

Old and new spaces of the automobile industry. Towards a new balance.

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Automobilisation of the US, society, distribution of income and financing, of car ownership

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Introduction

The US automobile market has recovered from the « great recession ». In 2013, new vehicle sales reached 15.5 million units not closing the gap with the historical of the years 2000. But this recovery lies on short-term factors (growth upturn, end of deleveraging, pent-up demand, quantitative monetary policy) while long-term factors of the great recession have not been addressed (income inequality, middle class squeeze). New cars have turned expensive for buyers whose real income do not grow fast enough. On top of that structural factors are still hampering the long-term development of the automobile market: slow population growth rate, shift of consumer demand in favour of services, relative dissatisfaction of young generations for cars. In this context, finance once again appears as the solution for the growing gap between vehicle supply and vehicle demand. Automobile financing has resumed its traditional activity and in particular subprime loans to poor and credit-damaged customers sold as asset-backed securities on speculative financial markets. But this cannot be a long-lasting solution as the “Great recession” has shown. When households’ debt will have returned to the previous excessive level, a new recession will occur. How long will it take to go back to the situation which prevailed in 2005-2007 before the great recession? We will see is an open question.

Section 1 will analyse the recovery of the US automobile market and the reasons to believe that this recovery is not sustainable because it is due to the convergence of cyclical factors that are playing positively: Partial improvement of employment, deleveraging, accumulation of pent-up demand and extraordinary expansionist monetary policy. In section 2, we discuss the prospect of long-term growth in the USA and show that the necessary conditions are not reunited. In section 3, we discuss the role of structural factors that are hampering the further development of the automobile market, in particular income inequality and how it shapes light vehicle demand; the high price of vehicles; the evolution of households’ consumption expenditures pattern in favour of services, and the role of demographics. In section 4, we present the auto finance industry and the critical role it plays for vehicle demand. We stress the importance of the non-prime and subprime auto loan market for the extension of the automobile market to the low-wage earners and the poor. This segment of the market is not only significant, it is highly profitable. But the point is that it is also risky and creates a structural fragility for the automobile market.

1. The US automobile market has recovered thanks to exceptional cyclical factors.

In 2013 sales, of new cars and light trucks have reached 15.5 million units up from 10.4 million in 2009 in the height of the “Great Recession”¹, (see figure 1). The V-shaped recovery has sparked a wave of optimism in the automobile industry and confidence in the possibility to reach in the coming years the previous sales record of almost 18 million units of the year 2000. This optimism is based on several favourable factors that have helped the auto market bouncing from the trough: job creation, the end of households’ deleveraging process, pent-up demand and aging of vehicles, the quantitative monetary easing and its positive impact on automobile financing.

- 1.1 Employment is the major factor that determines the dynamism of the automobile market. In the first quarter of 2014, private employment with 116 millions of jobs exceeded for the first time the level it had in 2007 before the recession (115.7 millions). Total non-farm employment including public administration followed the same pattern (see figure 2). It means that more individuals were earning an income and were able to get a loan to buy a car. At the same time, having a car is usually the pre-condition to get a job.
- 1.2 Households were able to get financing to buy cars in sharp contrast with the credit crunch they experienced in 2008-2009. Households have cleaned their balance sheets and are now facing banks and financing companies willing to lend. Their debt now represents 104% of their disposable income down from 130% at the end of 2007. This is the result of six years of deleveraging which started in 2008 when households gave absolute priority to debt reduction and curbed their consumption. They borrowed less and paid down their existing liabilities with charge-offs also contributing to the decrease of aggregate balance. Mortgage, credit card and auto debts went through this deleveraging process with the exception of student loans. Students had no choice but to carry on with their loans to finish their studies. Student loans are now in crisis because new graduates can hardly find work. This weighs negatively on their capacity to consume and in particular to buy cars. But for the majority of households, the deleveraging ended recently in the third quarter of 2013 with an across-the-board growth in indebtedness². The main reason of the upturn in debt balance is that households have started to pay down less of their mortgage balances than they did previously helped by the increase of house prices and historically low mortgage rates. As of March 2014, total consumer indebtedness was \$11,650 trillion up 4.5% from the trough of the second quarter of 2013 although still far below the peak of \$12.67 trillion of the third quarter of 2008. This means that households are taking new loans to finance increasing expenditures. This is particularly the case of auto loans, which had started to expand since the last quarter of 2011, while other forms of debt were still decreasing³ (see figure 3). Automobile outlays are indeed a special case and are not representative of all consumer goods. Since the free fall of the fourth quarter of 2008 (-26.8%), motor vehicles and parts outlays, although highly unstable, have outperformed by far personal consumption expenditures during most of the recovery period. Consumption expenditures followed GDP

¹ According to the NBER, the “Great Recession” officially began in December 2007 and ended in June 2009.

² Except for home equity lines of credit (HELOC) which are loans where the collateral is the borrower's house. Many homeowners used home equity credit lines for major items, such as education, home improvements, medical bills or car purchase (about 10% of HELOC loans in the years 2000). HELOC were one the factors that led to the “Great Recession”.

³ Again, with the exception of student loans.

growth and show no sign of acceleration which how fragile the recovery is. What explains this outperformance of automobile expenditures?

- 1.3 If we let aside the pick-up in the supply of auto loans enabled by the rehabilitation of banks and finance companies that will be analysed later on, two short-term factors explain the recovery of automobile demand. The aging of average households vehicles and the release of pent-up demand. These two factors are of course intertwined. Car median age has increased through business cycles from 7.9 years in the years 1991-2001 to 8.9 years in the period 2002-2007 between the “dot.com” crash and the “Great Recession”, to around 10 years in the period which followed the Great Recession (2008-2012). It means that half of passenger cars in circulation have more than 10 years of age. For light-trucks, the median age is respectively 7 years, 6.6 years and 8.7 years⁴. “The share of vehicles by age shows that newer vehicles of less than five years dropped by nearly 33 percent 2007 to 2012 while the share of vehicles 11 to 20 years old grew by 25 percent over the same timeframe” (). The aging of light vehicles means that owners held on longer to their vehicles after a recession but did not reverse the pattern during recovery episodes. This is because these recoveries did not last long enough and income did not increase enough for households to absorb the financial loss of recessions and then purchase new vehicles in the magnitude necessary to lower the median age. This phenomenon was especially strong with the “Great Recession” and a high pent-up demand accumulated which is now underlying the V-shaped recovery of the automobile market. Customers have delayed their new car purchase for lack of financial means. In 2009 and 2010, many consumers and businesses scrapped cars without replacing all of them, despite the Car Allowance Rebate System⁵. These customers have shifted their demand to used vehicles pushing their prices up to historical levels. As a consequence, new vehicles are relatively cheap compared to recent used vehicles. And low interest rates make them even more attractive. The convergence off all these factors explain why the release of pent-up demand is occurring now and has fuelled new vehicle sales since 2012 and probably for some years to come because older vehicles are just starting to being scrapped.
- 1.4 The monetary policy known as “quantitative easing” has also played a strong role in the recovery of the automobile market. This unprecedented policy of money creation by the FED has pushed the interest rate to an all-time low level of almost zero percent in real terms. This policy has saved banks from bankruptcy and flushed them with all-time high levels of money that they try to lend with a profit in a context of low financial returns. Because vehicle purchase outperformed other consumer goods, banks and finance companies have started to lend in increasing amounts to car buyers at the start of 2012. Competition between banks, credit unions, captive auto finance companies, finance companies and auto retailers have pushed real interest rates below 2% for a 48 months loan down from 8% on average in the eighties. It has also extended loan maturity to over 60 months up from 35 months in 1971. This has expanded the auto market to financially constrained households willing to purchase a new or used vehicle because the combination of low interest rate and long-term loans kept

⁴ More recent data show that car aging measured by average age (and not median age which are no longer available) continues despite the recent recovery: in 2013 the average age of light vehicles reached an historical peak of 11.4 years up from 10.6 years in 2010, 9.8 in 2007 before the recession and 8.4 years in 1995 when the series starts. Source: Polk, reproduced by US Department of Energy, table 01.25, Transportation Energy data book, various editions.

⁵ This system known as the “Cash for Clunkers” program started in July 2009.

the average monthly payment stable⁶ (see figure 4). Banks were initially very conservative in their lending policy and focused on customer with best credit scores. But they have relaxed gradually their standards from 2010 up to now. For instance, the share of consumers with Equifax credit score above 720⁷ peaked at over 52.4% in the fourth quarter of 2009 in the turmoil of the recession and is down to about 45% since the fourth quarter of 2012. At the opposite, consumers with poor credit score increased their share to 23% in the second quarter of 2013 up from 9.3% in the fourth quarter of 2009 but still well below the 25-30 % shares registered before the “Great Recession” (Haughwout, Lee et al. 2013). These favourable evolutions cannot improve continuously. One cannot expect an endless extension of loan term or another reduction of real interest rate to nearly zero percent with stable monthly payment. As we will see below, there is a limit to what finance can do and in particular the growing risk inherent to market extension to less affluent customers. But on top of that, these favourable conditions are very sensible to the monetary policy. Once the FED will stop the quantitative easing policy, as it is already announced, interest rates will increase and car financing will tighten.

2. Conditions of long-term growth are still not there.

To summarise, the cyclical factors analysed above, job creation, deleveraging, pent-up demand, quantitative monetary easing will fuel automobile demand for some years to come but cannot sustain a new growth cycle on the long-term. The decisive factor will be job creation and income. In this regard, perspectives are bleak. Although employment has returned to its pre-recession level, job creations have not been strong enough to offset job losses accumulated during the “Great Recession” and full employment is still very far off. To create enough jobs, the economy should grow for a sustained period at a pace above its long-term trend so that the gap between aggregate demand and the productive potential can be filled (Josh 2014). So far, growth has been sluggish because household demand, with the exception of automobile demand, has remained subdued because of joblessness. Officially, the unemployment rate has fallen to 6.3% percent in April 2014, below the level of November 2008 when Barack Obama was first elected president but still above the rate of 4.3% before the crisis in 2007. Worse, this improvement in unemployment hides the fact that the participation rate, the share of adult population deemed available for work, is falling. To be classified as unemployed, adults must identify themselves as actively seeking work. Due to the scarcity of jobs during the “Great Recession”, many adults have abandoned active search because they were discouraged. As they are no longer eligible for benefits, they have no reason to be registered officially as unemployed. But, they would return to active work if job opportunities were numerous. According to an Economic Policy Institute research, the number of these “missing workers” increased to an all-time high of 6.2 million (Shierholz 2014). “If those missing workers were

⁶ For instance, the index of average amount financed for the purchase of a new vehicle increased 11% between the third quarter of 2008 and the third quarter of 2013 while the monthly payment increase by 2% only. Source: Author’s calculations based on Experian data.

⁷ The Equifax Credit Score like the FICO Score are general-purpose score proprietary models used to predict credit risk. The Equifax Credit Score uses numerical range of 280 to 850, where higher scores indicate lower credit risk. The FICO score also uses a numerical range of 300 to 850, where higher scores also indicate lower credit risk. The New York FED’s Consumer Credit Panel is based on a nationally representative sample drawn from anonymised Equity credit data.

in the labour force looking for work, the unemployment rate would be 9.9 percent instead of 6.3 percent” (Shierholz, op cit). Meanwhile, this numerous “active industrial army reserve” weighs down on wages. Wages have seen no growth since December 2009 and are stagnant around 2% in nominal terms and around 1% in real terms (see figure 5). This explains the weakness of demand and why the recovery is much slower than previous ones. This phenomenon is not new and is the outcome of a neoliberal growth regime that was established at the start of the eighties (Dumesnil and Lévy 2011). The gap between real hourly compensation and labour productivity widened on the long-term (Fleck, Glaser et al. 2011) leading to a decline in the labour income share and growing inequalities. Various factors account for these evolutions: The decline of trade unions and the decentralisation on labour share (Fichtenbaum 2011) and on wage setting at firm level (Rosenfeld 2006), technological change (IMF, 2007) and globalisation (Rodrik 1997), financialisation (Hein 2013) and welfare state retrenchment (Brady 2009). This evolution is not specific to the USA and is also witnessed in many developed and developing countries (Onaran and Galanis 2012). The peculiarity of the USA until the “Great Recession” is that the labour share has fallen less than in Europe for instance⁸, but income inequality is much higher while in Europe it is lower (Stockhammer 2013). Since the work of Atkinson et al. (2011) and Piketty (2014) among others, it is well known that in the USA the top 1% of the income distribution has increased its share of national income by more than 10 percentage points. Before the “Great Recession”, this high income inequality did not translated into consumption inequality by the same magnitude because the real median income has kept on growing in the nineties, although at a slower pace than before, and because households have used various forms of credit to maintain their living standards. This was especially the case of low-wage workers and the middle class while the high income earners acquired more capital assets. This dynamic created a consumption bubble during the years 2000 which ended with the “subprime crash” and the “Great Recession” (Cynamon and Fazzari 2013). Now that this period has ended after the profound deleverage that occurred between 2008 and 2013 it seems that everything is again in place for the same story to happen again. Households have cleaned their balance sheet and are in position to take new debt again for the near future but not in the same favourable circumstances as in the nineties. In 2012, after five years of fall, the real median income with USD 51,000 has returned back to its 1995 level (see figure 6) and the bleak labour market does not signal a fast improvement. Over indebtedness will come sooner than in the previous growth cycle. As regard income inequality, there are as high as ever with a Gini coefficient of 0.477 in 2012 up from 0.397 in 1975 which places the USA on the higher end of inequality among rich countries (see figure 6). The lesson is clear: when the positive effect of the short-term factors analysed above will wane, households’ debt will take over and will fuel the growth of the automobile market for some more years. And when the wedge between stagnant real income and growing debt will be too wide, a new recession will occur. In the meantime, the demand for automobile will have to cope with some structural problem, the high price of new vehicles.

3. Structural problems are still hampering automobile demand.

Historically, the rapid fall of car price has been critical for the transformation of the automobile into a mass market. Fordism has been the technological, organisational and institutional breakthrough at the micro and macro level that enabled the transformation of cars from a luxury to a

⁸ Over the period 1980-2007, the labour share has fallen from 73.4% to 64% of GDP on average in the advanced countries versus 70% to 64.9% in the USA. Source: Stockhammer, 2013, op cit, p 10-11.

mass product (Boyer and Freyssenet 2002). One century after the invention of Fordism, one may wonder if new cars are still affordable to the majority of consumers. In constant dollars, the price of a new car was USD 25,233 in 2011, which places it between the price of 1915 and 1916 (see figure 7). Of course, the car of the 21st century offers much more value for money than one century ago. Still the question of affordability of new cars remains. The analysis of the purchase of new vehicles by income quintiles shows that all households except the highest quintile had started to reduce their spending on new vehicles in 2003, four years before the “Great Recession, because their income had not fully recovered from the previous recession that followed “dot.com” bubble burst. The highest quintile was the only one to increase its annual spending in 2005 and 2006 to around US\$ 4,800 before they plummeted after the “Great Recession” to US\$ 2,800 in 2010 (see figure 8). The highest quintile is also the only one for which spending on new vehicles is always superior to used vehicles. On average over the period 1984-2012, the 20% richest spent 1.7 times more on new vehicles than on used vehicles. At the other extreme, the 20% poorest spent 1.6 times more on used vehicles than on new vehicles over the same period. The intermediary quintiles, which include the middle class, spent more money on new vehicles than the lowest quintile. Still they spend more money on used vehicles than on new vehicles.

Another effect of growing inequalities on consumption is the bias it has introduced in favour of ever-bigger goods. This phenomenon has been detected in housing (Dwyer 2009) and automobile (Bhat, Sen et al. 2009), (Choo and Moktharian 2004). This can be seen in the size of the vehicles purchased (see figure 9). Small size vehicles were the major segment of the new vehicle market in the seventies and eighties. Then in the nineties the midsize segment became the first one which reflects the progress of the middle class during the long period of growth of the American economy which ends with the myth of the “new economy” when the dot.com bubble starts and burst in 2000. Nonetheless, after the recession and the “jobless” recovery of the years 2001-2007, new auto sales were financed by the “subprime” credit bubble and boomed. At that time, large vehicles sales with an average 5.068 million units⁹ supersede small vehicles ones (4.167 million units) that are the primary choice of low wage earners who are the most affected by the sluggish recovery. Obviously something is wrong because rich people are much less numerous than low wage-earners and a mass market can only be sustainable if established on much sounder base. During the year 2009, the worst of the “Great Recession”, large vehicles sold almost as much as small vehicles, 2.6 versus 2.7 million. This reflects the influence of the top richest quintiles of households who has a strong preference for these large vehicles. These rich Americans were less affected by the crisis. In fact, their income recovered rapidly and even progressed after 2009. They maintained their purchase of these large and luxury vehicles, a phenomenon which was also observed for other luxury goods. Among these large vehicles, light trucks¹⁰ and in particular SUVs play a special role. The problem of large vehicle is their price. Because they are expensive, the majority of customers buy them on the used vehicle market. The used vehicle market is by far the biggest automobile market. On average, over the period 1990-

⁹ Author’s calculation with data from Transportation Energy data book 2013, Department of Energy, table 4.10 and 4.11. We have added all categories of vehicles, cars, van, non-truck SUVs, pick-up trucks, truck-SUVs by size: small, midsize and large.

¹⁰ A well-known feature of the US automobile market is the progression of new light trucks sales (see figure 1). They accounted for less than 2 million units until 1970, then increased at a fast pace in the following decades and exceeded car sales in the years 2000-007 when the automobile market reached its apex doped by low interest rates, generous rebates and subprime loans.

2013, the used vehicle market sold 2.7 more vehicles than the new vehicle market¹¹. During the period of crisis, more customers buy used vehicles to save money and the ratio exceeds three use vehicles for one new. In other terms, the new vehicle market represents on average 27% of total used and new vehicle sales of around 55 million unit sales on the period 1990-2013. For vehicle sellers, the use market is much more profitable than the new market¹² in particular in period of crises when prices of use vehicles soar because of the strong demand of recent use vehicles and because owners hold on longer their vehicles repair and maintenance cost increase with age. In the USA, the use market is a very important institution with strong professional actors like the National Automobile Dealer Association (NADA) and the National Independent Automobile Association (NIADA) which defend their interest of wholesalers, retailers and various auto finance companies.

The automobile market including both new and used light vehicle reach an all-time record in 2006 with a total value of USD billion 786 and then decline during the “Great Recession” to USD billion 575 in 2009¹³. Once the market will have fully recover, one wonder whether there is still a potential for future growth because of the shift of consumer demand in favour of services and away of traditional consumer goods like the automobile and because of the evolution of demographics.

Before the Second World War (1929-1940), services accounted for 45% of households expenditures¹⁴. During the post-war fordist growth, their share increased a little up to 47.5%. But over the last period (1980-2012), they jumped to 62.5% of households expenditures. Much of this progress was at the expense of non-durable goods. Their share over the period 1980-2012 amounts on average to 24.8% down from 45% before the war. The share of durable goods, among them automobile registered only a small decline: 12.7% in the years 1980-2012, down from 14.6% in the years 1949-79 but up from 10.2% in the years 1929-40. But a closer look at some big ticket items show that the decline in automobile spending is more pronounced than one may expect. The share of total vehicle outlays jumped from around 4% in the thirties to around 8% during the post-war growth. It is interesting to observe that its share peaked in 1999 at the end of the longest growth cycle of the post-war era but then declined steadily long before the “Great Recession”. They were down to 6% in 2007 where they still are in 2012. Housing has traditionally been the biggest item and after the Second World War increased gradually from 14% of total households’ expenditures to 16% in 2009. But what is impressive is the sharp growth of health care spending which became the biggest item with more than 16%. In a way, it reflects the fact that Americans’ health has improved over time. But actually, it reflects the fact that the US health system is one of the most expensive and inefficient of rich countries which now limits the spending that households could dedicate to other items such as automobile or mobility for instance. To a lesser extent, spending on education services has also increased regularly and now accounts to over 2% of households’ expenditures, two times the level of the sixties. Higher education expenses are mainly responsible for this increase. Communication services, and among them mobile phone and internet access also account for about

¹¹ Source : Authors’ calculation with data from, National Transportation Statistics, Bureau of Transportation Statistics, table 1-17, updated 2013.

¹² See for instance the various NADA reports.

¹³ This including leases. Source: Authors’ calculation with data from, National Transportation Statistics, Bureau of Transportation Statistics, table 1-17, updated 2013.

¹⁴ All the data presented in this part come from the national accounts published by the Bureau of Economic Analysis and in particular table 2.4.5 which presents personal consumption expenditures.

2% of households expense. While looking small, these expenses also compete with the consumption of durable goods.

A detailed breakdown of automobiles spending reveals other interesting facts (see figure 11). While the share of total motor vehicle outlays has remained stable until 2001, the share of new motor vehicles outlays has decline steadily from an average of 4.3% in the period 1949-79 to 3.1% in the most recent period (1980-2012). This decline is not the consequence of a decline in the relative price of new vehicles which on the contrary has increased. It is explained by the significant increase in motor vehicle services (maintenance and repair and other services) from 1% in the thirties to almost 3% in the middle of the nineties and now 2%. To a certain extent, this evolution is explained by the increasing complexity and technological content of vehicle, and the high profit margin of parts and repair and maintenance services which makes the bulk of the profit of sales services. Net use vehicles purchases had also almost doubled their share from 0.8% in the period 1949-79) to 1.6% in the middle of the nineties when the majority of households bought a second vehicle, that one being usually a use vehicle. Finally, insurance costs add another 0.6% to households spending. This item has been stable since the Second World War but is three times higher than in the thirties.

To summarise, expenditures on new vehicles are on a historical declining trend due to higher spending on other items linked to automobile but also because of the higher price of critical spending like housing, health, education and communication. The share of new vehicle expenditures in total households' expenditures fell to an historical low level under 2% during the "Great recession" to be compared only with the "Great Depression" of the thirties. It will probably return to 3% in a near future but it is doubtful that it will recover its historically high average of 4.3% registered during the "Golden Age" of post war growth.

Demographics are another reason to believe that the US automobile market has entered a period of stagnation. The percentage of households with no vehicles has dropped to 9.3% in 2011 down from 21.5% in 1960. The potential for further extension of the automobile market is getting difficult¹⁵ because households' vehicle ownership has already increased dramatically. In 1960, 78.4% of households owned less than two vehicles. In 1990 it had declined to 45% but in 2011 the figure was almost the same: 43.4%. The third vehicle progresses among households but also at a declining pace because of financial constraint. In 1960, 97% of households had less than 3 vehicles. By 1990, it has declined to 82.6% but by 2011, it had declined to 80.9%, a small improvement of 1.7% in 11 years. Since 1958 there are more vehicles in operation than civilian employed persons, which is coherent with the fact that in a family there may have a second car for the spouse, husband or for a child. But what is even more surprising is the fact that since 1986, there is more than one vehicle per licensed driver. This means that a significant number of drivers own more than one car either a new or a used one. This may be sustainable for a thriving economy but this is not precisely the case since the "Great Recession" for lack of enough jobs and decreasing real median income. Another concern for the future expansion of the automobile market is the fact that the percentage of license drivers in the total population is reaching a point of stagnation at 68% (see figure 12).

This means that the real possibility of expansion of the size of the market lies in the increase of the size of the population. In this regard, if we use the median scenario of the United Nations

¹⁵ This figure and the following in this part come from various tables in: Transportation Energy Data Book, 2013, Department of Energy.

Population Centre for the population of the USA until 2050¹⁶, and if we hypothesise that 68% of the population has a driving licence and that there is 1.20 vehicle in operation per license driver which correspond to the average observed in the years 2005-2007 before the Great Recession, we can calculate the average absolute increase of vehicle in operation per year. There would be around 2 million vehicles more per year from 2015 until 2030, then a smaller increase down to 1.4 million in 2050. The total number of vehicles in operation would be around 328 million, a 40% increase from the almost 240 million vehicles of 2010. If again we assume that new vehicle sales amount to 6.7% of vehicles in operation which is the average observed on the period 2005-2007, new car sales would amount to around 17.8 million in 2015 and 22 million in 2050. Compared to the historical peak of light vehicles sales registered so far in 2000 of 17,164 million units, sales of light vehicles in 2050 would be about 28% higher than in 2000. This is quite important because it means about 4.7 million vehicles more and shows that the US market has still a potential to grow base on the growth of population only. But this positive forecast rests on the rather optimistic assumptions prevailing during the years 2005-2007 which may not be repeated again and presuppose that all things remain equal on the economic, social, environmental and political dimensions which is also optimistic to say the less.

4. Financing vehicle sales with subprime loans.

Without a huge finance industry there would not be a mass market for automobiles. Before the “Great Recession” about three quarters of new vehicles sales and half of used cars were financed either by loans or leases¹⁷. The dependence on the finance auto industry has increased to respectively 84% and 54% after the recession because households are less wealthy. The auto finance industry churns huge amount of money. In the fourth quarter of 2008, when total debt balance for the whole USA registered an all-time record of 13 trillion dollars, automobile debt amounted to 800 billion dollars, i.e. 6.2% almost the same as credit card debt (6.8%) and more than student loans (5%)¹⁸. This is because vehicle purchase is the second largest purchase of households after the purchase of a home. The auto finance industry is particular in the sense that auto makers usually own a financial subsidiary, called “captive auto finance” companies. This is not the case for other producers of consumer goods, but for auto makers it is crucial to be able to finance sales to “push” cars whatever the circumstances. Captive auto finance companies hold 30% of total on average during the period 2007-2013 in competition with banks (34%), credit unions (22%) and finance companies (14%) (Source: Experian). They assess customers with credit scores the most famous being the FICO scores but many companies have their own proprietary risk evaluation system. It is the same process as for buying a home. Customers are divided in risk categories according to their income, job, households’ characteristics, and past financial record (late on debt payment or worse bankruptcy). Experian for instance classifies customers in Super-prime, prime, non-prime, subprime and deep subprime categories. The more risky the customer is, the tightest the conditions of the loan: higher interest rate, higher monthly payment, smaller amount financed. Auto finance agents have different strategies: usually Banks, credit unions and captive companies compete for the best customers while auto finance companies focus on non-

¹⁶ According to this scenario, the UN anticipate that the population of the USA will be 400 million of individuals in 2050 up from around 312 million in 2010, i.e. an increase of 28%.

¹⁷ Source: The State of Automotive Finance Market, various editions, Experian.

¹⁸ The vast majority being house mortgage with 73% of total households’ debt at the time. Source: FED of New York, HHD C Report, various issues.

prime, subprime and deep subprime customers because these companies accept more risk to make more profit. But all of them have a diversified portfolio whose exact composition varies according to their strategy, the state of the economy, of the automobile market and competition between them. Before the “Great Recession”, the below prime and super-prime market share amounted to around 38%¹⁹ (see figure 13). This is a sizeable share which signals the bad situation of the automobile market and of households’ finance at the time. It means that 38% of vehicle customers were already in difficult situation when buying a car. With the recession, this share raised to 43.4% in 2008 because many the finance of many customers worsened. The share of deep subprime borrowers recorded an all-time high of around 18% of the market in the second quarter of 2009. Lenders tightened their lending criteria to filter below-prime borrowers out of the market and with the numerous charge-offs of delinquent loans, the auto finance market improved its risk profile. Since 2011, the share of below prime loans amounts 35% which is low by historical standards, while prime loans forms the bulk of the market with the remaining 65%. While this situation may seem healthy on a risk assessment point of view, it is bad news for car makers and lenders because it means few buyers. This is why once the economy started to recover and households have cleaned their balance sheet, lenders rushed to make new auto loans even to subprime then deep subprime borrowers. The reason is to be found in the state of financial markets. Because of the quantitative monetary easing, financial returns are very low and many finance companies are willing to take risks to boost their profit. This is why many invested in the auto finance market and in particular the auto asset-backed security market. This market had almost closed during the “Great Recession” and reopened in 2011. This market is very important for loans to below prime customers. Like for the subprime home market before the recession, auto lenders sell part of their auto loans on secondary markets, called asset-backed security market, once loans have been transformed in securities. With this process, auto lenders get rid of the risk attached to below prime borrowers as it is bought by investors willing to take this risk for a profit. This system worked well before the “Great Recession” until it provoked the famous “subprime crisis”. Of course, the situation is now different because households have deleveraged a lot and lenders have a lot of money to lend. But the same cause will lead to the same consequences especially because the recovery is not backed by a buoyant labour market and households’ income is still low. One can assess the return of future trouble with the figure 14 which focuses on the relation between the percent change in the volume of auto loans and auto loan delinquency. Four different phases can be distinguished. The first starts in the year 2000 when households are hit by the dot.com bubble burst and the recession that follows. 30 days delinquency of new auto loans are initially high until the end of 2001 but then turns to zero or even negative because customers are paying their debt. Normally new loan origination should also decrease but because of the recession and then the September 11 attack the interest rate is pushed down to almost zero and banks are encouraged to lend to support the economy. Hence the spike in the growth rate of loan origination. This is also the time when the home subprime bubble inflates. But the reality soon prevails and in a second phase which starts in the last quarter of 2005, delinquency on new auto loans shoots up and new auto loan origination dropped brutally until the end of 2007 at the moment when the home subprime crisis bursts. During the “Great Recession” delinquency falls down because banks are reducing the amount of new loans as much as possible and closing accounts. This is a period when many

¹⁹ The following development rests on Experian data unless specified.

households cannot pay their monthly payment on their auto loans just like their home mortgage. Cars like homes are repossessed by banks and the loans liquidated. Starting in the third quarter of 2010, the auto finance industry enters into an exceptional phase like heaven after hell. Delinquency keeps on decreasing to exceptionally low level until the end of 2012 because the market has been cleaned of bad debt and the only customers able to buy a new vehicle are those with a very healthy financial condition and a very high credit score. So banks and other lenders are enjoying a very favourable situation: they can increase their loans to customers who want to buy a new car without taking risk. This third phase ends at the start of 2013 when suddenly normalcy is re-established: the volume of new loans increases and delinquency increases together. This means that lenders are again lending money to customers who have trouble to make their monthly payments. This is especially the case of equity funds, a class of highly speculative investors, who have invested in auto finance company precisely because they are looking for highly profitable but risky investments. With that money in hand, auto finance companies have started again to lend to subprime and deep subprime car buyers. And after few months delinquency has risen again. This illustrates the contradiction auto makers and auto lenders are in: on the long run, they cannot lend to an ever increasing number of car buyers to increase car sales without taking more risks.

Conclusion

This article has tried to present the factors which explain the present recovery of the US automobile market after the "Great Recession". We have underlined the fact that cyclical and one-time positive factors are behind the strong recovery. These factors cannot last. Yet, the rebound of the US economy is not solidly grounded on long-term positive fundamentals. Actually, the deep causes of the "Great Recession" which are the gap between labour productivity and real income and very high inequality have not been addressed. As a consequence, households are getting indebted again. We are not heralding a new recession any time soon. We are just concluding that this is not sustainable.

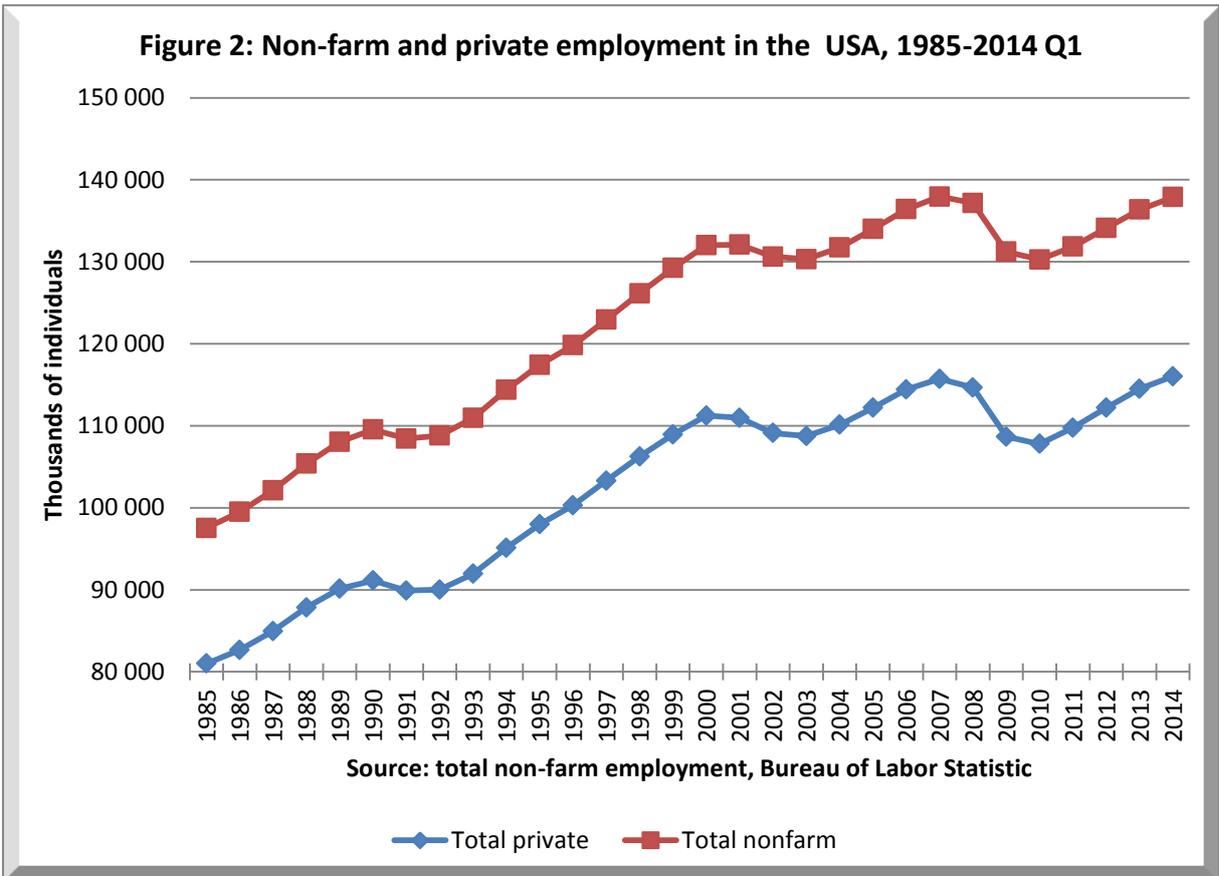
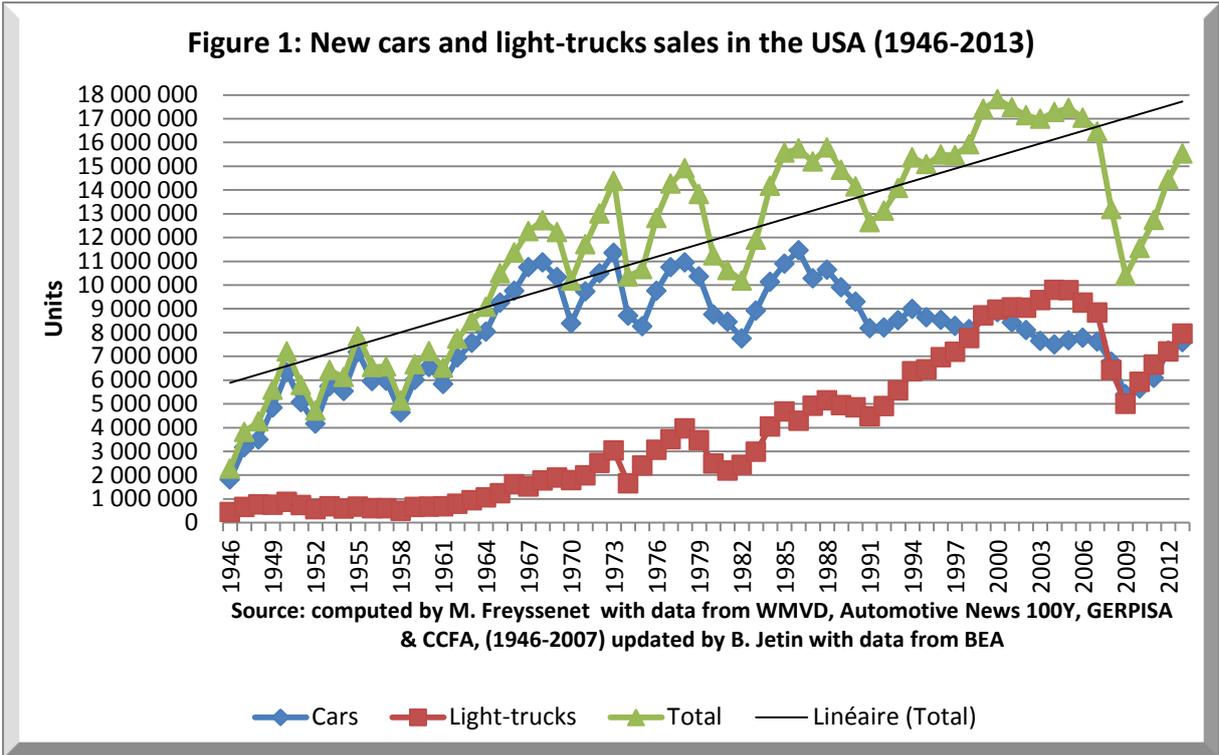


Figure 3: Year over year growth rate of GDP, consumption and automobile expenditures

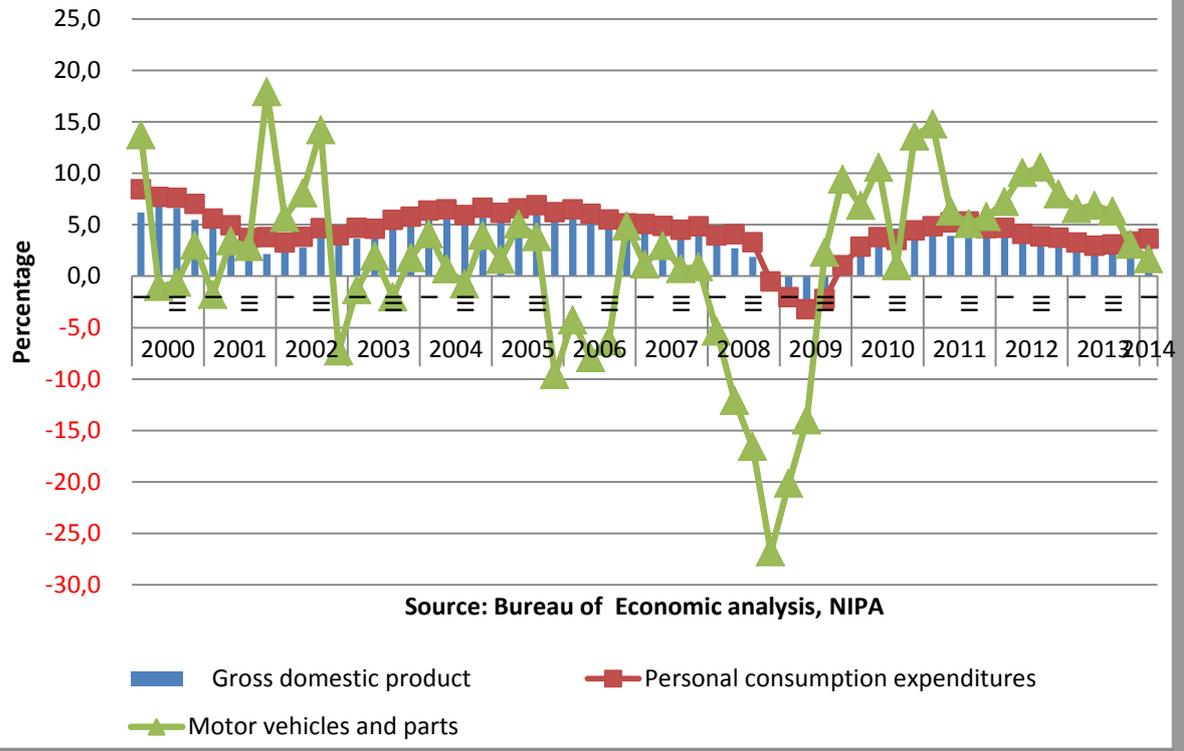
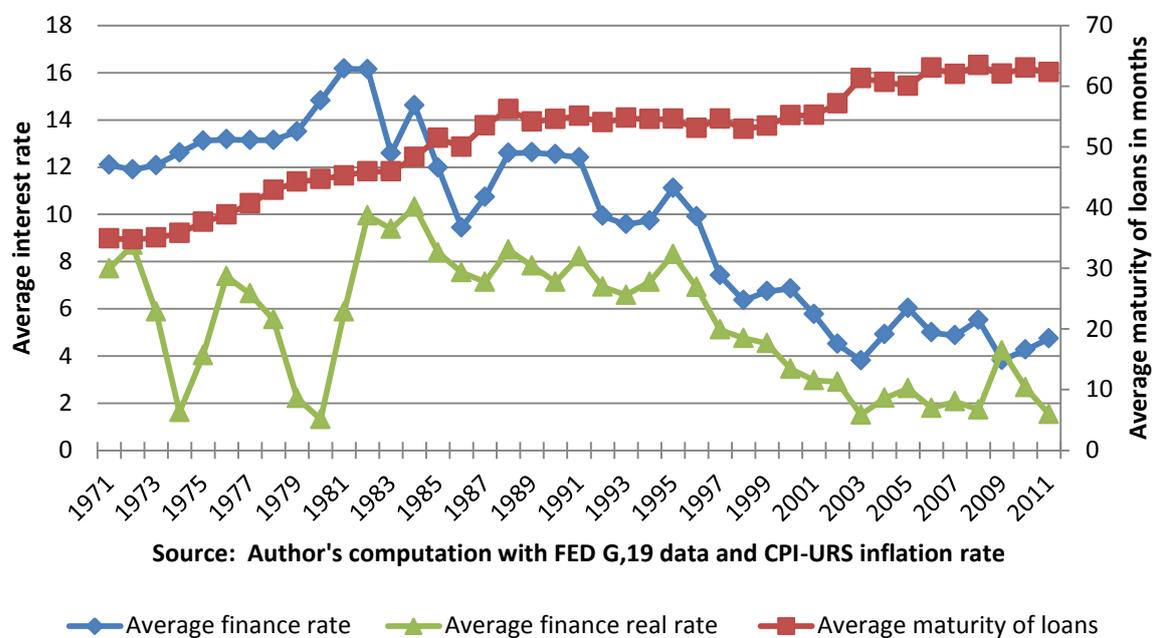
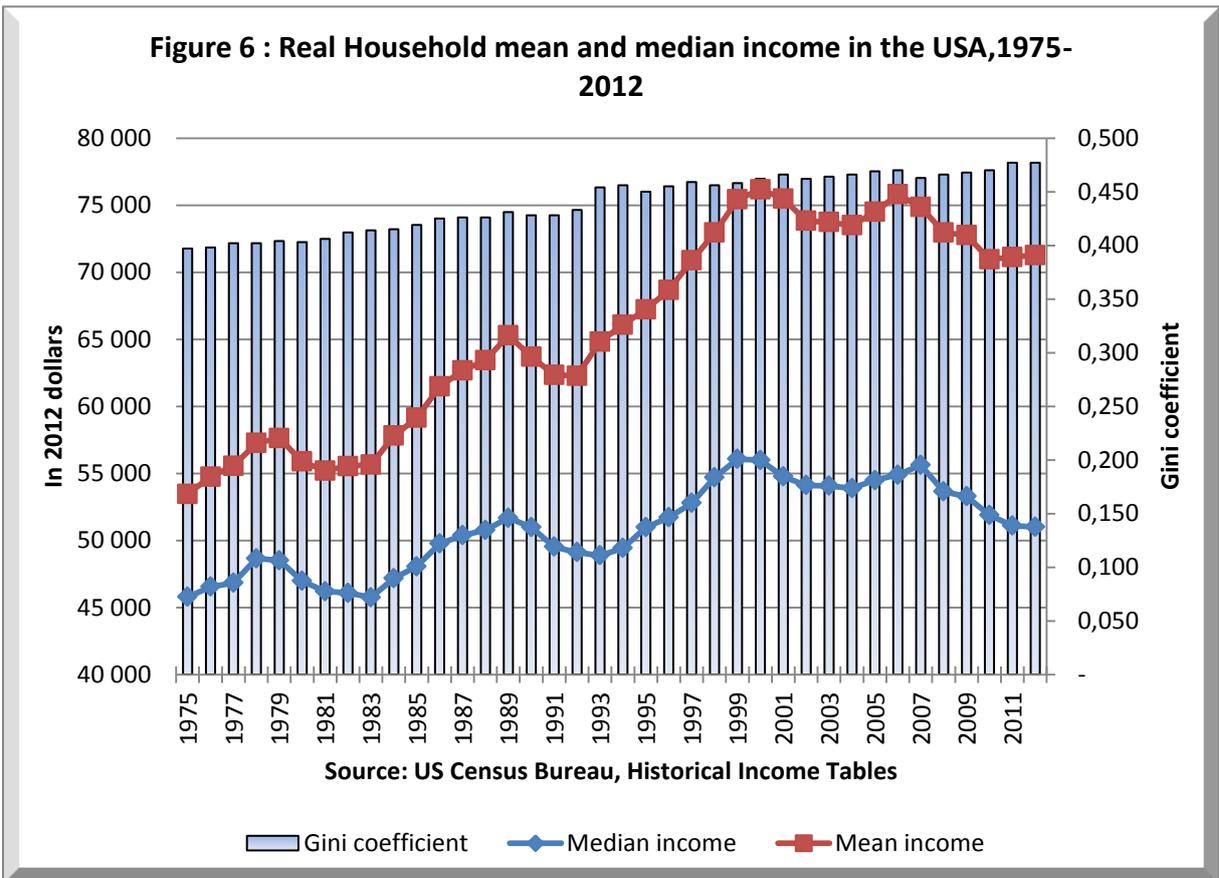
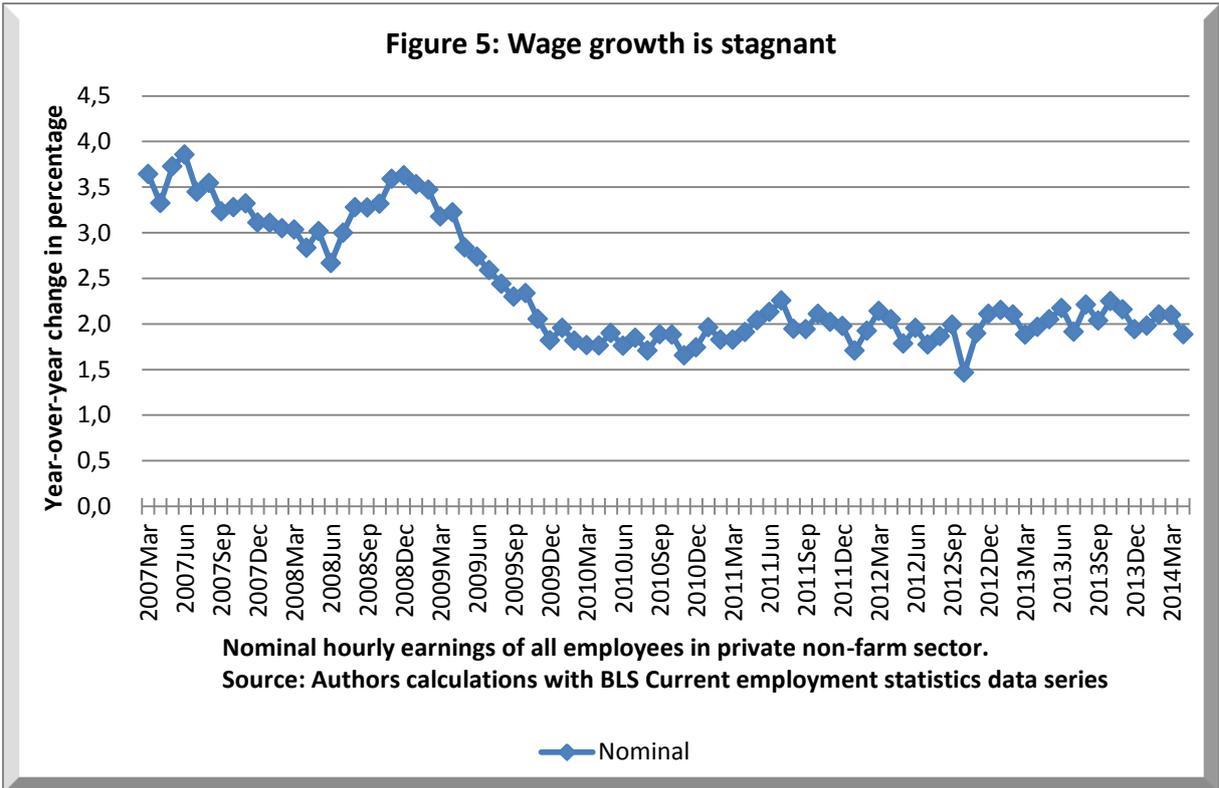
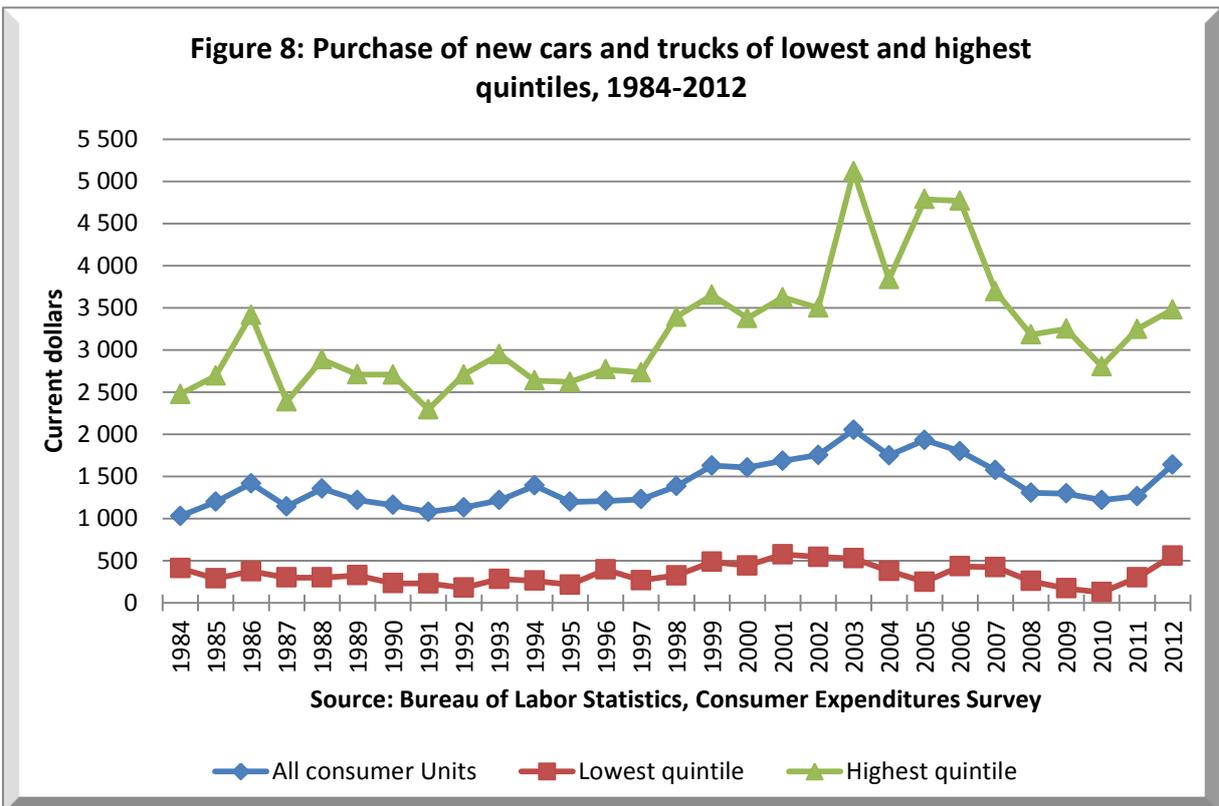
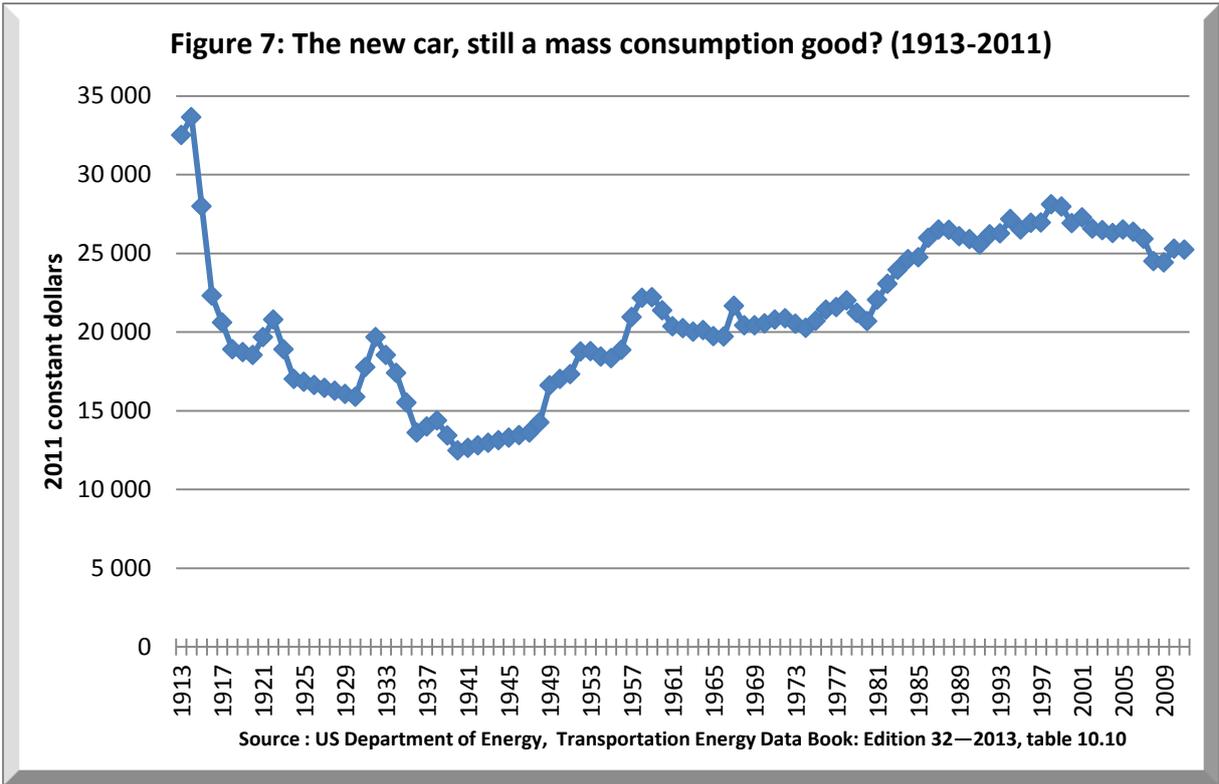


Figure 4: New car purchase financing terms of auto finance companies, 1971-2011







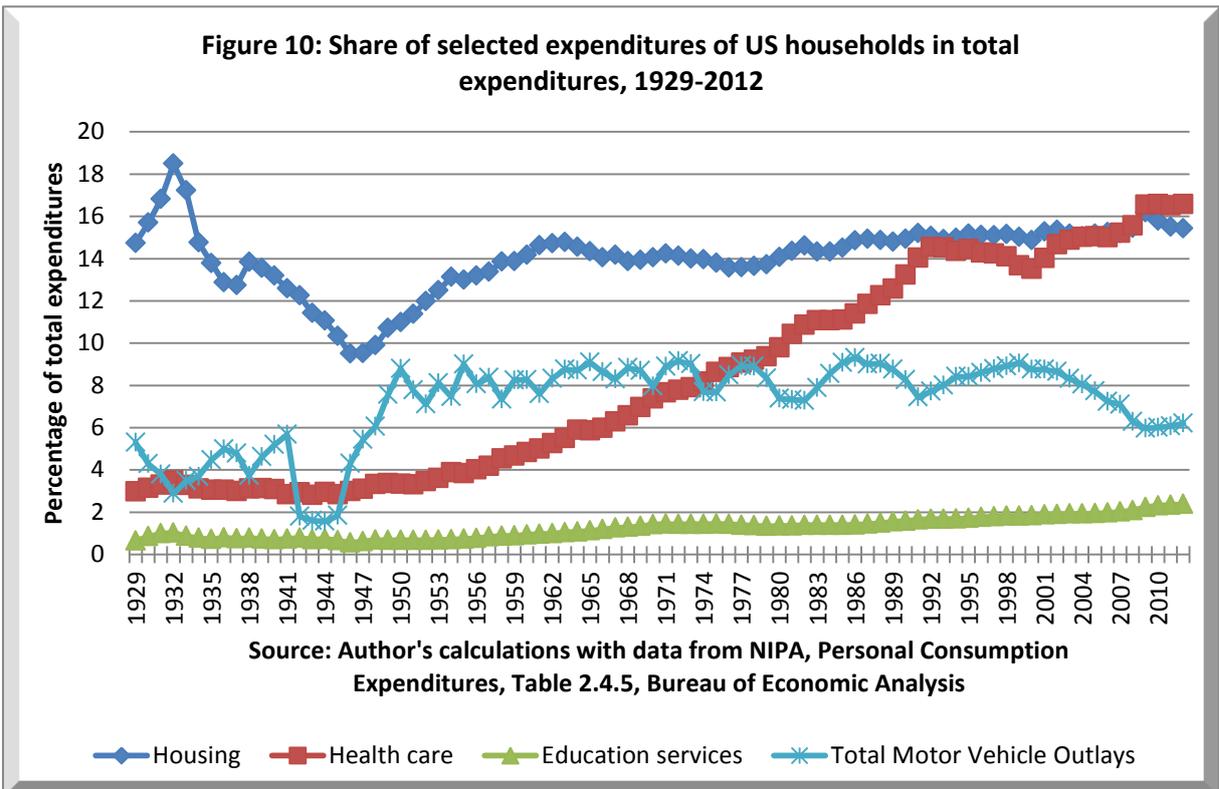
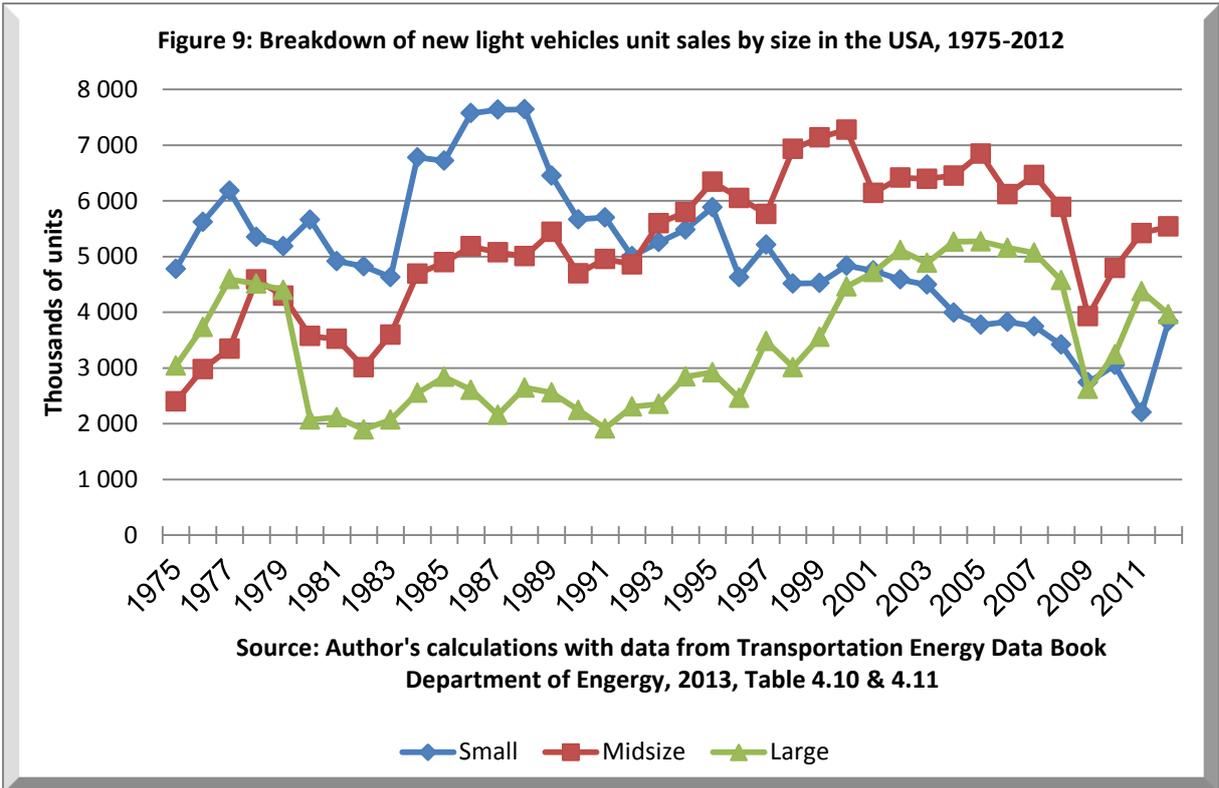
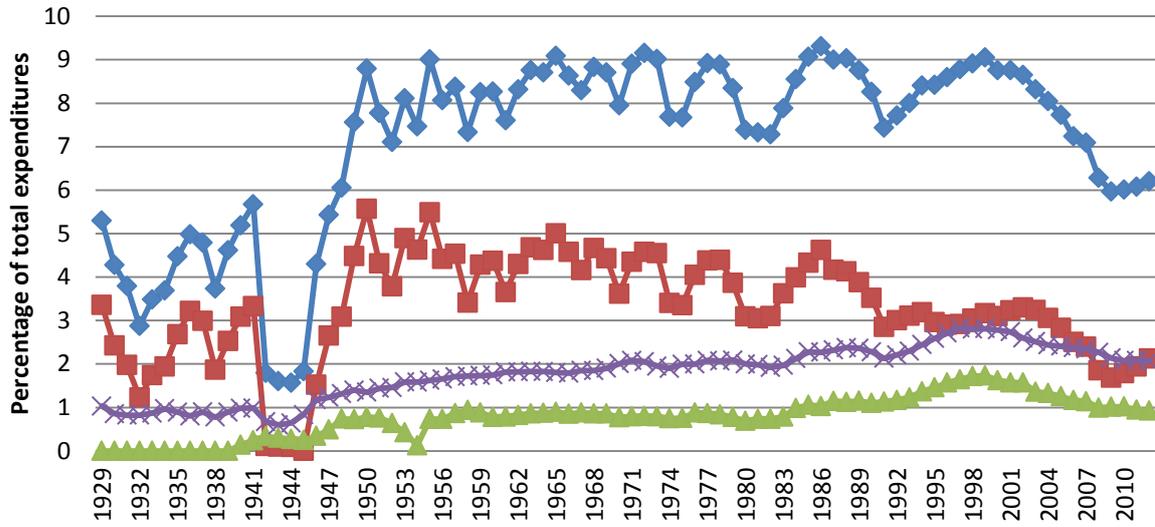


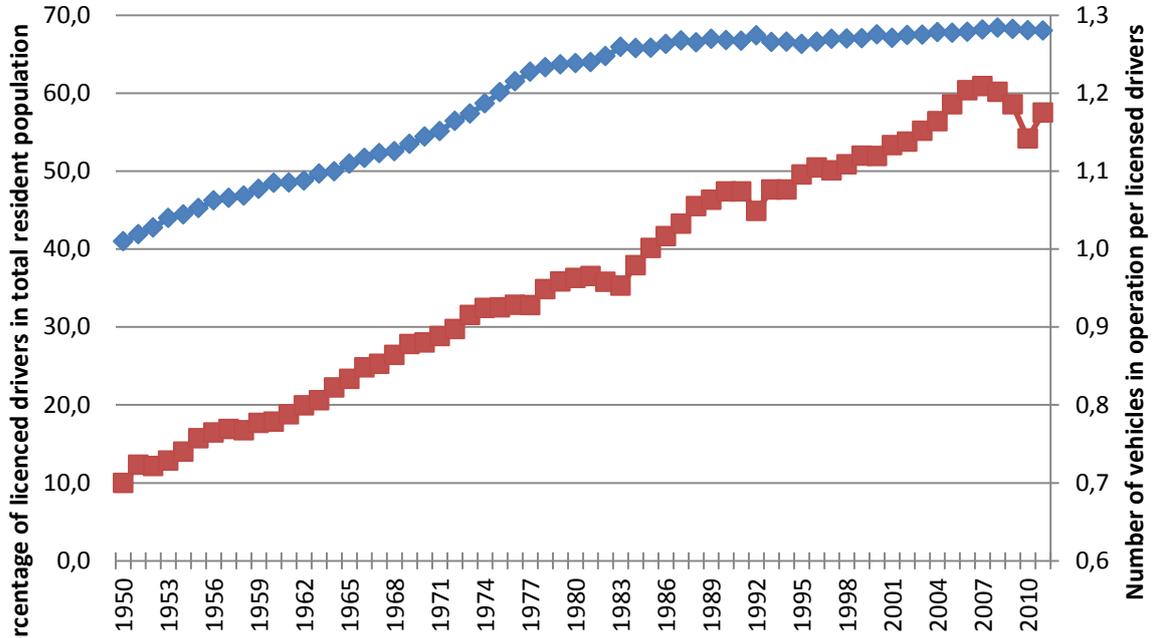
Figure 11: Share of motor vehicles outlays in total personal consumption, 1929-2012



Source: Author's calculations with data from NIPA, Personal Consumption Expenditures, Table 2.4.5, Bureau of Economic Analysis

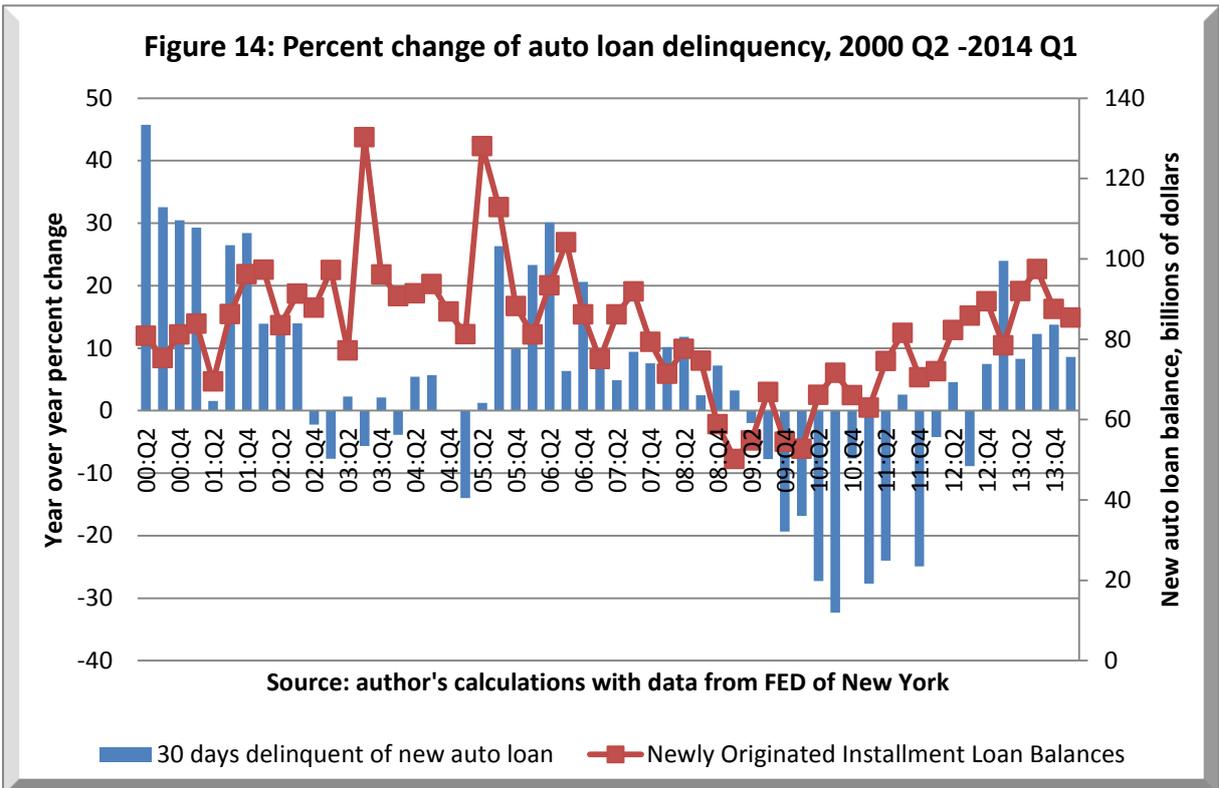
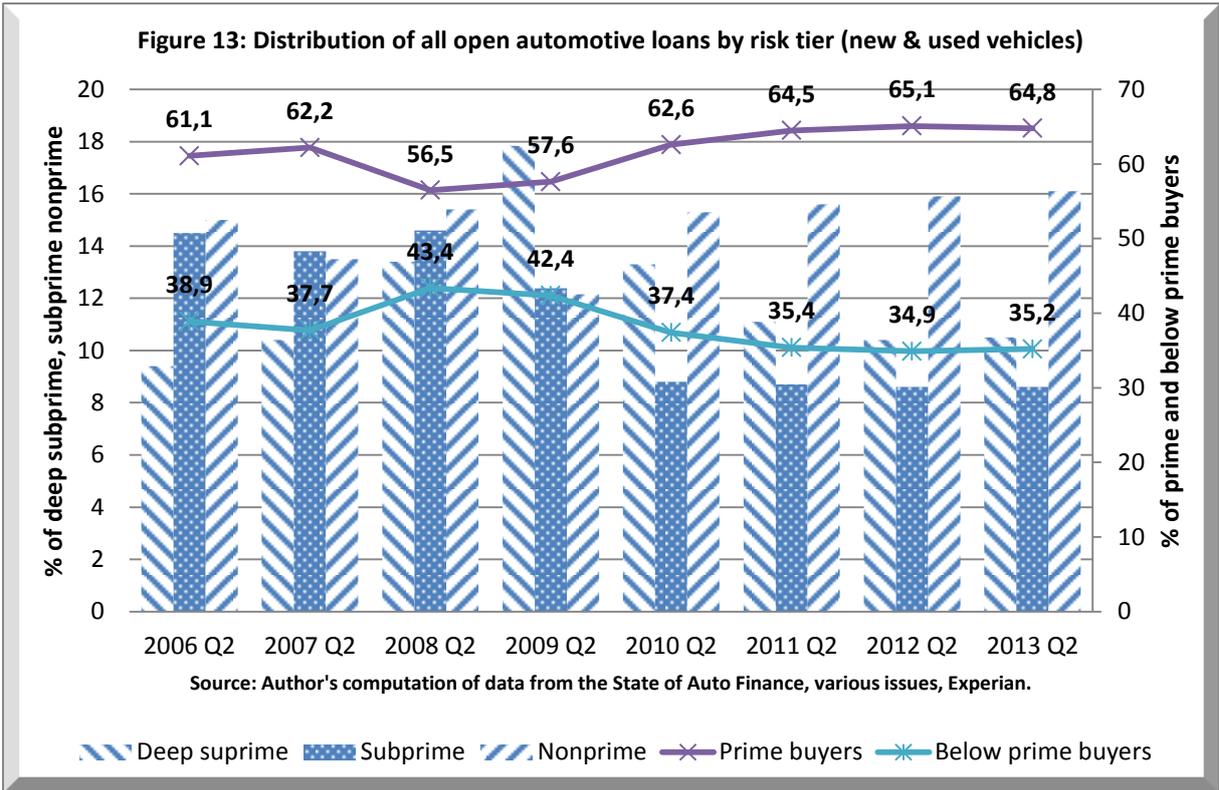
- ◆ Total Motor Vehicle Outlays
- New motor vehicles
- ▲ Net purchases of used motor vehicles
- × Motor vehicle services

Figure 12: Towards a saturation of the automobile market? 1950-2011



Source: US Department of Energy, Transportation Energy Data Book - Edition 32, 2013, Table 8.1

- ◆ Percentage of licenced drivers per resident habitant
- Number of vehicles in operation per licenced drivers



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