBgV>>

imminent release of an electric car is admirable, it seems that the company has bet too much on a product that will not generate any profit. Hopefully, though, the Volt will pay off in the longer run by establishing GM as a forerunner in the race to build cars that use alternative fuels. Such a reputation would be a big improvement from the company's Flex Fuel vehicles, which were for years "a running joke in Detroit, as carmakers made them only to collect bogus credits that would let them off easy on fuel-economy standards."⁹² Many of the vehicles were SUVs, and their drivers often did not even realize that they were capable of running on heavily subsidized ethanol.

On the other hand, it is true that it may take a few years for electric cars to become profitable because of the infrastructure necessary to support them. Yet with its supplementary gasoline engine, the Volt does not actually require GM to create any infrastructure. Thus, in terms of fueling networks, it seems to be more of a glorified hybrid vehicle, despite GM's persistent claims to the contrary. In this category, Ford's Fusion Hybrid is currently a more realistic and much more profitable offering. The car is the most acclaimed sedan-based hybrid on the market. It has won a raft of awards from the automotive media, including the 2010 *Motor Trend* Car of the Year,⁹³ a spot on *Car and Driver's* 2010 10Best Cars list,⁹⁴ and recognition as one of ten of *Automobile* magazine's 2010 Automotive All-Stars.⁹⁵

92 Carson and Vaitheeswaran, p.250

93 Stone, Matt. "2010 Motor Trend Car of the Year: Ford Fusion." *Motor Trend*. Nov. 2009. Web.
<http://www.motortrend.com/oftheyear/car/112_1001_2010_motor_trend_car_of_the_year_ford_fusion/index.html>

94 Editorial. "2010 10Best Cars." *Car and Driver*. Jan. 2010. Web.
<http://www.caranddriver.com/features/09q4/2010_10best_cars-10best_cars>

95Cumberford, Robert. "2010 Automobile All-Stars." *Automobile Magazine*. Jan. 2010
<http://www.automobilemag.com/features/awards/1002_2010_automobile_all_stars/2010_ford_fusion_hybrid.html>

The true rival to the Chevrolet Volt, though, is the Nissan Leaf. While GM has been dreaming about the success of the Volt, Nissan has been lobbying to help create charging stations that will cut the 20 hour charging time of the car down to 8 hours.⁹⁶ Nissan has targeted locales such as Raleigh, North Carolina to educate building departments, simplify regulations, encourage investment in public charging stations, and promote state and city-level incentives for electric vehicles. In doing so, Nissan's efforts to promote electronic infrastructure have far surpassed those of GM, Ford, and Daimler AG.⁹⁷ If Nissan succeeds in creating sufficient infrastructure and instilling confidence in drivers that their Leafs will meet their needs for range, the lower MSRP of the Leaf will nullify the only advantage of the Chevy Volt: the Volt's backup gasoline engine. More importantly, if Nissan's infrastructure is proprietary, the company could create a fuel station monopoly of sorts.

All of these changes products show some of the superior improvements that Ford has made to its product portfolio thus far, but one larger and perhaps even more important aspect of these products is the number of portfolios that each company carries. Before GM sought to reduce the number of nameplates that it was selling, "Multiple brands, overlapping brands, and no real global brands portend[ed] a dark future for GM."⁹⁸ In order to not just to save money on marketing and manufacturing, but to make sure that each brand could offer a distinct image and promise so as not to overlap with other brands, GM ought to have eliminated all of its brands but Chevrolet, its core nameplate, and Cadillac, its most successful luxury division. However, then-CEO Fritz Henderson defended GMC because its chrome covered versions of Chevrolet models

96 Ramsey, Mike. "Charge Up and Go? First Ask City Hall." *The Wall Street Journal*. 12 July 2010. New York, New York. p.B1-B2.

97 Ibid.

98 Hughes and Jeanes p.236

were “extremely profitable” and because “It wouldn’t make good business sense to try to collapse that into Chevrolet.”⁹⁹ Likewise, the company decided to retain Buick because of the brand’s extremely rapid growth in China, regardless of its image in the US.

This decision actually makes much more sense than the fractured state of GM’s international divisions, including the Vauxhall, Opel, Holden, and Daewoo brands. With its nearly autonomous international arms and somewhat redundant remaining American brands, GM seems to have come to an unhappy compromise between eliminating poorly defined nameplates and realizing efficiencies between its remaining brands. Under CEO Roger Smith, this practice of destroying the independent operation and identity of what should have been separate divisions hurt the company and diluted the value of the core brand, Chevrolet.¹⁰⁰ Today, GM ought to integrate its international brands while eliminating needless brands in the US. This will be important as GM seeks to increase its international market share and streamline its domestic operations.

In regards to the brand desirability eroded by brand engineering, Ford has also managed to create more appealing overall brands than its domestic and much of its international competition. In both the second and third quarter of 2010, Ford was rated as the most desirable brand in the Kelley Blue Book’s brand watch study.¹⁰¹ In the J.D. Power and Associates APEAL (Automotive Performance, Execution, and Layout) study, all three domestic brands outstripped their imported competition for the first time, but Ford and Lincoln in particular were the best performers. Lincoln outperformed both of GM’s luxury divisions, Buick and Cadillac, and Ford ranked higher than both Chevrolet and GMC. However, Ford’s Mercury brand lagged behind all

⁹⁹ Ingrassia p.266

¹⁰⁰ Hughes and Jeanes p.28

¹⁰¹ *Free Press* Staff Reporters. “Ford rated 1st in brand-watch study.” *The Detroit Free Press*. 15 August 2010.

of these nameplates, and appropriately, Ford has already decided to eliminate the irrelevant Mercury brand in order to redirect its resources to continue improving Ford and Lincoln. While the Initial Quality Study is an industry benchmark measuring vehicle problems within the first 90 days of ownership, the APEAL study measures owner satisfaction within the first 90 days of ownership. The former study may be interpreted as a measure of the physical quality of the product, while the latter represents consumer desirability and is thus a more accurate measure of the intangible value of a brand. The study notes that a higher score in the study has been historically shown to “generate faster sales, higher profit margins, and less need for cash incentives.”¹⁰² To be sure, Ford has already posted double the profit of GM and lower reliance on incentives.

II. The near future

2.1 Temporary Relief

Despite these beneficial changes, many of the same problems that precipitated crisis in the US auto industry remain, while several of the causes of the current recovery are untenable or temporary boosts to the industry. Still, it seems that GM is more vulnerable than Ford will be if these temporary boosts collapse.

Recently, J.D. Power and Associates noted that domestic automakers were breaking their habit of offering huge discounts to sell cars. According to one of the company’s analysts, though, “If we see a continued stall in the recovery, the temptation will be there to jump-start things.”¹⁰³ But even without a stall in its recovery, GM increased its U.S. customer discounts by

102 J.D. Power and Associates. “2010 Initial Quality Study Results.” <<http://www.jdpower.com/autos/articles/2010-Initial-Quality-Study-Results>>

103 Bloomberg. “Light vehicle sales may stall in ‘tortoise-like’ U.S. recovery.” 20 June 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100630/RETAIL01/100639991/1448#ixzz0sPuuyKz>>

7% per vehicle in the second quarter in 2010, or \$3,624 per vehicle. Of course, this will serve to perpetuate problems with the perceived value of GM vehicles, and though “Pricing will always play a role... if you live on price, you will fast become a generic that can easily be substituted for a lower-price alternative.”¹⁰⁴ Considering the low-price alternatives that GM will compete with in overseas markets and the cheaper cars that may be coming to the U.S. from India and China, discounting is still not a good strategy, and it is discouraging that GM has already started to slip back into the practices that culminated in its bankruptcy.

Ford and GM seem to have hired highly competent executives after years of mismanagement, as evidenced by Ford’s profits under Alan Mulally and GM’s early repayment of TARP funds under Ed Whitacre. Peter DeLorenzo of the internet magazine *Autoextremist.com* notes that “GM might just have the best team in place that it has had in years, maybe even decades.”¹⁰⁵ Yet after years of ineffectual management, the predecessors of GM’s current team did not set an extremely high standard for comparison for today’s team, which will continue be challenged by an increasingly confrontational auto union and the possibility of another economic downturn, as well as the temptation to brand engineer and offer large discounts to sell cars. Should the company fail to sell cars or stock in its IPO, it will be tempted to continue its executive churn regardless of whether it has finally found a competent executive team or not. Already it seems that Akerson may be yet another temporary CEO given the GM board’s shallow search and hasty decision to hire Akerson.

Another sign that the domestic auto industry may return to business as usual, or its usual insufficiency of business, is the attitude of the new leadership of the UAW. Even as he

104 Hughes and Jeanes p.171

105 De Lorenzo, Peter M. “Akerson’s ‘to do’ list revolves around two key points, plus one.” *The Autoextremist*. 18 August 2010. Web. <<http://www.autoextremist.com/current/?currentPage=2>>

acknowledges that, “In my view of the world, Ron [Gettelfinger] really saved the auto industry and saved the UAW,”¹⁰⁶ new UAW president Bob King has promised to fight to win back the very same concessions that helped domestic automakers return to health.¹⁰⁷ King aims to make the union just as powerful as it was in the past, with 70-80% membership in the automotive, aerospace, and agricultural sectors. He plans increase his numbers by gaining membership in foreign auto plants and “by saying no to the bosses.”¹⁰⁸ At the same time that the management of the Detroit Three has improved immensely, along with the health of their companies, the union has renewed its efforts to essentially prevent management from doing its job. Also, although the unions claim responsibility for Ford’s industry-topping quality rankings, this jump in quality seems to be only a blip on a long history of an inverse relationship between quality and production levels.¹⁰⁹ While labor disputes are by no means one of the largest problems for industry productivity,¹¹⁰ they will nonetheless create difficulties for manufacturers that are already struggling.

A more critical issue in the labor force of the auto industry is the coming shift toward high-skill, white collar work in manufacturing. Unfortunately, even industries outside of autos are finding a shortage of this type of labor as there is a trend towards white-collar “knowledge work.” Even after shedding 228,000 jobs in the last two years, America’s auto industry is ready to add 15,000 jobs in 2010. Even if the industry needed as many as 100,000 more jobs per year

106 Barkholz, David. “Gettelfinger’s legacy? King says he saved the Detroit 3.” *Automotive News*. 14 June 2010. <http://www.autonews.com/article/20100614/BLOG06/100619936/-1#ixzz0r16qU3Gx>

107 Zerilli, Ursula. “Import dealers call UAW’s drive to picket Toyota stores ‘inflammatory.’” *Automotive News*. 18 June 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100618/RETAIL07/19848/1147>>

108 Ibid.

109 Dewar, Robert J.

110 Reich, R.B. *The Work of Nations: Preparing Ourselves for 21st Century Capitalism*, New York: Vintage Books. 1992

from 2011 to 2013 if the economy continued to recover, it would still not be able to fill all of those positions because so many people in the glut of applicants are low-skilled workers who lack computer skills and the ability to work with less supervision than was needed in the past.¹¹¹

C.A.R. researchers note that as cars continue to advance technologically, perhaps at an accelerating rate, the necessary technology “is quite sophisticated and changing rapidly” at state-of-the-art factories.¹¹² Unfortunately, the labor force at large is not well matched to the large number of skilled positions that the industry will need, which will result in serious structural unemployment.

Labor relations and shortages are not the only relationships troubling automakers as they attempt to reduce costs and become leaner companies. GM and Chrysler in particular have had a great deal of trouble eliminating dealerships. Even after binding dealer arbitration hearings, dealers are making appeals in light of federal audits of GM and Chrysler.¹¹³ Still, with only one brand to eliminate- Mercury- Ford managed to avoid much of this type of trouble.

Yet even the remaining Ford brands’ performances are not quite as impressive as they seem. A closer look at the numbers shows that “the variation between the best and worst performer is actually quite small. Porsche topped the study with 0.83 problems per 100 vehicles, which boils down .83 to less than one problem per vehicle. Land Rover came in last at 1.70 problem per vehicle, or fewer than 2 problems per vehicle.”¹¹⁴ As Toyota has shown, it is really

111 Carty, Sharon Silke. “Auto industry may see labor shortage; New hires could need different skill set than some predecessors.” *USA Today*. 4 June 2010.

112 Carty, Sharon Silke. “Auto industry may see labor shortage...”

113 Harris, Donna. “Rejected dealers consider congressional action after U.S. audit of GM, Chrysler terminations.” *Automotive News*. 18 July 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100718/RETAIL07/100719869/1400#ixzz0u8bZZwjN>>

114 Gopwani, Jewel. “In first, Detroit 3 tops import brands in quality...”

only a lack of quality that can draw serious attention. Years before the Toyota debacle, Hughes and Jeanes pointed out the convergence of the level of quality of modern cars and noted that “quality is nowhere near the differentiator it once was. Another area of potential brand superiority has been diluted.”¹¹⁵ Thus Ford and GM will need to look for additional ways to convince buyers to purchase their cars.

As for Toyota’s quality problems, they are almost certainly only a temporary help to domestic automakers. Toyota, which, as the world’s largest automaker, holds the second largest portion of US market share after GM,¹¹⁶ has yet to fully recover from its quality issues and tarnished reputation resulting from stuck gas pedals and the resultant unintended acceleration. Indeed, these are the issues that have allowed the domestic manufacturers to outstrip Toyota’s normally stellar quality ratings. Though Toyota’s issues have dragged on, when the company fully recovers, it will still be a bigger threat to domestic companies. Already there are signs that Toyota cars may have been okay all along, including evidence that the crashes linked to unintended acceleration largely involved driver error rather than vehicle malfunction.¹¹⁷

In addition to help from an injured Toyota, the Detroit Three received a huge boost from an overall economic upturn and the release of pent-up demand from the recession. Some buyers simply made purchases that they had been putting off during the recession until the time was right to replace an aging car. A Gallup poll published December 18, 2008 found that 24% of Americans considered buying a car in the prior six months but decided against the purchase mainly for economic and job security concerns.¹¹⁸ Surprisingly, concerns over the future health

115 Hughes and Jeanes p.22

116 Ward’s Automotive Group. “U.S. Total Vehicle Sales Market Share by Company, 1961-2009.”

117 Bloomberg. “Toyota cites driver errors in unintended acceleration cases.” *Automotive News*. 14 July 2010. <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100714/OEM/100719958/1143>

118 Jones, Jeffrey M. “Automaker Woes Not a Major Factor in Car-Buying Decisions: Broader economic concerns

of American car companies was the least influential reason that consumers chose to postpone their purchases, which debunks the primary argument of GM CEO Richard Wagoner for avoiding bankruptcy- that consumers would never buy cars from an automaker in Chapter 11 bankruptcy. In fact, another Gallup poll showed that consumers' desire to buy American cars actually grew as the domestic automakers struggled in March 2009.¹¹⁹ The government was also willing to help struggling automakers in ways that were less direct than an outright bailout. A year ago, in the middle of the recession, generous discounts and the government's cash for clunkers program helped many manufacturers post record levels of satisfaction with U.S. consumers. These programs were in fact thinly disguised subsidies for the industry, and the gains they created have not been sustained.¹²⁰ Whatever the current determinants of demand are, once this pent-up demand has been exhausted, domestic automakers will find it more difficult to move cars.

2.2 International Competition and International Markets

In the 1970s, the arrival of imported vehicles and transplant factories in the US challenged domestic automakers to compete in their home market, which was then the largest in the world by a significant margin. As of 2009, though, China has overtaken the U.S. as the world's largest auto market, and the importance of international manufacturers and consumers continues to grow for American car companies. GM's performance has been strong in China,

more consequential." *Gallup*. 18 Dec. 2008. Web.
<<http://www.gallup.com/poll/113485/Automaker-Woes-Major-Factor-CarBuying-Decisions.aspx>>

119 Saad, Lydia. "'Buy American' Feeling Grows as Automakers Struggle: U.S. cars most favored by older and lower-income Americans." *Gallup*. 4 March 2009. Web. <<http://www.gallup.com/poll/116356/Buy-American-Feeling-Grows-Automakers-Struggle.aspx>>

120 Phillips, Dave. "Auto industry satisfaction is down, but U.S. brands stable." *Automotive News*. 17 August 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100817/RETAIL/100819873/1259#ixzz0wvXBZR2G>>

and this performance remains one of the most promising achievements of the company. Meanwhile, Ford has excelled in Europe, even as sales there decline. Considering these very different markets, GM would do well to focus more on the Chinese market and the cheaper cars that it has sold there, while Ford ought to continue to develop the slightly more expensive small cars better suited to the European and American markets.

In China, GM has partnered with SAIC Motor Corp in a highly successful 13-year partnership. One researcher believes that this joint venture is the most successful one in the entire country's auto industry.¹²¹ GM has the second-most sales of any manufacturer in China, behind Volkswagen AG. Another analyst noted that even though "GM went through a rough time last year, but they never backed away from China... China proves the bulk of their revenue and profits from Asia."¹²² GM's resolve in Asia has been one of the best decisions that the company has made in the last few years, and the company's success there is even more promising than the perennially delayed Chevy Volt. Nonetheless, should GM show a real commitment to alternative energy and apply that commitment to inexpensive mass market vehicles, the company would be years ahead of its competition.

While GM has had great success in China, Ford's international strategy seems to be more focused on Europe, where the Fiesta is the second best-selling car.¹²³ GM's Chinese presence is impressive, but nonetheless, it has probably made it more difficult for the company to create a unified global product line. The American auto market bears far more similarity to the European

121 From staff and wire reports. "GM posts Q2 net income of \$1.3 billion, sales of \$33.2 billion." *Automotive News*. 12 August 2010. Web. <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100812/OEM/100819966/1424#ixzz0wUUY0Rpv>

122 Ibid.

123 Snavely, Brent. "Ford Europe sales dropped 22% in July." *The Detroit Free Press*. 13 August 2010. Web. <<http://www.freep.com/print/article/20100813/BUSINESS0102/100813011/Ford-Europe-sales-dropped-22-in-July>>

market than the Chinese market, which means that Ford can better realize economies of scale by selling similar cars on both continents. Granted, even Ford's European and American Fiesta still have differences, but at least Ford isn't selling the rebadged Daewoos that Chevrolet is offering as Chevrolets and Buicks in China.

In the US, though, both companies seem to be at a disadvantage to their foreign competitors in terms of new technologies. Most auto companies must license their hybrid technology from Toyota and Honda, and Toyota's Prius continues to dominate the hybrid market.¹²⁴ Even in other segments, the Japanese have demonstrated superiority in manufacturing and reliability. Contrary to Detroit's view that Japanese imports sell because of currency engineering, in the mid-1990s, when most Toyota cars sold in America were shipped from Japan, the yen was rising in value relative to the dollar, making Japanese imports relatively more expensive. Also, contrary to the view that there was something inherent in the Japanese labor force that allowed it to build better cars, transplant factories proved that Toyota's management technique, which "emphasizes a learning culture, an eagerness to embrace change..."¹²⁵ were what allowed the Japanese companies to excel. At Toyota, "rather than merely deal[ing] with problems, the company's employees are hardwired to find out the underlying causes and to tackle those."¹²⁶ Today, it is especially evident that Ford is emulating many of these same techniques. On the other hand, GM's executive churn does not seem conducive to a learning culture, nor does its product line demonstrate a real eagerness to change, with the exception of the Volt.

2.3 Interrelated Nature of OEMs

¹²⁴ Carson and Vaitheeswaran p.109

¹²⁵ Carson and Vaitheeswaran p.118

¹²⁶ Ibid.

In the coming years, it is very possible that there will be fewer domestic automakers, and even more likely that the remaining automakers will continue to shrink. Yet even despite the intensifying competition between international and domestic manufacturers, Ford's restructuring plan emphasized that its own fortune, at least in the short term, was tied to the success of its domestic counterparts. The company's plan stated that "Our industry is an interdependent one. We have 80% overlap in supplier networks," as well as shared dealers and maintenance networks.¹²⁷ Ford's statements about the survival of GM and Chrysler were most likely more a show of goodwill than a part of a long-term business plan, as Ford would certainly benefit from being the only domestic automaker in the US, even if the company would be temporarily hurt by damaged supplier networks.

Meanwhile, Chrysler's new CEO, Marchionne, has been predicting consolidation of the auto industry for years. In the wake of the recession, he sees only six surviving carmakers, and foresees that "We're going to end up with one American house, one German of size, one French-Japanese, maybe with an extension in the U.S.; one in Japan; one in China and one other potential European player."¹²⁸ Regardless of his bold prediction, it seems unlikely that Chrysler will be the single remaining American producer. What is more likely for the future of the industry, though, is that as the large carmakers fold, smaller, more fragmented supplier networks will spring up to manufacture the increasingly complicated electronic components of the newer evolutions of automobiles, in a natural, if belated, application of the increasingly specialized global disassembly line.

III. Conclusion

127 Cooney, et al. p.6

128 Buss, Dale. "Fiat CEO Marchionne Has Led an Unlikely Turnaround."

Considering the changes that both Ford and GM have made, it seems that Ford's decision to seek credit in advance of the global financial crisis was more than just a lucky break that allowed the company to avoid a government loan. In view of the unsustainable sources of the current auto industry recovery, it also seems that Ford's decisions will help it to continue to prosper more than GM in the coming years. Furthermore, GM's imminent IPO has begotten another round of shortsighted decisions reflected in another rushed CEO change.

In the future, the auto industry is overdue for a great deal of change in both governmental regulation and in the type of vehicles it produces. Many different types of fuels, some alternative, some even more carbon intensive than petroleum, will play a role. Many different governments, competing producers, and fragmented suppliers will play a role. Within all of this, though, the one constant is the leadership and culture at the automakers themselves, and Ford's leadership has demonstrated both a longer-term view of the industry and a greater level of consistency.

Furthermore, Ford has demonstrated a greater level of brand value, which will be important regardless of how its products change over the years. It has also produced superior small cars, which is very important given the direction that the industry is headed. In the face of a rapidly changing automotive landscape, Ford currently seems more capable of adapting to change and remaining profitable.

Bibliography

- Alterman, Eddie. "Chrysler's Future: Ram Brand." *Car and Driver Blog*. 4 Nov. 2009. Web. 7 Aug. 2010
<http://blog.caranddriver.com/chryslers-future-ram-brand/>
- Armitage, Ian. "Ford CEO Alan Mulally: The turnaround specialist." *Manufacturing Digital*. 7 Mar. 2010. Web.
 <<http://www.manufacturingdigital.com/industry-focus/world-class-operations/ford-ceo-alan-mulally-turnaround-specialist>>
- Ball, Jeffrey and White, Joseph B. "Rising Gasoline Prices Threaten Viability of Biggest SUVs," *The Wall Street Journal*, March 22, 2005
- Barkholz, David. "Gettelfinger's legacy? King says he saved the Detroit 3." *Automotive News*. 14 June 2010.
<http://www.autonews.com/article/20100614/BLOG06/100619936/-1#ixzz0r16qU3Gx>
- Barkholz, David. "Whitacre got a bureaucratic company to move quickly—now new boss Akerson needs to create a vision." *Automotive News*. 16 August 2010.
 <<http://www.autonews.com/article/20100816/OEM02/308169963/1178#ixzz0wpqoCODS>>
- Bloomberg. "Ford to ask buyers to pay more for smaller engine in new Explorer." *Automotive News*. 26 June 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100726/OEM/100729911/1424#ixzz0uo0vlZMF>>
- Bloomberg. "Light vehicle sales may stall in 'tortoise-like' U.S. recovery." 20 June 2010. Web.
 <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100630/RETAIL01/100639991/1448#ixzz0sPuuysKz>>
- Bloomberg. "Toyota cites driver errors in unintended acceleration cases." *Automotive News*. 14 July 2010.
<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100714/OEM/100719958/1143>
- Bloomberg. "GM board, seeking to boost IPO, pressed Whitacre to either go or stay for years." *Automotive News*. 12 August 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100812/OEM02/100819940/1178#ixzz0wUUunsXud>>
- Bunkley, Nick. "GM Posts Profit as Sales Rise 40 Percent." *The New York Times*, 17 May 2010.
 <<http://www.nytimes.com/2010/05/18/business/18auto.html>>
- Buss, Dale. "Fiat CEO Marchionne Has Led an Unlikely Turnaround." *Edmunds AutoObserver*. 21 January 2009.
 <<http://www.autoobserver.com/2009/01/fiat-ceo-marchionne-has-led-an-unlikely-turnaround.html>>
- Chang, Richard S. "Backtracking, G.M. Says Please, Call it a Chevy." *The New York Times*. 10 June 2010. <<http://www.nytimes.com/2010/06/11/automobiles/11CHEVY.html>>
- Carson, Iain, and Vija Vaitheeswaran. *Zoom: The Global Race to Fuel the Car of the Future*. New York: Hachette Book Group USA, 2007. Print. p.21
- Carty, Sharon Silke. "Auto industry may see labor shortage; New hires could need different skill set than some predecessors." *USA Today*. 4 June 2010.
- Center for Automotive Research. C.A.R. research memorandum. "Fixing Detroit: How Far, How Fast, How Fuel Efficient." By Walter McManus, Ph.D. and Rob Kleinbaum, Ph.D. Ann Arbor, Michigan: June 2009. *UMTRI*. Web. 10 Jun. 2010. <<http://www.umtri.umich.edu/content/UMTRI.Fixing.Detroit.Final.pdf>>
- Cole, David, et al, *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
- Congressional Research Service. CRS Reports for Congress. *U.S. Motor Vehicle Industry: Federal Financial Assistance and Restructuring*. By Stephen Cooney, et al. Washington, D.C.: 2009. *GalleryWatch CRS Reports*. Web. 10 Feb. 2010. P.6 <<http://www.fas.org/sgp/crs/misc/R40003.pdf>>
- Cumberford, Robert. "2010 Automobile All-Stars." *Automobile Magazine*. Jan. 2010
 <http://www.automobilemag.com/features/awards/1002_2010_automobile_all_stars/2010_ford_fusion_hybrid.html>
- De Lorenzo, Peter M. "Akerson's 'to do' list revolves around two key points, plus one." *The Autoextremist*. 18 August 2010. Web. <http://www.autoextremist.com/current/?currentPage=2>
- De Lorenzo, Peter M. "A disastrous move for General Motors." *The Autoextremist*. 27 Jan. 2010.
<http://www.autoextremist.com/current/2010/1/25/the-autoextremist.html>

- Dewar, Robert J. *A Savage Factory: An Eyewitness Account of the Auto Industry's Self-Destruction*.
Bloomington, IN: Authorhouse, 2009. Print. p.194-195
- Durbin, Dee-Ann. "Chrysler posts smaller quarterly loss: CEO says the company still has more tough work ahead." *Associated Press*: 9 August 2010. <<http://www.msnbc.msn.com/id/38622721/ns/business-autos/>>
- Editorial. "2010 10Best Cars." *Car and Driver*. Jan. 2010. Web.
http://www.caranddriver.com/features/09q4/2010_10best_cars-10best_cars
- Executive Office of the President. "A Look Back at GM, Chrysler, and the American Auto Industry." 21 April 2010.
- Free Press* Staff Reporters. "Ford rated 1st in brand-watch study." *The Detroit Free Press*. 15 August 2010.
- J.D. Power and Associates. "2010 Initial Quality Study Results." <<http://www.jdpower.com/autos/articles/2010-Initial-Quality-Study-Results>>
- From staff and wire reports. "GM posts Q2 net income of \$1.3 billion, sales of \$33.2 billion." *Automotive News*. 12 August 2010. Web. <http://www.autonews.com/apps/pbcs.dll/article?AID=/20100812/OEM/100819966/1424#ixzz0wUUY0Rpv>
- Gardner, Greg. "Chrysler loses \$197M in first quarter but sees 2010 profit." *USA Today*, 21 April 2010.
<http://www.usatoday.com/money/autos/2010-04-21-chrysler-earnings_N.htm>
- Gardner, Greg. "U.S. automotive brands outpace rivals in new J.D. Power survey." *Detroit Free Press*. 15 July 2010. <<http://www.freep.com/article/20100715/BUSINESS01/100715036/U.S.-automotive-brands-outpace-rivals-in-new-J.D.-Power-survey>>
- Gopwani, Jewel. "In first, Detroit 3 tops import brands in quality. Ford leads the way as the No. 1 mainstream auto brand." *Detroit Free Press*. 17 June 2010.<<http://www.freep.com/article/20100617/BUSINESS01/100617048/1318/In-first-Detroit-3-tops-import-brands-in-quality>>
- Gumbel, Peter. "Chrysler's Sergio Marchionne: The Turnaround Artista." *Time Magazine*. 18 June 2009.
<<http://www.time.com/time/magazine/article/0,9171,1905416,00.html>>
- Harris, Donna. "Rejected dealers consider congressional action after U.S. audit of GM, Chrysler terminations." *Automotive News*. 18 July 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100718/RETAIL07/100719869/1400#ixzz0u8bZZwjN>>
- Hughes, Charlie and Jeanes, William. *Branding Iron: Branding Lessons from the Meltdown of the US Auto Industry*.
Racom Books: Chicago, 2007. Print. p.156
- Ingrassia, Paul. *Crash Course: The American Automobile Industry's Road from Glory to Disaster*. Random House: New York, 2010. Print. p.304
- Johnson, Erik. "Chrysler Announces Dodge Ram Brand, Shuffles Some Executives." *Car and Driver Car News*. 5 Oct. 2009. Web. 7 Aug. 2010. <<http://blog.caranddriver.com/chrysler-announces-dodge-ram-brand-shuffles-some-executives-car-news/>>
- Jones, Alex Taylor III. *Sixty to Zero: An Inside Look at the Collapse of General Motors—and the Detroit Auto Industry*. New Haven: Yale University Press, 2010. Print. p.3
- Jones, Jeffrey M. "Automaker Woes Not a Major Factor in Car-Buying Decisions: Broader economic concerns more consequential." *Gallup*. 18 Dec. 2008. Web.
<http://www.gallup.com/poll/113485/Automaker-Woes-Major-Factor-CarBuying-Decisions.aspx>
- Kiley, David. "The New Heat on Ford." *Bloomberg Businessweek*. 4 June 2007.
<http://www.businessweek.com/magazine/content/07_23/b4037036.htm>
- Krebs, Michelle. "Chrysler Posts First-Quarter Operating Profit." *Edmunds Auto Observer*, 21 April 2010.
<<http://www.autoobserver.com/2010/04/chrysler-posts-first-quarter-operating-profit.html>>
- Lareau, Jamie. "Ford CEO Alan Mulally: Industry leader of the year." *Automotive News*, 12 July 2010.
<<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100712/OEM02/307129983>>
- Lutz, Catherine and Fernandez, Anne. *Carjacked: The Culture of the Automobile and its Effect on Our Lives*.
Palgrave Macmillan: New York, 2010. Print. p.72
- McManus, Walter, Ph.D., and Rob Kleinbaum, Ph.D. "Fixing Detroit: How Far, How Fast, How Fuel Efficient."
University of Michigan Transportation Research Institute: JSTOR. June 2009.
- Mecham, Michael and Velocci, Anthony Jr. "Alan R. Mulally is *Aviation Week and Space Technology's* Person of the Year." *Aviation Week*. 31 December 2006. <http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=awst&id=news/aw010107p1.xml>

- Mitchell, William J.; Borroni-Bird, Christopher E.; and Burns, Lawrence D. *Reinventing the Automobile: Personal Urban Mobility for the 21st Century*. The MIT Press: Cambridge, 2010. Print. p.12
- Phillips, Dave. "Auto industry satisfaction is down, but U.S. brands stable." *Automotive News*. 17 August 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100817/RETAIL/100819873/1259#ixzz0wvXBZR2G>>
- Pope, Byron. "One Ford Strategy Streamlines Purchasing Operations." *Ward's AutoWorld*. 1 July, 2008. Web. <http://wardsautoworld.com/ar/auto_one_ford_strategy/>
- Quigora, Tony. "Chevy's New Small Car: Chevy's new sipper." *Car and Driver*. September 2008. <http://www.caranddriver.com/news/car/08q3/chevy_s_new_small_car-car_news>
- Ramsey, Mike. "Charge Up and Go? First Ask City Hall." *The Wall Street Journal*. 12 July 2010. New York, New York. p.B1-B2.
- Reich, R.B. *The Work of Nations: Preparing Ourselves for 21st Century Capitalism*, New York: Vintage Books. 1992
- Reuters, "Chrysler to have difficulty turning '10 profit, CEO says." *Automotive News*. 23 August 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100823/OEM/100829943/1179>>
- Robinson, Aaron. "2004 Pontiac GTO- Road Test: Lusty performance disguised in a phone-company fleet car." *Car and Driver*. December 2003. <http://www.caranddriver.com/reviews/car/03q4/2004_pontiac_gto-road_test>
- S
- Saad, Lydia. "'Buy American' Feeling Grows as Automakers Struggle: U.S. cars most favored by older and lower-income Americans." *Gallup*. 4 March 2009. Web. <<http://www.gallup.com/poll/116356/Buy-American-Feeling-Grows-Automakers-Struggle.aspx>>
- Shepardson, David and the Detroit News Washington Bureau. "Fritz Henderson 'never had a chance' as GM CEO: Longtime GM staffer and short-term CEO moving on after tumultuous tenure." *The Detroit News*. 17 June 2010. <<http://detnews.com/article/20100617/AUTO01/6170335/Fritz-Henderson--never-had-a-chance--as-GM-CEO#ixzz0rh8uomG4>>
- Snavelly, Brent. "A Company Comparison: Ford results twice GM's \$1.3B quarter." *The Detroit Free Press*, 13 August 2010.
- Snavelly, Brent. "Ford Europe sales dropped 22% in July." *The Detroit Free Press*. 13 August 2010. Web. <<http://www.freep.com/print/article/20100813/BUSINESS0102/100813011/Ford-Europe-sales-dropped-22-in-July>>
- Snyder, Jesse. "Ex-AT&T boss Whitacre to be chairman of 'New GM.'" *Automotive News*. 9 June 2009. <http://www.autonews.com/apps/pbcs.dll/article?AID=/20090609/OEM02/306099897#ixzz0rhC3tAVT>
- Spender, J.C. "Structural adjustments and conflicting recipes in the US auto industry." 2007. p.149
- Staff and wire reports. "GM to price Chevy Volt EV at about \$40,000." *Automotive News*. 27 July 2010. Web. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100727/OEM/100729899/1186#ixzz0utRXKBgV>>
- Stone, Matt. "2010 Motor Trend Car of the Year: Ford Fusion." *Motor Trend*. Nov. 2009. Web. <http://www.motortrend.com/oftheyear/car/112_1001_2010_motor_trend_car_of_the_year_ford_fusion/index.html>
- Swan, Tony. "2011 Ford Fiesta SEL – Mini Test Road Test." *Car and Driver*. August 2010. p.122-123. Print.
- Thompson, Chrissie. "GM develops candidates for next change at top, Reuss and Liddell seen as in-house front-runners." *Automotive News*. 14 Aug. 2010. Web. <<http://www.freep.com/article/20100814/BUSINESS01/8140313/1331/Business01/GM-develops-candidates-for-next-change-at-top#ixzz0wmQWdDNs>>
- Thompson, Chrissie and Gardner, Greg. "Next GM CEO Dan Akerson is what company thinks Wall Street wants: a hard nosed financial guru." *Detroit Free Press*. 13 August 2010. Web. <<http://www.freep.com/apps/pbcs.dll/article?AID=/20100813/BUSINESS01/8130321/1331/Dan-Akerson-to-be-CEO-at-GM&template=fullarticle#ixzz0wWfWBIM>>
- Tingwall, Eric. "Reviews: 2009 Chevy Aveo5." *Automobile Magazine*. <http://www.automobilemag.com/review/s/driven/0808_2009_chevy_aveo5_subcompact_hatchback_review/powertrain.html>
- Vlasic, Bill and Bunkley, Nick. "General Motors, Driven to the Brink." *The New York Times*. 26 October 2008. Web. <http://www.nytimes.com/2008/10/26/business/26jane.html?_r=1>
- Ward's Automotive Group. "U.S. Vehicle Sales, 1931-2009." Penton Media, Inc.,

WardsAuto.com/ReferenceCenter.
Ward's Automotive Group. "U.S. Total Vehicle Sales Market Share by Company, 1961-2009." Penton Media, Inc., WardsAuto.com/ReferenceCenter.
The World Bank, World Development Indicators. "Motor vehicles (per 1,000 people.)"
<<http://data.worldbank.org/indicator/IS.VEH.NVEH.P3>>
Zerilli, Ursula. "Import dealers call UAW's drive to picket Toyota stores 'inflammatory.'" *Automotive News*. 18 June 2010. <<http://www.autonews.com/apps/pbcs.dll/article?AID=/20100618/RETAIL07/19848/1147>>