

# Reasons for decline and Strategies for Re-emerge of American Manufacturing Industries: The Case of Motor City Detroit

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## 1. Introduction

The thriving of the U.S. manufacturing sectors of the post-war era had created the economic boom and the rise of middle bule-collar class in last century, which made America the most prosperous country on this planet. However, it seems that the golden age of manufacturing is over. [Figure 1] Fort, Pierce, et al. (47) pointed that the employment rate of manufacturing industries kept swiftly increasing since 1948 and reached a summit at approximately 20 percent, whereas it began to experience a sharp decline since 1998 even reached less than half of the level of 2010, [Figure 2] in addition to the fluctuation of added-value of manufacturing, which is also unsatisfactory.

Making the America's manufacturing great again is vital to realize the American dream. As Stettner and Yudken (86-88) claimed that manufacturing is still the main source of jobs, and it drives the overall economic growth and innovation. Maybe Detroit in Michigan is a good case to analyze the reasons for decline of manufacturing and explore potential opportunities of revitalization. Detroit used to be the fifth metropolis of America, but it degenerated into bankruptcy in 2013, becoming the largest municipal bankruptcy in U.S. history. According to Boyle (109), Detroit was an industrial center the envy of the world since 1900s, however, it became the label of city desolation in the second half of 20th century. This paper dedicates to discuss the reasons for the Detroit's decay and bankruptcy, and the

possible ways making Motown glorious again, which will provide references for American manufacturing renaissance.

Figure 1

**US Employment and Value Added within and outside Manufacturing**

A: Employment, 1948–2016  
(millions of workers)

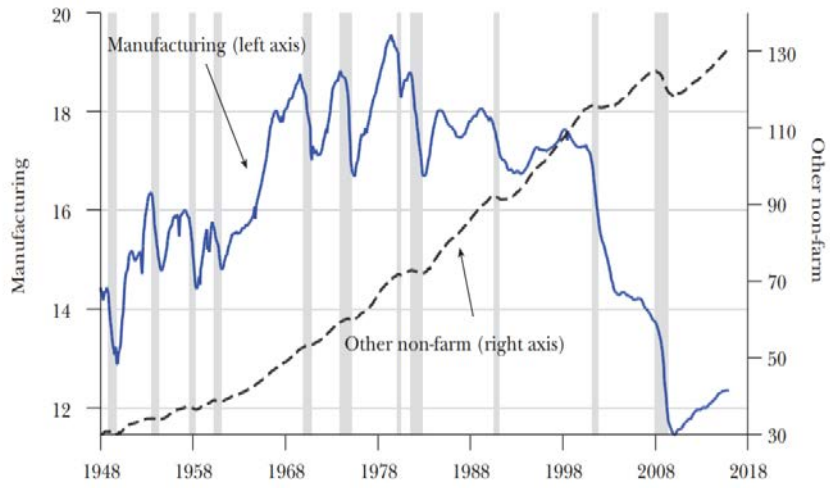


Figure 2



Note: The employment data [Figure 1] are presented by the US Bureau of Labor Statistics, and the real value-added [Figure 2] data are from NBER-CES Manufacturing Industry Database (qtd. in Fort, Pierce, et al. 48).

## 2. Literature Review

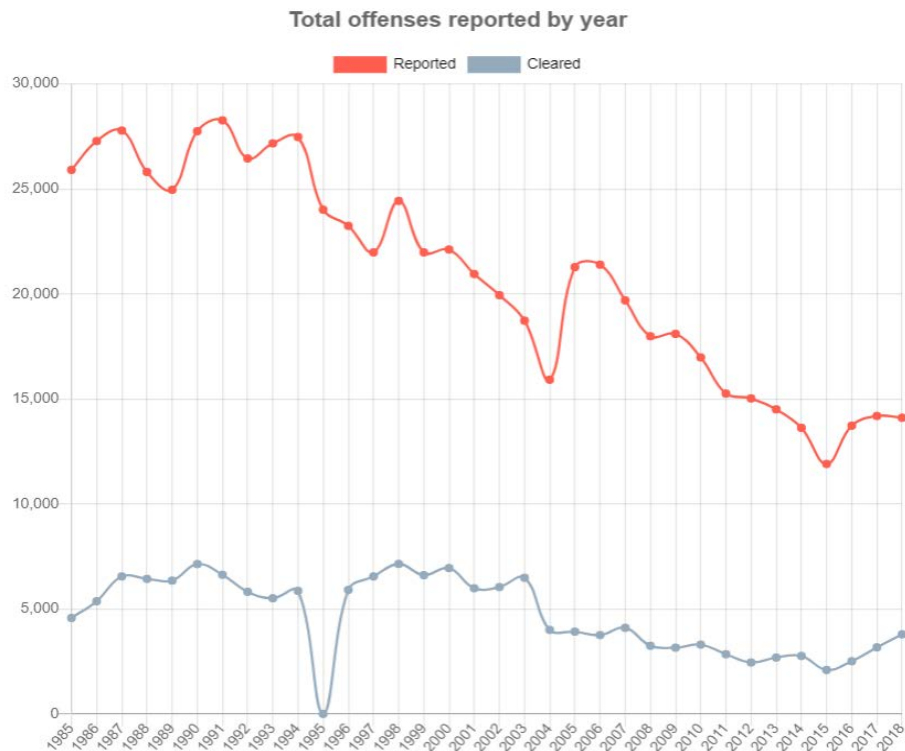
McGraw (290) introduced the status quo in Detroit, it will be clearer to present it with data. Previous researches like Naglick, et al. (4-5) have pointed out that the reasons for Detroit's bankruptcy could be mainly concluded as 'one industry manufacturing city', 'demographic change', and 'highly community segregation', which are conventional. At the same time, it seems that the movements United Automobile Workers (UAW) and Treaty of Detroit are worth mentioning. Maybe that was one of the fatalist reasons that the 3 major corporations made the negative decisions. In addition to the Racial Riots in 1967, which had deadly attack Detroit. In terms of potential reconstruction measures, Stettner and Yudken (95) proposed the methods of 'Smart Manufacturing' and 'Innovation Clusters'. It seems the crime reducing is foundation of developing but this is what they did not mention. Moreover, maybe improving the quality of labor force by upgrading educational condition and providing training could be considered as the long-term strategy.

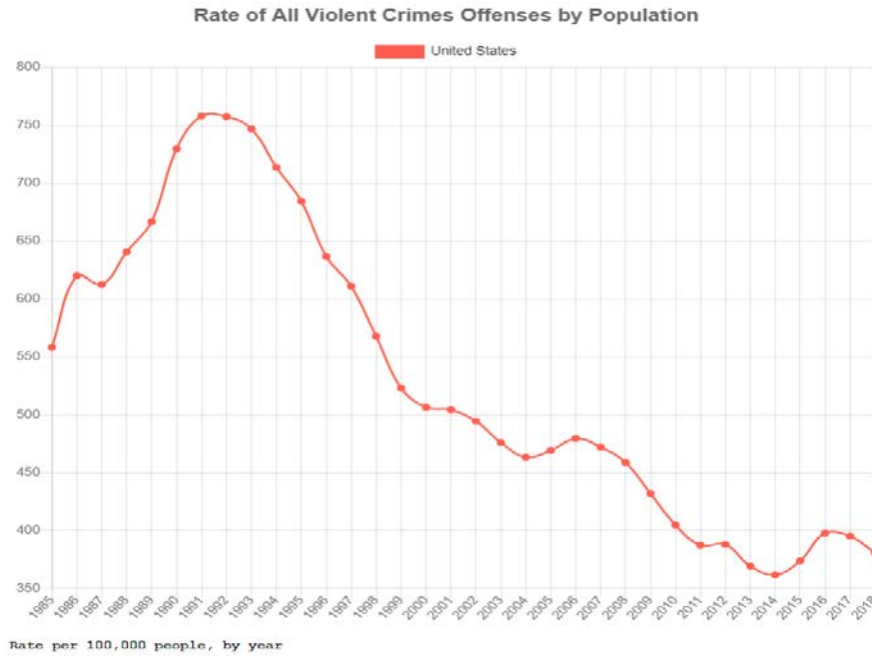
### 3. Body paragraph

#### 3.1 Status Quo of Detroit

According to McGraw (290), despite the current uprising central business district, crime, poverty and unemployment, nothing illustrates Detroit's decay better than them. To begin with criminal rate. [Figure 3] According to the data from 1985 to 2018 presented by FBI Crime Date Explorer, it can be calculated that the criminal rate of Detroit approximately ranging from 1.767% to 2.727%, whereas the rate for the whole United States lies between 0.361% and 0.758%. It is obvious that the level of Detroit's crime rate is much higher than the national average level.

Figure 3





In terms of unemployment and poverty, in 2009, unemployment rate peaked at 24.9 percent and the percentage of Detroit's habitants who were living under the official poverty line was 36.2 (Roe 2). In addition, [Figure 4] as the data given by Guerrieri, et al. (122), the median household income growth rate for 1980-2005/2009 in Chicago had been kept constantly increasing. However, Detroit had kept heading for a sadly opposite direction.

Figure 4

Panel B. 1980–2005/2009 percent growth in median household income

Detroit	Chicago	Average across broad set of comparison cities
-13.7	61.0	42.6
-13.8	30.4	31.0
-13.7	11.8	23.0
-18.6	12.3	19.0
-27.0	24.5	25.2
-28.5	4.2	20.5
-26.8	14.1	21.3
-22.1	24.8	34.1
-23.4	34.8	37.8
-4.3	39.5	52.3

Note: Figure was presented by Guerrieri, et al. (122).

Moreover, Boyle (110) also said that “Detroit is the only city in the nation where single parents head the majority of families” and Lee et al. (438) claimed that the poverty and social instability had significantly debased the quality of public education. To sum up, Detroit is still facing the severe problems of unemployment, crime, poverty and poor educational equality, which will significantly restrict its development.

### 3.2 Reasons for Detroit’s Decline

First, Detroit is a single industry town, which will take the risk of economic fragility. Detroit’s economic development highly relied on heavy industrial manufacturing, especially taking the automobile industry as center. According to Naglick, et al. (4), the cyclical theory could be applied to heavy manufacturing activities. The theory argues that the economy like Detroit would experience relatively regular economic expansions and contractions. Moreover, Ford Motor Company, General Motor Corporation and Chrysler Corporation were called 3-big

companies, which occupied the majority of the market share. The 3-big made Detroit the automobile manufacturing center of the U.S., and shaped the Detroit's character, and even determined the city's destiny (Hyde 57). Furthermore, the automobile industry also could provide huge development room for other industries, like steel, glass, oil, oil varnish, rubber, vehicle maintenance and auto wash, even air-conditioner and CDs. According to Hill (2), in Detroit, roughly one-fourths of retailers worked for automobile industry and nearly 16.67 percent of business made profits by coping with motor vehicles. Therefore, in Detroit, the fluctuation of the automobile industry, especially the undulation of the 3-big companies will have a great impact on the urban prosperity and stability.

Second, market shrink caused by the international challenge, especially from Europe and Japan. After the Second World War, the old manufacturing empires like Europe and Japan did not have the capacity to compete for the international market share with America, because their industrial bases were relentlessly destroyed by war. According to the data released by United States Bureau of Transportation Statistics, in 1961, the U.S. produced 6.7 million automobiles in total, including both cars and trucks, approximately occupied 43.8 percent of the world output. It was obvious that the American automobile industry represented by Detroit was the dominant one in the world at that time. However, in the next following 3 decades, the American share of market separately plummeted to 32.0, 21.4 and 18.6 percent in 1971, 1981 and 1991 (United States Bureau of Transportation Statistics). The automobile manufacturing in Europe and Japan kept efficiently capturing shares of markets, which made the 3-big companies become decreasingly competitive and be in a horribly embarrassing financial position. In 2009, even the federal government stand out preventing General Motors and Chrysler's collapse (Goolsbee and Krueger 10-12).

Third, UAW's grand bargain and the major corporations' inappropriate policies. With the rapid development of the automobile industry in Detroit, the organizations of autoworkers from different companies also got handsome opportunities to form and grow up, and Boyle (110) pointed out the United Automobile Workers (UAW) was the most famous one. Since the 1940s, under the leadership of the long-incumbency president Walter Reuther, the UAW and auto corporations reached an agreement, which was called the Treaty of Detroit. Since then, the members of

the UAW got the highest salaries and welfares among their industry in this country, but they sacrificed their rights of participating and intervening the companies' decision-making. A good example of the adverse outcome of Detroit Treaty was the financial speculation of GM. McNally (159) said "financial derivatives were created as a hedge against the currency fluctuations caused by the market deregulations of the 1970s". Furthermore, Cowie (311) said "derivatives will accelerate economic instability by making it possible for companies to make money by betting on the future value of almost anything and thus stimulating a flood of capital into finance rather than production". The General Motors Acceptance Corporation (GMAC) was created to finance the GM dealers and car buyers, and the Residential Capital (ResCap) was set for branching out GMAC's business to finance house mortgages. According to Ingrassia (159-160), not long after the running of two derivatives, 70 percent of corporate income was from the two derivatives, which made the GM management officials think mortgages were more profitable than selling cars until GM lost 1.8 billion dollars on the loans it had issued. Therefore, one of the negative results of grand bargain is the executive officials of companies will have rights to devise policies without thinking too much for the public good. Apparently, giving advantages on financial derivatives will decrease the job positions of manufacturing labors, but the labors cannot prevent it.

Fourth, race riots and demographic change. The first half of the twentieth century was Detroit's golden age, and population growth was also skyrocketing. According to United States Census Bureau, the population in Detroit was 286,000 in 1900. Half a century later, in 1950, Detroit's population culminated at 1,850,000. At the same time, the increasing population made Detroit embrace an expansion. As Hill from Detroitgraphy.com noted, Detroit's encompassing borders had grown to 140 million square miles since the population boom in the first half of 1900s. Nevertheless, Detroit was a city of highly racial segregation. It was hard for African-Americans to buy houses in the same community as the white people, and black labors could not be treated equally, and there were segregated schools for black students and their funds were usually curtailed. There were always racial conflicts caused by the discrimination and segregation in Detroit and many white citizens tent to leave for peaceful places. Finally, the pent-up of racial conflicts fiercely erupted at the Racial Riots in 1967, which dramatically accelerated the metropolis' population loss to suburbs. Besides, government implemented some housing and transporting policies



facilitating white wealthy citizens' leaving, which could be described as the catalyst for Detroit's population loss. United States Bureau of the Census reports that Detroit began the twenty-first century with 951,270 residents, its lowest population since 1910. As a result, Detroit is suffering from the problem of population loss, which accompanied by several syndromes. The first one is city vacancy. McGraw (293) presented that the urban population density was 14,400 people per square mile, whereas the figure of current years is approximately 6,500, there are more than 60 square miles vacant land. In addition, LeDuff (236) said "By the time Detroit declared bankruptcy in 2013, the city was 40 percent vacant". Therefore, the problem is that Detroit still needs to maintain a large scale of budget providing city services, but which seems to be a waste. For example, the city is geographically large requiring to be covered by a good deal of police, city-clean and fire-control resources, but it is hard to provide effective services in such a vast territory with a sparse population, but which still will cost a lot of money. The second one is the reduction of tax revenues. In terms of direct tax revenues, less population link with less taxpayers paying less income taxes, and more abounded possessions mean less property taxes. With respect to the indirect revenues, less population mean less investment, less consumers, less businesses and less production. Both the indirect and direct taxes revenues contribute to the deduction of city's fiscal revenues. According to financial report released by the Office of the Chief Financial Officer, City of Detroit, "Detroit's total revenues (measured in 2013 dollars) fell from approximately \$1.35 billion at its peak in 1972 to only \$650 million in 2013".

In summary, the rising of Europe and Japan auto manufacturing would squeeze the living space of Detroit companies and companies' oligarchic strategies-making would also lead to a sequence of negative results. Besides, the population loss would induce the corporations' customer churn and high-skilled labors drainage. Therefore, Detroit's auto industry experienced grave losses, so some of them applied the court for bankruptcy or made the adjustments of contraction, which implied the massive unemployment, not only for the companies' labors, but for all the auto-related industries because of the mode of single-industrial system. People lost their jobs and incomes, but neither government nor private sectors could afford people's salvage money or old-age pension, that is why so many people live below the poverty line. Moreover, it seems that unemployment and poverty will increase social instability, maybe that is the reason why Detroit has long been criticized for its crime. Finally,

both the huge expansion on public services and the deduction of tax revenues contribute to the increase in the Detroit's financial burden, which worsened poverty and curtailed public education's expenditure. According to Lori from Detroit Free Press, Detroit's public education system one of the worst in this country.

### **3.3 Possible Solutions**

Fighting and reducing crime. Schrantz (92) noted that one of the most remarkable presidential campaign themes in 2016 was reducing crime and prison population. The security condition in Detroit had been deteriorated since the racial riots in 1967, which made affluent whites leave Detroit with their possessions and people were less willing to invest in Detroit. Therefore, it is necessary for the revival of Detroit to make the security condition better. First, Detroit's police department could build partnerships with the Ministry of Veterans Affairs (VA), recruiting veterans into the police force. On the one hand, it will significantly strengthen the police force. On the other hand, it can share the VA's burden of arranging veterans. Second, helping prisoner reentry the society is of extreme significance. It is not only a supplementary of social labor resources, but a reduction of recidivism. Prison system could build partnerships with private companies or city infrastructure sector, and they can provide job training or help prisoners get education during their prison stay, which will increase the likelihood termers getting employed after being released. As Fleisher (136) stated that there is a huge positive correlation between low income caused by unemployment and crime rate. Therefore, it seems that helping persons who have completed their sentences to get jobs will decrease their possibilities of re-offending. Finally, it is truly necessary for police department, judicial and justice system to build the belief of life-long-learning. They should catch every opportunity to learn the most effective approach and apply the most advanced technology or devices to fight against and reduce crime.

Constructing multi-pillar economic system and stimulating residents' employment. First, as mentioned above, single industry system will deal a fatal blow to Detroit. Therefore, it is necessary to create the atmosphere of industrial diversity, like supporting the development of emerging industries of services, medical technologies, informational or electronic industries. On the one hand, multi-pillar system will make Detroit's economy be more elastic. On the other hand, the methods of building the multi-pillar economic system, like encouraging

entrepreneurship or attracting investments will significantly create more jobs. Second, safeguarding local employment needs to be seriously considered. It seems that the idea of public grant in the general election under the Federal Election Campaign Act (FECA) is a good reference. According to Ansolabehere (40), under the FECA, the two major-party candidates in the general election can receive a public grant for all their election expenses, but they cannot raise any additional money from individuals, PACs, or party committees, and they can use only public funds for campaign expenses. In a similar way, Detroit city government could introduce some taxes concessions or financial subsidies for local enterprises who apply for them and enterprises need to make compromises. For example, the business who get the government incentives must hire a certain proportional set by government of residents as their employees and the figure should vary based on the structure of labors' working capacity. Considering Detroit's situation, the amount of low-end assembly line labors should be much more than the advanced technology researchers or seasoned managers. Therefore, for the labor-intensive industries who have gotten the supporting, the proportion could be like 80 percent or no less than half, and the restrictions for the technology or intelligence-oriented occupations should be relaxed. The proportion set by government should not be inflexible or formalistic, so it would be better for city government to establish a specific business incentives office to evaluate enterprises' application and calculate the proportion that the company should take based on physical truth. Moreover, businesses' undertaking the qualified emancipists or providing training opportunities for termers could also be taken into consideration by the office. But at the same time, the intimate interactions between public and private sectors in terms of money will easily cause the bribery and corruption, so the supervision on this office is of seriously importance.

Strategy of 'Smart Manufacturing' and 'Innovation Clusters'. Deloitte concluded that the missions of innovation stimulating policies on domestic manufacturing enterprises should promote the transformation of traditional manufacturing structure into scalable, cost-effective, and technology-advanced (qtd.in Stettner and Yudken 95). First, government's expanding investment and research institutes' enhancing cooperation. Government should constantly increase budget on investing in both research universities and businesses' R&D centers, which will promote innovation and advanced technologies to create job opportunities and new economic growth

points. At the same time, as Hannigan, et al. (618) had pointed out that government should pay attention to coordinate the partnerships between research institutions and businesses, which will help dissolve the barriers among different scientific disciplines and the gaps between researching, application and commercialization. In other words, this is the notion of ‘Innovation Clusters’ contributed by close cooperation between R&D and production. It is the synergetic networks of multiple stakeholders who work for a specific sector and enjoy geographical proximity, in which can include supplying chains, government agencies, scientific research institutions, thinking tanks, manufacturers and universities. Take the Toledo project as an example, which is the Ohio’s photovoltaics cluster built on its conventional strong industry of glass manufacturing. Toledo project was modeled on the successful Germany applied research called Fraunhofer-Gesellschaft program, which integrated the resources of government, universities, different types of companies to engage in research, innovation, even workforce education and training in spheres of robotic engineering, lightweight metals or other advanced manufacturing areas. The Toledo project makes Ohio a remarkable example of manufacturing revival, which made Ohio get the name of ‘phoenix city’. As U.S. Senator Sherrod Brown proclaimed: “To call us Rust Belt demeans our work and diminishes who we are. Today’s factories in Ohio and around the country are not rusting, they’re innovative, they’re high tech plants” (qtd. in Stettner and Yudken 95). Therefore, Detroit could try to establish a project of innovation cluster based on its traditional powerful autonomous industry by increasing investment in innovation and integrating resources to build the innovation clusters. Maybe the new energy automobile research and manufacturing will be a good orientation for Detroit’s construction of innovation clusters.

Education and workers’ training. Bonvillian (28) expressed that continuous improvement in the quality of the workforce contributes to the constant progressive economic and industrial performance. Apparently, ever-increasing level of labors’ skill could be achieved by higher education or training. To begin with Detroit’s education. As Lori from Detroit Free Press reported that Detroit’s education system is counted as one of the poorest-performing in the United States, and one of the uppermost reasons is poverty. Therefore, it seems that government’s education supporting will be the most important method and the ways of stimulating residents’ employment could be a model. First, government could combine with public or

private banks to issue some loans to students who are in need with low or without interest. There is one point needed to mention. The student loan must be issued to students who are really in need, because there must be some students pretending that they are suffering a miserable life, which arises teachers' sympathy, but these students are just good actors rather than being in the genuine dilemma. Second, government and universities could sign agreements with students that exempting students from tuitions and issuing basic allowance, even supporting them studying in graduate school of any other school, but students must be back working in Detroit even a specific job, or paying huge liquidated damages. To cope with such a complex work, maybe a new government agency who is in charge of student loan and its candidates' background check, and the signing of tuitions-free contracts is necessarily needed. Finally, companies could provide their employees on-job or off-job training, or it could be described as an investment. Employee training will promote the employees' mastery of new ideas and technologies, which will increase their working efficiency and involvement (Pallansch, et al. 6). For companies, they could build an internal training system or sent some of their employees to universities learning new technologies or management skills. For government, officials and civil servants could also be sent to schools for further learning. In addition, government could encourage personnel of university, government and enterprises to exchange, working in an unfamiliar environment for a period, which will induce a better cooperation.

#### **4. Conclusion**

In conclusion, the reasons for Detroit's decline can be mainly attributed to 4 points. First, its single industry economic system, whose inelastic character is hard to afford the pressure of massive economic contraction. Second, the challenge from the rising industrial powers, like Japan and Europe. In the 1960s, the American automobiles manufacturing represented by Detroit could share approximately 44 percent of the global market, but this figure shrank to less than 19 percent although the total output had significantly increased. Third, the UAW's grand bargain with automobile manufacturers deprived workers' right to participate in company decision-making, which enabled the enterprises' management teams implemented the hazardous speculation policy, like GMAC and ResCap. Finally, the racial

conflicts culminated at the Racial Riots in 1976 giving rise to the horrible population loss and perennial public security problems.

At the same time, there seems to be 4 possible solutions to make motor city glorious again. The first one is coping with crime, which includes enforcing police by employing ex-soldiers and reducing recidivism by providing termers education or job training in order to help them start a new life. Second, ending the situation of single industry system and facilitating employment. Building multi-pillar system will enhance economic elasticity and creating more jobs, and government could ask businesses carrying out obligations of absorbing local labor force by giving fiscal support. Third, building the system of smart manufacturing and innovation clusters centering on the new energy automobile industry by modeling on the successful cases of Toledo project in Ohio and Fraunhofer-Gesellschaft program in Germany. The last but not the least one is improving labor force's quality, which can be achieved by increasing education level and providing employee training.

The research on the broken city Detroit will bring at least 4 benefits. First, it will help get Detroit out of dilemma. The former prosperous motor city is suffering from a lot of the post-industrial city problems, like unemployment, population loss, environmental degradation, violence crime and terrible economic condition. Apparently, solving the Detroit problem will create a better life for Detroit people. Second, Detroit's decay could be considered as a cautionary tale to alarm other cities, even countries. Every city or a nation, should be alert to dangers even in times of calm and prosperity. It seems that the bankruptcy of global automobile center that makes the whole world jealous is certainly unanticipated. It is hard to say whether the magnificent New York city or Chicago will become the second Detroit. It is also hard to predict whether riding high American financial, internet and informational industries will become the industries of horrible decay and unemployment. In addition, it is hard to tell whether American will maintain its global hegemony in the future, just like the sunset of empire on which the sun never sets. Third, effective policies of Detroit's revitalization could provide reference of other post-industrial cities around the world, like old-industrial bases in China, Ruhr region in Germany and Kitakyushu industrial zone in Japan. Finally, the successful strategies for reinvigorating Detroit will be the vivid and pragmatic model on American manufacturing, which will create billions of jobs and promote the national

innovation. In addition, the flourish of manufacturing will accelerate the rise of the middle class and their more active participation in democratic politics, which will realize the American dream and make the United States great again.

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