

Economic Analysis on Experiences of Western Auto Industry to Hubei's Low Carbon Auto Development in the Post Crisis Era

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Abstract

It is expected that by 2020, the saving and new energy car production in Hubei will reach 600 thousand, the predicted sales will reach 500 thousand. As one of the three major automobile bases in China, Green cars, long popular in European countries such as Belgium, has therefore become a key for both the revival and the low carbon development of Hubei's auto industry. Analyzing the green car development in Europe and the history of the US auto's once prosperity, its gradual decline and the latest green development, the paper holds the view that, in the Post Financial Crisis Era, the biggest opportunity for Hubei's auto industry lies in the low carbon development.

Key words: Saving and new energy vehicles; US auto financing; Belgian "green" car plastics; Hubei low carbon development; Post crisis era

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INTRODUCTION

China's auto industry with its big potential has historically surpassed US in car sales and become the world's No.1 car sale and producing economy since 2009. Meanwhile, the US automobile has been under complete depression. This paper analyzes, from economic point of view, how Hubei, as one of the three major automobile bases in China, benefits from both the US auto's past failure and the European green car development's success.

1. RETHINKING EXPERIENCES OF THE ONCE WORLD NO.1 AUTO EMPIRE — US'S LESSONS AS A RESULT OF ITS LONG NEGLIGENCE OF LOW CARBON CAR DEVELOPMENT

1.1 Once World No.1 Car Economy — Past Prosperity of the US Automobile Industry and its Gradual Decline

As the world No.1 economy, the US has also been for a fairly long time the world's largest auto producing and sales market. Its earliest auto development can be traced back to the early 19th century, due to the railway construction, large influx of immigrants, as well as the rapid development of ship-building and shipping industry. In the very year of 1903, Henry Ford set up the world's first large scale automobile production factory, and has also for the first time put the auto production assembly line into production in 1914.

The auto industry has been US's important traditional economic pillar accounting for 4%-5% in its state economy. Many famous world auto brands have also

originated from the US, such as GM, Ford and Chrysler, etc The stunning Ford production assembly line and the General Motors matrix operation system have greatly improved the world auto production efficiency.

Relying on the favorable conditions of iron ore and steel plant nearby, Detroit in Michigan has gradually become a very important automobile base in both the US and worldwide. Detroit — “the automobile capital” used to be the world’s largest automobile manufacturing center. With the headquarters of GM, Ford and Chrysler in it, Detroit has become the synonym of the American cars even 100 years ago.

Yet, mainly because of its long pursuit of big and expensive cars in the past few decades, the US auto industry was in gradual decline especially in the 21st century. First, in 1998, the German Daimler-Benz and the US Chrysler have been merged. Second, having been the world’s second auto company up to 70 years, Ford Motor was surpassed by Japan’s Toyota in 2007. To make matters worse, the US sub-prime crisis broke out in late 2007, the US auto industry was no doubt in a big depression under the 2008 US financial crisis.

The following 2008 global economic crisis arising from the US has made things worse for its auto industry. As the world’s largest car producer and market, the US auto has, in 2008, fallen to its lowest level in the past 27 years in sales, the three Detroit auto big makers have all trapped in deep abyss. Though the US Top Three auto makers have made much effort to restore, all did not work.

Table 1
Fiscal of General Motor 2004 – 2008

(USD billion)			
Year	Income	Yield	Loss
2004	1935	28	
2005	1930		-104
2006	2056		-20
2007	1811		-387
2008	1490		-309

Sources: NetEase auto

Table 2
Fiscal of Ford 2004 – 2008

(USD billion)			
Year	Income	Yield	Loss
2004	1716	35	
2005	1769	14	
2006	1601		-126
2007	1725		-27
2008	1463		-147

Sources: NetEase auto

To the first period of 2009, all the US major car manufacturers’ sales were decreased at least by 36% compared to the same period of the previous year, many auto enterprises fell into bankruptcy and reconstruction. General Motors and Ford were both in heavy losses. Ford’s financial loss in 2008 was USD12 billion higher than that

in 2007. Long been at a loss, Chrysler was getting worse and worse after the termination of its cooperation with Daimler in May 2007. With the Big Three auto companies’ application for bankruptcy protection, it is quite obvious that the US auto industry does not shine any longer.

1.2 Obama’s Loss on the Development of the New and Saving Vehicles

Reflecting bitterly on its past failure, The US government and its auto enterprises have focused their attention to the green car development. They also changed their former strategy of big and expensive car production and released Peel 50 battery-driven mini car instead. The US government has declared its great plan for the new and saving vehicle’s development, namely to sell 1 million Electrical Vehicle by the end of 2015 which is the biggest among all the EV development programs.

The government has also increased related subsidy polices and promised to refund USD 7400 for every single EV car bought. Yet, according to statistics 2011, its actual sale volume was only 17.5 thousand, while the expected sales volume for 2012 is only 35 thousand.

Though, great effort and emphasis have been put into the development of the new and saving vehicles, Obama and his government has encountered many obstacles in the field and has also faced much opposition even in the Congress.

2. EUROPEAN LOW CARBON AUTO DEVELOPMENT SUCCESS — TAKING THE BELGIAN HIGH-TECH RECYCLABLE CAR PLASTIC INDUSTRY AS AN EXAMPLE

2.1 Economic Review of the Belgian High-Tech Recyclable Car Plastic Industry

Global warming has been a major world problem for years and has also become the vital issue of revival for wold economy. As a general rule, the world crisis is most probably accompanied with certain Industrial revolution. The new industrial revolution, namely the development of green card, which has long been popular in European countries such as Belgium, has therefore been regarded as a key for the revival of the world auto industry.

Belgium is among the world’s top car export countries, its high-tech middle and small car enterprises are open both in the structure and operation. They have been engaging for generations in the productions of machine fittings such as car spares. Belgium has been quite strong in car producing and assembling, which is of course closely related with its high-tech green car plastic industry. The green auto plastics have at the same time provided about 15,000 job opportunities for the Belgian. The recyclable green plastic has not only greatly reduced the car’s weight, but has also made the Belgian car

cheaper and safer, improving its car quality and making Belgian car maintenance more convenient. In a sense, the recyclable plastic has indeed brought a real technical revolution to Belgium auto industry.

2.2 Economic Analysis of Auto Industries of Other European Countries

As one of the world major auto economy, European countries have long been paying special attention to the green auto development, among which Belgium can cat as an example. There are altogether 45 countries in Europe, while its majority, especially in EU, are small countries like Belgium, Luxemburg and Ireland. These European countries are small in size yet quite strong especially in international auto trade. Their car products acquire the same high quality and high-tech just as the big countries in the world. In effect, there is no essential technological difference among auto products in European countries.

Generally speaking, in Europe, middle & small enterprises are their economic pillar. Both these small European countries and the small companies have a saying in world economy with their flagship green car products with high technology and equipment.

2.3 Brief Analysis of Auto Industries in Other Countries

Besides the above mentioned lessons and experiences, there are still abundant of successful examples to follow, such as the green auto development in Japan. As one of the most successful country in developing saving and new energy vehicle in current world, Japan's green car industry benefits a lot from its governmental support. A lot of fund, both from the central and local governments, is subsidized to those green car producers and purchasers. Toyota planned to research and designed USD 5,000 ultra-low cost green cars. German and India has also accomplished significantly in the development of saving and new energy cars.

3. ECONOMIC ANALYSIS OF THE US AUTOMOBILE'S FAILURE

Taking an overview of the development of the US auto industry, the 2008 world financial crisis is not the sole reason responsible for its gradual decline.

3.1 Economic Bubble Driven by the US's Second Hand Car Market as a Result of its over Developed Car Financing

The US's second car market is the world's most developed and largest, its car replacement is cheap and convenient. According to statistics, over the past 10 years, the average new car sales of US is 16 million per year, while its second hand car sales have already reached over 40 million, almost 2 to 3 times larger than the sales of its new cars.

US car companies has long been depending too heavily on financial products. As some critics pointed out that the innovation capacity of US Top Three auto manufacturers

in launching financial services has exceeded far more than their innovation ability in the practical economy. With the Top Three's market shares decrease, the profits of the main auto business comes mainly from financial services rather than from the auto productions and sales. 92% Americans purchase cars actually by credits loan and leasing. Consumers' ahead of time consumption and excessive consumption have finally led to the rapid expansion of US auto purchasing. This is subsequently followed by economic bubble in the second hand auto market as a result of over reliance of its over developed car financing.

3.2 Long Negligence of the Current World Trend of the Saving and New Energy Vehicle Development

US auto manufacturers have been too keen on the production of large and luxurious cars. For example, GM has emphasized in a long period in the production of expensive and oil-consuming cars, ignoring the world trend of small and cheap cars, while neglecting the green car production. This is the very cause for its bankruptcy. Obama has put forward times and again to encourage the new energy car development and has spend USD 14 billion to the green auto development. GM, suffering a lot from its past ignorance of green cars, has also started the low carbon researches and has become the first US major car producer in the saving and new energy vehicle production.

4. ECONOMIC ANALYSIS ON EXPERIENCES OF WESTERN AUTO INDUSTRY TO HUBEI'S LOW CARBON AUTO DEVELOPMENT IN THE POST CRISIS ERA

4.1 Lessons of the US Auto's Past Failure — Ignoring the World Green Auto Development Trend

Americans are a nation "on-the-wheel", owning more than 26% cars in the world with only less than 5% world's population. Over-car consumption or even excessive-car consumption has become a major feature in US's auto market. According to statistics by the US Department of Transportation, China's vehicle ownership per thousand persons in 2003 was merely equivalent to that of US in the late 1930s.

Reasons for the US over reliance of autos are: first, US's high income and the fierce auto competitions. Different from many other countries' high fuel tax policies (to limit energy consumption and promote environment protection), the US's fuel tax is relatively lower and steadier. Second, the US's auto finance market is fairly developed and the strategy of "zero down payment, zero interest rate" has been applied from the late 1980s. After the 9.11 event in 2002, GM has established "zero-interest rate" loan to stimulate the US's economy and the

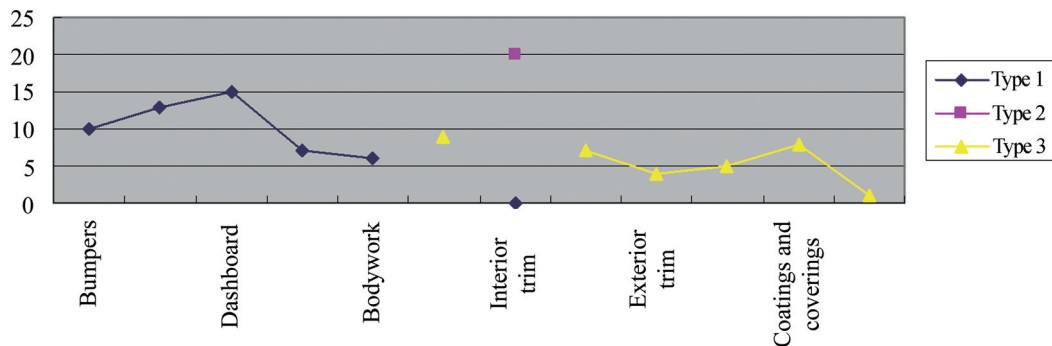
other Big Two have also carried out similar marketing measures in order to stop their sharp decline in car sales. The effect of “Zero down payment, zero interest rate” is obvious in the short run, but on the other hand it has made the auto business even more risky and a large number of consumers lacking practical purchasing power have bought cars completely on loan, which has made its follow-up production limited. Third, the US’s highly developed second auto market has accelerated the current high frequency of car replacement and therefore caused some over consumption. As is known to all, the second hand car market’s prosperity represents that the high frequency of replacement and the increase of cars per capita growth.

4.2 Reference on the Success of the Belgian Green Auto Plastic Industry — Early Awareness of the Importance of Low Carbon Development

The current low carbon development trend is to produce small and inexpensive green cars in order to stimulate consumption, decrease energy consumption and

environmental pollution. Actually the recyclable hi-tech green plastic has long been the main components of cars in Belgium and in many other European countries as well, which will absolutely cause an auto revolution worldwide.

Plastic is the fourth largest export industries in Belgium. Its plastic products exports accounts for 7.1% of the BLEU total exports. According to the Belgium State Statistics Bureau, plastics production import and export industry in Belgium has owned a total of 21,300 employees. Plastic processing industry is Belgian’s most creative industry. The Belgian plastic automobile industry has always attached great importance to environmental protection, the “green” plastic has made cars inexpensive and has improved its quality also. Meanwhile, it is much more convenient for auto repairing and makes car safer, which is also discussed above. In a word, the High-tech green plastic has replaced the traditional materials in Belgian auto industry and has therefore brought a real technical revolution.



Sources: Special report about Plastics for the motor industry, Belgian Foreign Trade Board-BDBH/OBCE, June, 2001.

Figure 1
Average Weight of Car Plastics in Belgium Cars (unit: kilo)

CONCLUSION AND SUGGESTIONS

From the above analysis, the major cause for the failure of the US auto industry is obvious — its long negligence of the saving and new energy vehicle, while Belgium has become world No. 1 car producing country per person mostly because of its successful green car plastics development. The Saving and new energy vehicle has become the key for getting rid of the side effect of the global economic crisis and restore the world economy. As the trend of the sustainable and healthy development, it has also become the focus of global automotive industry’s low carbon development. Those which can grasp the pre-hand of the green car development can surely win the coming round of world auto competition.

Surpassing US in car sales in 2009. China has been showing big potential since the world economic crisis. As one of the major resources of Carbon Dioxide releasing industries in China and probably worldwide, The auto industry will surely face big development challenge and opportunity in the Post crisis era.

It is prospected that by 2020, the new energy car production in Hubei will reach 600 thousand, while the expected sales will reach 500 thousand. Hubei’s auto industry has been facing both challenge and development opportunity in the post crisis era. As one of the three major automobile bases in China, Hubei can benefit from both the US auto’s past failure and the Belgian green car’s success. We should also learn from the US auto industry’s latest green development and the success of green car development in other countries. All in all let us realize the industrialization of the saving and new energy auto, grasp the development opportunity and win the final success in the coming new era.

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