The Modern Transformation of the Traditional Civilization: An Interpretation in Terms of Public Economics

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The path and causes of civilization transformation have drawn much of attentions in social scientists. However, with the individualism methodology, the Neo-classic economics cannot explain the rise of the modern civilizations. Starting from group surviving, we analyze the logic in collective actions during the transformation of civilization, basing on the law of the supply and demand of public goods, with collectivism methodology. Along the way to define the civilization with the public economic system by Song (2015a), we interpret the dynamics of civilization transformation with the effort to meet the survival challenge by the people in those periphery areas, and then to shift the structure of public goods to meet some new demands. Finally, we conclude that the transformation of civilization is the result of a try to meet the challenge the group survival faced, the happening of the modern civilization relies upon the achievement of making decision efficiency and enforcement efficiency at the same time. And the new system is the result of the efforts in willingly designing effective public economic system by elites, and comes from the social evolution through the institutional competition. However, during this process, the mode of elites’ altruism action and collective survival concerns supplies a very important theoretical basis for the explanation of civilization transformation and the failure of the anti-poverty policy by the World Bank.

Key words: Institutional Change, Public Economy, Civilization Transformation

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I. Introduction: The Puzzle in the Theory of Civilization Transformation

There is still no consensus in understanding the transformation from the traditional civilization to the modern one, even it is a very popular common idea in the world to appreciate the modern civilization and try to establish it all the world. The scholars have been not satisfying with the interpretation of the powerful rise of China and other Golden Bricks through the development strategy of state-led, and the failure of the help in those poorest countries by the World Bank with the market economic ideas, on the one hand; it has led to the further rethinking about the nature of the modern civilization that the finance crisis result in the decline of the economic growth and the break of the benefits conflict, on the other hand. Among others, the inequality of the distribution of wealth and income and the repeated failure of anti-poverty policy by the World Bank and developed countries (Deaton, 2016) have resulted in the doubts of economists (Piketty, 2014) on the justice of the modern economic system, while the non-rationality activities\(^1\) of politicians embodied in the process of solving conflicts frequently induced the reflection of scholars (Caplan, 2007) on the “Myth of Rational voter” in terms of the neo-classical economics in the modern time of market economy.

Indeed, though there is a huge progress in modern economic development, but no matching progress in the development of economic theory which focus on the topics of anti-poverty or the economic development in those poor countries. Not only were there no a convincingly explanation of the civilization transformation, even no a definition of modern civilization in terms of development economics until recent past (Song, 2015a). As an economic theory frame just focuses on the market economy, the Neo-classical economics once enjoyed a great success, and stick to the skillfully precise description of the market economic activities after the transformation, with the ignorance of the interpretation of the process of the birth of the modern civilization. With a brilliant reputation, the New institutional school seems to success in explaining the rise of the modern economy, and even improves its validity with the extension of

\(^1\) The spread of protectionism, nationalism, terrorism and popularism and the rise of right politics.
institutions from the property right system to the parliaments, from the characteristics of institutions, such as open, inclusive, to the general institutions (North, 1973; North and Thomas, 1976; Acemoglu and Robinson, 2008; Ogilvie and Carus, 2014), however, neither did their works discuss convincingly the failure of the Holland and Wurttemberg in the economic growth and defense (Mokyr, 1999, 2000; Kindleberger, 1975; Epstein, 2011; Ogilvie and Carus, 2014; Song, 2015b), nor the conflicts of group benefits among different groups, because the people outside of the general system (such as the system in the United States) cannot enjoy the windfall of those excellent institutions, and/or even a basic food supply in a modern times. As one of classical schools, Marxism economics aimed to analyze the flaws of the market economy, and pointed strictly out that there is a structural contradiction and logic mismatch between the modern production or the industrial manufacturing and the various consumption from the market mechanism. They have earned a reputation with a serious critique on the market mechanism based on their sympathy to poor people, but not yet extend to the improvement and construction of the modern civilization. The success of socialism in the last century seemed to show a success of the theory, however, the overlook of the basic pre-condition of the Marxism economics and the misunderstanding of the nature of the modern economy made the school of Marxism economics met the hit from the failure of the practice of socialism constructions in the end of the last century.

Of course, the cause why the Neo-classical economists could not make some contributions to the explanation of the transformation to the modern economy is that the powerful modern economics developed under the influence of Europe-centralism, neither made a carefully analysis on the process of the origin itself of the modern economy which born in the Britain and matured in the United States, nor investigated the details of the successful experiences of those agricultural civilizations which had stood for thousands of years, then led to a misunderstanding on the nature and relations of Mercantilism and Physiocracy in academy. As a result, the modern

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1 Both of the Physiocracy which stress on agriculture and Mercantilism which emphasize on the international trade are some principles generalized from those people who enquired the way of his group to survive under...
economists did not contribute an enough part to investigate the process of civilization transformation while economic historians frequently find the facts during the birth of modern economy recently (Hobson, 2009; Zhao, 2005). Similarly, those scholars having been criticizing on the flaws of market system, factually misunderstood the nature of the problems faced by Marxism economists, therefore were unwilling to seek the solutions to these problems in the process of the modern economic development, but tried to delete the problems by withdraw from the modern economic development.

Just because of the lack of transformation theory, the reform in China have to “passing river through touching stones”, that is, step by looking at next step. In virtue of the decision to reform made from the hate on the low efficiency of the planning economy, the introduction of market economy and the stress on the selfish individualism seemed to be the best choices, and led to the summit in 2002 when China entered WTO to enjoy the benefit of the global trade system. However, both of the mature of the market system and the worsening of international competition soon made it appeared again the social economic problems on which Karl Marx focused once. And the conflicts among interest groups have been going up rapidly. The followers of traditional Marxism economics drew lots of attentions from populace and weak groups with the social critiques, even they did not contribute any innovation in theory. Absolutely, the simple debate between the right and the left is not able to guide the inquiry to the real transformation process to the modern economy, to the contrasts, it even brings decision-makers some negative influence. Obviously, an economic theory which can figure out the reasons of modern economic transformation is necessarily urgent to protect the reform in those developing countries from trapping in the dilemma between totally Westernization and complete retreat.

It is expected that the new theory not only can explain the origin of the western

certain conditions then and there. However, in the popular system of contemporary modern market economics coming from Adam Smith, Physiocracy is a contrast to Mercantilism, or in other words, Mercantilism, as a theory or principle, is previous to Physiocracy in the system of Europe-centralism. But in the perspective of global world, whatever as a viewpoint of public economics or as a strategy of state governance, Physiocracy had existed in Ancient China before the Qin Dynasty.

1 It is observed in developing and developed economies by Piketty (2015).
modern economy from the inside of the traditional economy, but also can help us to understand the continuing domination of the traditional agricultural civilization in the east areas. Furtherly, it should also interpret the failure of good policy (such as anti-poverty by the World Bank) and the benefits conflicts in the market economy which were observed by Karl Marx and Piketty (2015), and be in according with the system and conceptions of history, in order to contributing some intelligences for the efforts of the elites who try to transform the traditional civilization in undeveloped countries to a modern economy. To do so, we start with a new definition of civilization from the perspective of public economics by Song (2015a), then to analyze the economic efficiency logic, the survival struggle logic, collective action logic and dynamic mechanism or path of the transformation from the traditional agricultural civilization to the modern market economy basing on the effort of people in those periphery areas to meet the survival challenge and the law of structural change of public goods demand. We found that both of the agricultural civilization and the modern civilization are successful public economic system in group survival, even on the separate way, that is, Physiocracy and Mercantilism. As a result of long practices, the traditional civilization leads to the rapid increase of population based on its inside order and enforcement efficiency, but fails to defense its security from the outside invasion, especially those from nomads. The modern civilization leads to the development of market economy and the breakthrough of industrial revolution because of its ability to defeat their enemy and to provide developmental public goods based on the effectiveness from the match of the supply and demand of public goods, then brought the rushing of GDP per capita, but has been troubled frequently in the interests conflicts and economic crisis coming from the disappearance of collectivism and altruism moral, and back to the start point again and again to exercise the survival struggle by fighting or wars.

II. Redefinition of Civilization: Based on the Perspective of Public Economy and System Change

2.1 The ignorance of the modern economics on the investigation of civilization evolution
Even though the modern theory of market economy provides a perfect description of the private economic activities in market system, there is no enough attention being paid to the construction of market system which in fact is a public goods provided by states (Epstein, 2000). As a popular knowledge, in *An Inquiry into the Nature and Causes of the Wealth of Nations*, Adam Smith, on the one hand, assumed an economic person with the preference to exchange goods with others in a business society (Morgan, 2006); he also analyzed the real people in nations who concern more about the survival goal, on the other hand. About the later, he even pointed out correctly that defense is a more important goal than the wealth (see cited by Olson, 1963).

Indeed, without the worry about subsistence, the assumed economic person can willingly pursue to the goal of the profit-maximization in the market economy. However, as a real people lives in a national state or any other group, he have to concern the survival problem firstly, and overlooks the efficiency and rationality of market economy. In the earlier stage of human society, the possibility of individuals to survive is heavily upon the collective action by their group for their disability in survival struggle, therefore, the economic theory to explain the economic activities of those general people or most people has to be drawn from the material incentive and the individual actions to the subsistence and those collective actions as members of a group. Factually, as an example of classical political economy, both of the theory of class struggle from Marx and the population theory from Malthus once emphasized on the importance of survival struggle and the logic of collective action as a group.

At the same time, because the subsistence of human being is considered as a physiological phenomenon, the accounting of population is a very reliable method to measure and compare the size of the survival economies. Opposite to this, all the happiness in mind, the preference and the utilization in market, which is the base of price, are psychological phenomenon which are unstable, subjective and waving basing on the time, the location and emotion of the economic person. Therefore, the additivity, aggregation and comparison of market economy face lots of technical problems which are hardly overcome. As a result of those efforts, the Edgeworth Box
is assumed to deal with the comparison between two goods, however, the simple comparison in a two-dimensions space make it to be a meagre sandbag against the rising water of those complicated economic problems in real market, especially in a global market. Just for this, the modern economists (Hicks, 1967) have to recognize that there are indeed some phenomenon among human economic activities cannot be explained by the market economic theory. Even more, these activities which cannot be explained by the market economics not only existed independently previous to the market economy, but also decided the appearance of market system or the birth of the modern civilization.

In fact, in the early stage of human society, it is almost impossible that a person survive individually because of the limitation of technology and skills, so that the collective survival in a group is becoming the first necessary public goods for human society, which is still a present fact in those less-developed areas, such as Africa, even the limitation changed and the help increased from outside based on market system (Deaton, 2016). Of course, according to the public economics, all economic activities to provide public goods are public economic actions. In other words, most of human economic activities factually started from these public economic behaviors, and the institutionalization of the mode of public economic activities predicted the birth of the ancient civilization and the change of policy in anti-poverty in the future. All those organizations, such as the local villages, the tribal meeting in those nomadic society and the irrigation system in agricultural society, are the examples that human beings made their efforts to investigate the way leading to the civilization or the better situation to live on. However, only when the population increased greatly because of the rise of the survival ability, the struggle between different people evolved to be the major challenge to the human subsistence, then the social structure and the public economic system dealing with both of the inside and outside complex relationship of people become the mainstream in the investigating the way to the civilization or the guarantee of the weak or poor people to survive.

In the process of investigation, the first challenge coming from the increase of population is the inner coordination, that is, the unitization of different arguments in
making decisions will be more and more difficult when the size of group is becoming bigger and bigger, the separation of group gradually appears. With the continued increase of population and the frequent separation of groups, the competitions between human groups in dominating natural resources will be the major challenges, the relations of geo-politics start to be tensional ones. Even the progress of technology, such as the improvement of tools, as the relations between human and nature, often relax the tension of geo-politics, the challenges from and the solutions to meet those relations between struggling human groups is still becoming the main irreversible dynamics of civilization evolution. With the deeper understanding the way of group competition, the elites in every group realized soon and later that the size of group is critical to the defense ability and the collective survival ability of group, so the inner extension and outside integration of human societies or groups become the typical characteristics of the evolution of human civilization. Based on this situation, both of the property right system to deal with the inside relationship and the sovereignty structure to meet the outside challenges rapidly were developed to be the center part of the society structure in the early civilization. At the same time, the efforts of elites are also reflected in the birth of Greece Philosophy, the religions in the Middle East and the Confucianism in the Ancient China, which focused on the relations between different human groups, and exercised a very important influence on the happening of civilized society.

It is unbelievable that, however, the modern mainstream economics, which exists almost everywhere, shows an incomprehensible ignorance on the field of collective game process and survival struggle actions which bred human civilizations, except for the efforts by institutional economists. Unfortunately, the modern economists always utilize the market economic index and modern economic theory to measure and analyze the poor people’ economic behaviors (Deaton, 2016), even though those poor people possibly act habitually as a member of a group to survive. Similarly, the interpretation about the rise of the west civilization from neo-institutional economists (North, 1973, 1976) just basing their argument on property right system also cannot make the readers satisfied (Olson, 1982), then, the fiscal historians, such as Bonney
(1999, 1995), O’Brien (2012,2011), Song (2015b) and Epstein (2000) began to stress on the role of sovereignty and fiscal structure in the transformation of modern civilization in the west. As an extension of their efforts, some Chinese scholars made some similar analysis on the happening of Yellow River civilization in the Ancient China (He, 2013; Hsu, 2009; Zhao,2006; Zhao, 2005). All these analysis show that it is likely a helpful trying to explain the civilization evolution from the perspective of public economics. This paper is an extension of their efforts. We will analyze the collective survival action of human in groups in terms of public economics, then try to figure out the causes to decide the appearance of market system, which consist of the basis of modern economy.

2.2. The definition of civilization in terms of public economics

About civilization, even in one field, there are still lots of arguments about its nature. However, we do know that most scholars in different fields agree to use the same conception and use it to discuss some similar phenomenon, that is to say, at least they have some same ideas about the civilization. For example, they all agree at that civilization is a situation, in which one person cannot survive individually, then the cooperation in groups is necessaryand efficient (Sheng Hong, 1999; Zhang Yan, 2004). Again, for instance, civilization is a mode of action, by which the subsistence of one group co-exists with the subsistence of other groups, then the geo-political structure is necessary to the evolution of civilization.

Of course, both of the cooperation inside of the group and the co-existence of different groups are achieved in the process of the collective survival competition, therefore, the evolution of civilization and the co-existence of different groups need to develop some effective social structure, with the conditions of the continuing increase of population and the constant resources. Fortunately, not only the modern powers based on two-way exchange fiscal system in the national states, but the traditional powers based on one way coercionfiscal system in an empire state also provide an institutional support to the birth of civilization, and then bred some ancient civilizations on the mode of agricultural production and some modern civilizations on the mode of industrial production.
Indeed, before the birth of the formal public economic mechanism, the people in different areas of the globe tried various possibilities (kingdom, feudal or serfdom, even national state) to give up the backward tribal mode of the public economy and to improve the efficiency of public economic activities and to enjoy the co-existence of different groups, then to rise the ability of their group to survive when face those worst challenges. However, whatever they tried, the social labor division basing on the specialization is the hub of these institutional construction.

It is certain that, in the ancient times, the social labor division between the private economic activities and the public economic activities appeared gradually upon the progress of technology. But the appearance of labor division make it impossible to feed themselves by those public goods suppliers, who have to get their food or necessities from the customers of those public goods, as the return of public goods contribution. Therefore, the exchange between the public goods suppliers and the private goods suppliers became a necessary step. This process of the bargaining and the accounting of the trade between private and public goods makers is the public finance in modern economics. The happening of public finance basing on the social labor division and economic specialization raised the efficiency furtherly of human economic activities, the steps in both of the institutional and technological changes accelerated at the same time. For example, the birth of words or characters to record the human experiences, especially in group organization, raised the transit efficiency of knowledge about public economy, and the appearance of the city-wall increased the possibility of the birth of the public economic system basing on geography, which finally led to the birth of state that is a public economic unit surpass the limitation of tribal group or blood relationship.¹

About the ancient civilizations in the very early times, there are various arguments (Osborne, 2006), however, they also have some similar ideas, such as the suggestion that the civilization is a more civilized mode of human behaviors, or a mode of behavior opposite to the savage behavior, or a collective or social order in a

¹As a main concern, the fact that there is no enough evidence to prove the existence of the social structure beyond the blood relation is a vital challenge faced by those Chines archaeologists who try to argue the Xia Dynasty as the birth date of the Chinese civilization.
group (Ma, 2004). There is also another point saying that the civilization is a complicated social structure (Zhang, 2008) basing on the specialized labor division, which is a public economic system to focus on the supply of survival public goods—the state in these agricultural civilization is its typical mode. Just in this point, we get a common basis to define and recognize the ancient civilizations. Similarly, for the modern civilization, the scholars have some very close ideas. For example, some people considered the modern state as (Joseph Strayer, 2010) a political organization with some institutions and power in a fixed space, during a certain historical term, and over the individual relationships, they stressed even more on that the birth of words or characters has a very important meaning for the continuity of the state system, and that the appearance of the fiscal and judicial system is critical to the conception of state in the mind of people. In the end, they concluded that the birth of the public economic mechanism which supplies the public goods of market system, that is, the modern public finance, predicted the birth of the modern civilization.

Basing on these points, economists have suggested (Song, 2015a) that the state, which is a public economic mechanism bases on the formal social specialization labor division, and whose members are not based on blood relationships and share some externalities in a continuing space, is the symbol of the birth of civilization. In other word, the institutional hub of civilization is the public economic system, the economic efficiency of civilization comes from the social labor division basing on specialization. It is no doubt that the birth of civilization, in terms of development economics, is the greatest breakthrough in the development history of human society, and is also a typical economic revolution in efficiency which marks that human being had become an unique advanced species to shake off the natural limitation.

However, we have to realize that the Europe-centralists have been being tried to exclude the ancient civilizations in the east, and just highlighted the modern civilization in the Europe, when they drew some conclusions about civilizations. They argued that, on the one hand, there is no other modes of state birth beyond of the European experiences, then, they overlooked the experiences in the east or recognized the experiences in China or other areas outside of Europe as irrelevance; on the other
hand, some people (Toynbee, 2009; Huntington, 2002; Weber, 2006) tried to use culture or religion to substitute for civilization, then stressed on the characteristics of the European civilization in terms of a best and unique culture.

However, we will use the definition of civilization by economists (Song, 2015a), that is, to see a civilization as an organizational structure to support the co-existence of different human groups, or a public economic system which is beyond the blood and religion relationship basing on geography. In this way, the civilization is a situation of human society in which people substitute wars with peaceful politics, and substitute survival struggle with harmony co-existence. Opposite to the emphasis on the birth of national state by those modern scholars in the west, some economists (Song, 2015a) stressed that the economic nature of the civilization is never the national economic communities basing on the blood relationships, but the public economic system basing on the geography. Indeed, the civilization and the state in the ancient east never based on religion or blood links, but just stressed on the universally providing public goods to all people living in the space or locations since Qin-Han Dynasty, which supplied a solution to the problem of externality in public goods and led to the efficiency of the scale economy in providing public goods widely. Therefore, to deal with all citizens equally in the ruled area is the basic nature and typical characteristics of the public economic system in all ancient civilizations, that is, the ancient civilizations hold the features of universalness in blood and religion, and of continuity in time and space, which is so-called the super ability of agricultural civilization in assimilation (Zhao, 2005). In contrast, the conception of national state posed in early modern times, not only triggered off the most cruelly international wars in human history, but resulted in the frequently happening of the terrorism conflicts of religions or national races inside of one country, whatever the developed or undeveloped economies, on the background that the resources is enough for all people in the world to survive.

Finally, we argue that the civilization should have the typical characteristics of
un-blood, and the characteristics of space continuity\(^1\) as a unit to supply public goods, a civilized society should provide basic or survival public goods equally to all citizens in its ruled area. According to this, we exclude those big empires based on blood relationship or on religion from the civilizations, such as the Yuan Dynasty in China, the Christian Empire in Spain or the Islamic Empire in the Middle East. Even more, the city republics, like Venice and the Dutch, are also excluded from the civilizations for the narrow scope of the customers of public goods provided by city state, whatever strong they are in terms of army. As the typical examples, the third Empire established by Hitler, the North American States in the early stage, and the South Africa with race separation are not the civilization at all because they supplied the public goods basing on the blood relationships. On the other hand, the Han and Tang China, the Ancient India, and the Ancient Egypt are the real civilizations. Therefore, the typical nature of civilization is the universal customers of the public goods provided by territory states, not the national state, however, the basis of the birth of civilization is the efficiency of public goods supply, and the symbol of the civilization is the continuity of the public economic system in time and space.

2.3 The Measurement of Civilization Based on the Effectiveness of Public Goods Provision

Because the main demand of public goods in the early stage is to protect the collective survival, we consider that the measurement index of the ancient civilization or the measurement index of the effectiveness of the public economic system is the size of population or the density of population in society. Factually, similar to the GDP today, the ancient civilizations in the early stage valued the statistics of their population as the index of civilization since very ancient times like Xia-Shang Dynasty in China, and judged and compared their ability in surviving with others basing on the size of population (Kennedy, 1986). As an important fact, we point out that, different from the GDP which is measured with the unit of subjective and human-made money, the accounting of population is more objective and reliable as a record or historical documents so that there is no need to adjust annually before a

\(^1\) Indeed, in the principle of taxation, the area ruling is very popular in almost all modern states.
historical comparison\textsuperscript{1}. As a reasonable result, there are many scholars try to use the total population and the increase rate of population to define the stages of the human civilization evolution. Without understanding the nature of the first stage of human society development or civilization evolution, the development economists always try to measure the development or the undeveloped ---the poverty with the market economic index even there are lots of issues in measurement, such as the additivity and aggregation of utility or preference (Deaton, 2016).

At the other end, the population historian, Ivinbates (2005) pointed out that population is a natural measurement of the human development and society booming, one million in Paleolithic Age, ten million in Neolithic Age, one hundred million in Bronze Age, one billion in the Industrial Revolution Age, and undoubtable ten billion in the coming century, all these number does not indicate a simple increase of population demographically, but shows us the different stages of human development. He suggested also that the 0.008% of the increase rate of population in the eve of the agricultural revolution at the 10000B.C. about, the 0.064% in the eve of the industrial revolution at the 1750 about and the 0.59% in 1950, signs the different stages of the civilization evolution or development process, similarly. The data from the historian, Cristian (2007), confirmed the points. He suggested that the upgrade and transformation of civilization raised greatly the ability of human being in surviving so that the ability of people in the agricultural society in surviving is 150 times of that in the nomadic and hunting society, and the ability of people in the modern society is 130 times of that in the agricultural society.

It is obvious that the size and the growth rate of population display clearly the stage characteristics of human civilization evolution and social development, therefore, the data of population in the past thousands of years has been being the measurement index of the ancient civilizations. Just in the first half of the 20\textsuperscript{th} century,

\textsuperscript{1} To the opposite, in calculating GDP, there are lots of problems to solve when make a comparison between different persons’ preferences (such as $3 in the hand of poor and in that od rich), or a comparison between the different times of same person (such as $3 in his hand when he is young and in that when he is old). Even more, the aggregation of preferences, and the calculation of preferences, such as the comparison between life and enjoy or the possibility of the existence of the infinite preference, posed some similar problems to the comparison of the efficiency of those different public economic system.
when the modern civilization or modern economy destroyed the traditional social saving system in the villages (f.e. the common land or church), and then the weak people stranded in the street of industrialized cities, the governments started to concern the social security and employment of populace. To measure the ability of government in supplying employment opportunity to populace, to calculate the macro-economic data became the focus of the economists concerning, then the GDP and per capita GDP became an important measurement index of the modern economy. However, the ability of a government in providing employment, obviously, is the not all its function, even not the most important role in those undeveloped economies, then GDP or per capita income is not the exact measurement of the modern civilization, not say the social development, in which, anti-poverty is one of most important tasks.

In the pre-civilization age, the density and the size of population almost rely absolutely upon the level of the technological development in a society. But, in the first stage of social development after the birth of civilization, the relationship between humans became rapidly the major factor to decide the size of population of a society, especially the size of population clearly and negatively relates to the scale and the frequency of wars. For example, in the East Asia, even there are some statistic errors, the population since the Qin Dynasty declined with the rise of the number of wars, and raised with the decrease of the number of wars, then the harmonious unification and social stability characterized the birth of the civilized society. Additionally, the appearance of united states in the east 3000 years ago put some checks on the bad effect of wars, such as the frequency of wars, and led to the first summit of the size and the density of population in China history, however, it did not delete the disadvantages of wars totally, especially in killing human. During the times from 3000 years ago to 300 years ago, the increase rate of population in century once waved greatly among 7.62%, 0%, 26.49%, -3.18%, 24.5%, 17.65% (Cristina, 2007), which indicates that the war between states play a more important role than the technological progress. Only in the recent two centuries, the negative effect of the wars between states was controlled gradually, then the increase rate of population in
century rise suddenly from 40.29%, 71.28%, 139.74% to 462.42%, and arrived at a high level to announce a new stage of human civilization, that is the birth of modern civilization. In other word, with the establishment of states and the upgrade of civilizations, the number of wars and the number of the death in wars started to decline sharply so that the number of death in wars is only one third about of those by suicide, and one fourth of those in traffic accidents in 2000 (Harari, 2014). So, we consider the existence of states and the decrease of wars as the important features of the civilized societies in the first stage of social development, whatever kind of states or inside political structures exist there, the index to measure the feature is the size and density of population in a society.

However, regrettably, the economists in the early modern west, has been misunderstanding discriminatingly on the nature of state or the sense of civilization, especially those with Europe-centralism or those stress on the superior of the west civilization and democratic polity. They use the result of wars to flaunt the civilization in the west, on the one hand, and at the same time, they also try to highlight the superior of the west civilization with per capita GDP or democratic polity, on the other hand. In fact, before the establishment of the universal public economic system, the west Europe, especially Spain, Portugal, Holland and England who focused on the wars in expanding their colonies and plundering overseas, did not enjoy the civilization at all. If and only if the universal public economic system serving for different races or those people with different religions in a same territory was established, there were some civilizations in the west Europe. Therefore, it is even possible that the conquest over the global is a historical start point of the modern civilization in the west, however, the conquest itself by war is not the civilization, and then the national constitution state is not the logic start point of civilization, especially, the increase of per capita income based on the high death rate of weak people (Clark, 2007) is unlikely the symbol of the human civilization.

Just because of the misunderstanding of the economic nature of civilization and with a wrong measure index, the economic historian, Clark (2007) missed his way to understand the puzzle why many societies transformed from the hunting, collecting or
nomadic societies with high income level to the agricultural societies with low income level. Even more, he highlighted the backwards of the agricultural civilization with the historical facts that the income per capita in the Britain in 1800 is higher than most of the undeveloped agricultural countries in nowadays, then concluded that the agricultural civilizations are less developed than those hunting societies 10000 years ago. In the mind of these modern economists, the birth and continuity of the agricultural civilization, which once was the mainstream of human history, is an exception to explain.

In fact, Clark (2007) should know the fact that the ability of European to survive is very poor. He realized that the high mortality in the European cities during 1580-1800 cannot indicate the superior of the west civilization in any situation. His research showed us that the European cities would disappear if there is no a big group of emigration from countryside nearby, it is especially true for London, which was seen as the hub of the modern civilization soon later, it is even said that the high mortality is a precondition of the high income per capita in London. However, the modern Marco-economic measurement index system he used to evaluate the result of economic development in history makes him misunderstood the nature or the sense of the civilization or development, so that he appreciated the superior of the hunting societies over the agricultural ones in human history. Indeed, he did not realized that the high per capita income based on the high mortality is a symbol of uncivilized society. The modern measurement index being used to evaluate the historical facts leads to a misunderstanding of the historical facts in economic history, because of their perspective of non-history.\footnote{See Hodgson,2001;He, 2013 and Song 2014.}

III. The Public Economic Logic in the Process of the Modern Civilization Transformation

3.1 The economic efficiency logic of the civilization transformation

It is not strange that the efficiency concerned frequently by the modern economists has been being the pre-condition of the civilization transformation, even though the birth and transformation of civilizations have never been linking
necessarily to the growth of the per capita income. For instance, in the process of the agricultural civilization evolution, it is the labor division and specialization in the social administration that improved the efficiency of supplying public goods to secure collective survival, then made it a popular phenomenon in long term that the agricultural civilization boom embodied in the growth of population.

However, the efficiency of public goods supply heavily depends upon the efficiency of the public economic mechanism which is the base of civilization, and the efficiency of the public economic mechanism includes the enforcement efficiency and the decision-making efficiency. The enforcement efficiency comes mainly from the coercive power owned by the government or suppliers, which exampled in the appearance of the standing army, institutionalized taxation, and bureaucracy system, while the decision-making efficiency comes mainly from the check on government exercised by demanders or taxpayers, which exampled in the parliament or the bargaining system left by the early noble democracy. The efficiency of public goods supply consists of two aspects usually, one is the amount of the public goods and its kinds, and the other is the cost of public goods supply.

In the early stage of human history, the demand for public goods is usually just the collective subsistence, and it is meaningless to let the demanders to show preference of demand because there is no any difference in preference or change in demand structure, therefore, all those efforts to try the ancient civilization in different areas embodied in designing public economic system were focused on the enforcement efficiency, that is the cost and the amount of public goods. Just in this meaning, centralism or anarchy has some positive merits, and the yellow river civilization based on the Chinese traditional Confucianism and bureaucracy system become the one of the best agricultural civilizations.

However, why is there no any further progress in the efficiency of public goods supply after the first success of traditional agricultural civilization? The cause exists in the characteristics of those excellent public economic mechanisms themselves.

At first, the separation of time and space between the demanders and suppliers of public goods under the conditions of social division, makes it very difficult to raise
the efficiency of public economy. As we known, the efficiency of the market economy relies heavily upon the price bargaining, the quality checks, the amount accounting and payment at the same time and at the same location, between sellers and buyers when trade happens. In case there are some differences in times or locations, the efficiency of trade depends mainly on the credit between the sellers and buyers. Unfortunately, after the appearance of the social labor division, the trade of public goods is just one of those typical trades in which the payment has to happen before the supply of goods with some separations of times or locations of trades, and there has been not good record of the credit between the governments and taxpayers, therefore it is almost impossible to improve the efficiency of public economic activities.

Secondly, in virtue of the externality, it is inefficient in terms of economics to divide and separate the property right among the customers, so that the customers have to be seen as one person or one group without the inner structure. Then, there is an agent problem to solve in the group of customers to bargain with the supplier, that is, who will be chosen to be the agent to negotiate with the seller for their group sake.¹ There is no solution so far to the intricate agent problem, so that the improvement of public economic activities after the birth of traditional civilization could not get the pressure or dynamics from the taxpayers who are the customer of public goods.

Finally, the contradiction between the need for the coercion from the enforcement efficiency and the need for the supervisor by demanders from the decision efficiency, leads to another difficulty in improvement of the public economy. For the separation between the demanders and the suppliers, no any demander is willing to pay the price of public goods before they see the goods, much less, the agent problem and the possibility of free rider furtherly block the incentive of customers to pay the price of public goods positively. So, different from the stress of the neo-institutional

¹ How to deal with the agent problem is almost the most important goal to those elites or philosophy providers in human history, the final solution is always the gentlemen and the good government. However, the agent, e.g. the gentleman, is an economic person too, and with some themselves benefits and preferences, so it is almost a unachievable goal to make sure the agent to represent the preferences as a result of the difficult coordination in the group, let alone the efficiency.
economists on the possibility of plunder by the providers, Epstein (2000) considered that it is also very hard that the state with coercion appear from the mess of survival struggle. Of course, there is a state in most of successful civilizations based on that they established a standing army in the level of state to make sure the mode of trade to run in which the payment of the price of the public goods is previous to the supply of those goods. But, it is very popular to default in this fiscal system basing on the army force, that is, the government with the support from the standing army do not supply or supply some bad public goods after they get the payment of taxation, in other word, there is a possibility that the government becomes the bandit in terms of neo-institutional economics (North, 1976; Olson, 1982). The huge side effect of the coercion in the process of the enforcement is the major cause why the situation of absolute inefficiency of public economy frequently reappears in human history, and the background why most traditional civilizations declined, disappeared or changed their dynasties often.

All in all, for the characteristics of the externality of public goods, it is unavoidable that the providers of public goods default in the process of the exchange between private goods and public goods after the birth of the social division and the establishment of fiscal system. The default of governments made it a reality that the efficiency of public economy has not been being improved, and the necessary modern transformation of civilization supposed by the modern people has been not happened. Additionally, because the institutional taxation and the existence of the standing army are the key of the improvement of the enforcement efficiency, and the absolute monopoly of standing army on coercion strictly constrains the possibility of new institutions, so that, up to the recent times when the modern civilization appeared, the bargaining system, even or the system of making decision which closely relate with the efficiency of trade had not been being the focus of the elites’ concern. Only in those periphery areas with few agricultural civilization, there left some opportunities to try to improvethose so-called new institutions which is left as the heritage of the traditional noble democracy.

3.2 The survival struggle logic of the civilization transformation
Just like the Toynbee (2010) said, the birth of civilization is the result of the efforts to meet the challenges by the social elites in all times. In the process of dealing with challenges, the improvement of efficiency itself is never the topic of the social elites’ concern. Only when the improvement of efficiency relates to the effort to meet the challenge, the mechanism of making decision related to the improvement of efficiency started to draw the attentions of social elites.

In fact, in the long history of human being, just to deal with the various problems, the human tried various systems of public economy in different situations. However, in virtue of the oneness of the demand structure of public goods in the early stage, that is, the collective survival, the showing preferences of public goods is not important. Even more, the parliament has some bad influence on the coercion or the enforcement ability of governments (Oviegil, 2014; Epstein, 2000). So that, even though the collective mode of noble making decision is the earliest mechanism of public economic decision known by human, all the successful traditional agricultural civilizations, such as the Roman Empire and the Qin-Han Empire, gave up the inefficient mechanism of making public economic decisions through collectively discussion. The elites in human history never made their efforts to try to improve the decision making efficiency and the match between the demand and supply, but focused mainly their attentions on the improvement of the enforcement ability of public economy.

By contrast, in those backward periphery areas with the poor agricultural resources, such as England, the urgent demand of English wool from the Southern European States made the mercantilism to be the new survival strategy when the new challenge appeared, like the agricultural decline from the little ice times. The strategy of the Mercantilism posed some new requirements for public goods from governments, such as the demand of the developmental public goods, which benefits the business and has the characteristics of variation in the demand structure of public goods, therefore, the efficiency of decision making mechanism related to the preferences showing of demanders became gradually the main concern of the social elites.
About the establishment of the modern decision making mechanism, albeit the traditional civilization with the longer history and some experiences in civilization, it is still a more anguished, long and slow process to establish the modern one in those successful traditional civilization, in which the preferences showing mechanism of public goods existed in the collective mode of noble making decision once was given up for its bad effect on the efficiency of enforcement. However, in those infertile areas in which the agriculture was not successful, the noble collective decision making institution left as the institutional heritages, provided a platform for the bargaining budget, made it more easily that the preferences showing and decision mechanism of public goods appeared. Finally, the new public economic system----the public finance system born in the inside of the old system, even a remote area.

The new mechanism from the noble system accidentally combined the parliament with the budget system, which is similar to the market mechanism perfectly, then formed a compensative exchange mechanism of public goods based on the price negotiation between the demanders and suppliers, that is the later so-called public finance or the modern fiscal state. In this new mechanism, the person who paid more taxes will enjoy more opportunities to voice and vote in the making decision of public goods, while the person without the right to voice or to vote will be free of taxes. That public economic mechanism dominated by taxpayers greatly improved the supply efficiency of public goods because of its accordance with the economics principles of the match of cost and benefit, and the market principles of preferences showing, which in turn promoted the development of market economy, and aroused the Industrialization Revolution based on ore energy, finally raised the ability of those people inside to survive as a group. The merit of this mechanism lies in the establishment of a co-win mechanism between the government and the rich people or businessmen who paid taxes on the one hand; it also let the poor to enjoy some free public goods on the other hand, therefore it is recognized as an advanced civilization, which is becoming the goal pursued by all elites in the world.

Of course, there are some points need to be clarified: firstly, the parliaments’ decision making system dominated by the rich people did benefit the development of
the modern market economy, but not necessarily meet the all demand of public goods, especially always overlook the demand by poor on anti-poverty as one kind of public goods. As the agents of the micro-economic entities, the rich people do know more about the demand of developmental public goods, and do have the incentives to push the government to provide more and better developmental public goods, however, as the necessary outcome of benefit conflicts, these decision makers will not automatically concern the demand of the poor people on the particular public goods, such as the survival security, so that the conflicts between the survival struggle of the poor and the development efforts of the rich in competing for more resources still exists in successful modern civilized society, even worst in some situations. Secondly, the success of the public economic system based on the improvement of the decision efficiency does not mean that the efficiency of enforcement is not important. In fact, just like the research (Epstein, 2000; O’Brien, 2012) of fiscal history showed that the efficiency of the sovereignty of the state and the ability in governance are the same important basis of the successful transformation of the modern civilization. The absolute liberals which ignorance the ability of government in enforcing and just emphasize the constitution’s check on the governments’ ability in making decision never lead to the final success, as the typical cases, the systems in Poland and Holland with the parliament constitutions encountered the failure in keeping its sovereignty because of the lack of enforcing efficiency without the unified sovereignty. In other word, the success of the modern civilization not only depends upon the improvement of decision making efficiency, but also or even more firstly on the improvement of enforcement efficiency or the power of the state, that is, the state with the modern civilization has to provide both of the survival public goods for all and the developmental public goods for those rich.

However, even the security of subsistence is still the first goal of the modern civilization in modern times, the development of the modern economy has considered the mercantilism and the development of market economy as its only goal soon later. Indeed, the mercantilism factually was once the method of survival competition in the very beginning, even it resulted in the Industrial Revolution as the outcome of the
change of energy utilization forms in the market expansion following the mercantilism pursuit. Just for the change of energy utilization forms, the modern economy leads to the growth of the per capita income, and the debate on the modern civilization goes beyond the discussion on the trade-off between the decision efficiency and the enforcement efficiency step by step, finally becomes the accounting of the per capita income in terms of pure market economy or industrial economy.

But the calculation of the per capita amount of the macro-economic quantity is not processed, as easily, decisively or objectively as the statistics of the population once in history, and moreover, there are lots of problems in measuring the development goal of the modern economy, e.g., in aggregating the different results of different goals (such as the survival of the poor and the development of the rich). So that there has been being lots of debates on the measurement of efficiency and the ability of public economic mechanism or modern civilization in providing public goods, especially on that the per capita GDP alone is seen as the major measurement index of the modern civilizations by those developed countries (Morris, 2013) or the World Bank, which has a critical influence on the those policy makers in undeveloped areas.

In fact, just because that the elites in the developed countries did not understand the precision of the economic nature of the modern civilization, they could not coordinate the relationship between the different public economic goals, then could not establish a consistent principle in logic to deal with the problem of the harmonious co-existence among those people with different religions or different races. In addition, those in the developed countries, considered themselves as tutors of the modern civilization, but not yet get rid of the negative effect of survival struggle, so that they could not avoid of biasing themselves in dealing with the problems of the benefit conflicts in public economy.\(^1\) As a result, their politics conception and economic principles could not be recognized as universal ideas whatever by competitors or even the inner members (Piketty, 2014; Caplan, 2007), on the one

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\(^1\) There are the distributional problem of public goods between different countries in the globe, and that between different classes, different races and those people with different religions in one country.
hand; both of their economic success completely based on the ability in competing resources and their efficiency advantage in terms of public economic institutions or so-called political system could not sincerely convinced those people in less-developed economies, on the other hand, let alone to say, there is no way to link the developed countries to the modern civilization with the universal sense or the common benefits to all people in the world.

Indeed, the success of the modern civilization transformation in the west, did not make it disappear those public economic actions aiming at the target of collective survival struggle, in some ways, it even worsen the collective survival struggle. Then, it not only triggered many unnecessary wars happened frequently in the situation that there is enough natural resources to feed all people in the world, but also triggered the heavily encounters between the laboring class (poor people) and the resources monopoly class (rich people) inside of many countries (Pekitty, 2014, 2015). It is these flaws of the modern economies that aroused the continuing turmoil in many modern societies (such as occupying the Wall street in New York, occupying the Zhonghuan in Hongkong, and those similar movements in Tailand) because of the worry of the weak people about their right in subsistence, on the one hand, and that lead to the nationalism in the domestic protectionism in market competition and the populism in the geopolitics (such as the rise of Nazi, the territory dispute in the east Asia and in the East Europe), on the other hand. Factually, both of the stress of Keynesian economists on the employment and the critique of the modern market economists on the trade protectionism are the reflection of the contradiction between the collective survival struggle and the requirement of the market mechanism efficiency. Therefore, even the idea of the modern civilization has been accepted for a long time all over the world, the modern civilization has not yet spread all over the world, and the threat of wars not yet disappeared completely.

3.3 The collective action logic of the civilization transformation

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1 The undeveloped countries did not satisfy with both of the narcissistic of those elites about their ideology in developed economies, and their monopoly on the public interests. The members of the developed societies lost their ways in opportunisms (such as they made their best effort to protect their industries when they are in disadvantage situation, but stressed on the trade freedom when in advantage situation).
In virtue of the public economic activities following the basic law of economics, the civilization evolves along the way from the mess to the order, from the low efficiency to the high efficiency. That is, the efficiency of the public economic mechanism determines the possibility of the human civilization transformation, and then, the less efficient civilization will be weeded out by the more efficient civilization. The decline of the less efficient civilization happens maybe in two ways. The first one is that the people in the traditional civilization was perished by those in the new one, or that the old civilization was destroyed and given up, just like the story of the Ancient India, the Ancient Egypt, the Ancient Greece and the Ancient Roman; the other is to transform the old system into a new, more advanced or efficient one, which is the experiment in China. The former is very popular in that the traditional civilization replaces the savage society; the process of later is more civilized, but more painful and longer. However, the initiative logic of the two kinds of civilization transformation is contained in the collective decision making by the elites in a society to pursue to the collective survival, therefore, it is very necessary to define and describe the collective action logic of human being and discuss its economic rationality.

Firstly, we classify the human being in a society into four kinds of people according to their merit (altruism or selfish) and ability (elite and mass) or performance. Of course, the characteristics of a person can be changed under some conditions. Such as, the ability comes from the gene, but also can be improved by the learning. The learning not only can change the ability, but also can change the merit.⁴ So, there are four kinds of people: altruism elites, selfish elites, altruism mass, and selfish mass.

Secondly, the survival goal determines the collective economic actions or the elites’ decision making; and the technology and the resources determine the space of economic actions or decision making. As discussed above, the economic goal in reality contains two: the survival goal and the development goal. And more, the

⁴ In fact, the earlier philosophy proposers, like Kongzi, Polato, Mose, and Jesus, all try to change the merit of human by education, and succeed a lot.
survival goal is the prior one to all human people. Only under the pre-condition that the survival need is met, the development becomes the goal of economic actions or decision making. In the early times of human history, however, the individual subsistence independently by himself is impossible, then how to utilize the collective action to meet the challenge from the different environments and make sure the group people to survive has been the major goal of collective action or elites’ decision which has solidified in the gene of human body and the culture of human society (Kosfeld & Rustagi, 2015) as a memory of historic experience.

Indeed, if we include all human people in developing countries, developed countries, even those in hunting or nomadic savage societies, into the economic person, that is, the object of economic research, just like the natural experiment by Henrich et. al. (2001) showed, we will conclude that the public economic action pursue to the collective economic goal is the mainstream of the human development history. Then, the collectivism culture is an important action mode from their past experiences, and the outside environment and the technology play an important influence on the action mode, and start to draw the attentions of social elites. Of course, in the early times, the exogenous environment means mainly the natural environment because of the big space and a few population. However, when the growth of population made it unavoidable to compete for the natural resources between the groups of people, the exogenous environment become gradually the environment of geopolitics, which is the base and starting point of the institution choice by the group of social elites group.1

Thirdly, it is assumed that the elites choose the institution, the institution affect the mass. Factually, even in the collectivism culture pursue to the collective survival goal, the action modes chosen by different people are inconsistent when face the same institutional environment or similar challenges. We suggest that most of the economic actions are controlled by inertia and follow to their habits, only a few of elites will analyze the collected information and make a rational decision, so that we should focus our analysis on the public economic actions or decisions of those minority or

1 Zhang and Song, 2015.
elites if we really concern the law of public economic activities.

Indeed, in the reality of public economic activities, different from the perfect imagination of the contemporary scholars, the mass did not determine the direction of history development but rather that the elites making decisions for their group is the major mode of the public economic institutional change. That is, the elites establish the systems, the system determine the actions of the mass. In other word, the situation of group competition vary according to the change of the environment, all those so-called processes of institutional change in any society are some processes of active choices to try new solutions by the elites in those societies when they meet some new challenges. Fortunately, some elites posed some right solutions to their problems, then their societies succeed in struggling with the natural environment or the other groups, then a civilization happens; the others failed and were weeded out by the history. In history, the successful elites with rationality often were respected as gods in those ancient myth and religious story, but nor all people are the elites with rationality, so that the individualism method based on the equality of every one cannot explain the origin of the institutions.

Fourthly, the elites have the recognition rationality, the society shows us an evolution rationality. Why can the elites, as the decision makers, make a rational choice, and lead the society to evolve to civilization successfully? The answer lies in the rationality of society evolution and the limitation of the perspective of the observers.

As discussed above, the human history, in which the superior is left and the inferior is weeded out, just gave the opportunity of group survival to the successful society, so the elites with rationality have more opportunities to success, and then is easily observed by the contemporary people. Therefore, the historical process observed by us is factually just a part of the historical facts,¹ and is the just result of social evolution. If just judgement by the result, all the elites in those successful groups are some luck individuals with recognition rationality, they frequently improve

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¹ Whatever the individual or the group, there are definitely various other survival modes existed in human history, but rather not recorded in history, because of its failure.
their recognition ability, and choose the best solution from the known ones, even every elites in all groups did make their efforts to try some new solutions to meet the new challenges, the unlucky elites just are forgotten by the history for their failure.

Therefore, when a kind of institution successes in trying the new solutions to meet the challenge, not only the people themselves in the society will try every way to transfer its survival experiences to their descendants, but the competitors or the observers outside of their group also try to copy their successful experiences. As a result, the successful civilization has more chances to be kept and spread to other groups as a model. Of course, in virtue of the cruelty of the survival struggle, the transfer process of the survival experience, which has embodied in institutions, has some mysterious characteristics of monopoly and exclusiveness, from the ceremony of witchcraft, sacrifice, totem to the requirement of the wealth or status.¹

Fifth, the ability and merit of people distribute normally among the group, the result of survival struggle is that the superiors win and the inferiors are weeded out. Even the elites have the ability and rationality to choose institutions, we are not sure that the elites have the altruism preference to pursue to the collective survival goal for a group,² and then have a willingness to choose the institutions to achieve the goal of collective survival. Then, when will the elites make their efforts to show altruism preference? Why will the elites make their efforts to exercise the altruism activities?

About the first question, the research in evolution economics (Huang and Cheng, 2008) told us that the elites will benefit a lot from the provision of public goods for the strong demand in the early stage of human society, when the individuals cannot survive independently, especially in the situation that there is an enough survival pressure from the outside and a very few migration between groups. Then, the altruism preference, which concerns more the public goods or the collective benefits, will evolve, the selfish preference, which just concerns the private benefit or private goods for themselves, will be constrained. On the contrary, the selfish preference will

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¹ The people in early society not only limited the users of characteristics to a small group, they also kept the intelligence of law in the group of nobles.
² Indeed, from the law of utilization declining, we conclude that the elites is more likely altruism—the increase of wealth brings less benefits to the rich, then the less incentive to the selfish of the rich, but we still assume that the distribution of the possibility of altruism in elites is normal.
evolve, the ability of group to collect resources for public goods will decline, which is the situation in Song Dynasty, the Republic of Dutch, the Republic of Venice or the Athens in Plato times. Then, the technological conditions which aims at the relationship between the land and the people, and the geopolitics which aims at the relationship between groups, together determine the size of the pressure index of competition from outside.

About the second question, we assume that the distribution of altruism preference and selfish preference in people is random, and that the distribution of the ability in people is also random, and that the heterogeneity is basic characteristics of human nature, then we will conclude the social evolution of the altruism elites as following.

Because the distribution of merit and ability in people is random, it is impossible to know the result before history that which group is better than others in dealing with the change of environment. However, in the situation that the individual cannot survive independently, when the elites are selfish and unwilling to cooperate with others to contribute the public goods, the weak people will be weeded out for its inferior in competition and the lack of the protection from the public goodssupplied by elites, finally, the elites and its group will lose the struggling competition with other groups for the less population or lack of cooperation.¹ On the other hand, when the elites are altruism, the strong reciprocity will happen. In this situation, the altruism elites will provide public goods under the condition that they can make sure of themselves survival, and organize the inside cooperation by distracting the model by themselves, to improve the ability of the group in survival struggling with other groups. At the same time, it is even more important that the altruism elites have the ability to punish those non-cooperators to make sure a successful cooperation in providing public goods, especially in defending the attack from other groups. Because of the coincidence between the altruism merit and the ability in the same people, finally the group will win the struggling competition and evolve into the civilization.

¹ According to the research by Bowles and Gintis, a complete selfish group will disappear for they cannot establish the cooperation order.
In other word, the social group with high preference for altruism and cooperation will be kept, then resulting in that the moral characteristics of the civilized society signed as the altruism and cooperation evolves. The preference of the altruism elites to organize cooperation and punish those non-cooperators not only make sure themselves success in survival, but also incentive more social elites to follow their action to promote the principle of the strong reciprocity and altruism.

In addition, just like the proposal by Kongzi and Polato, the altruism merit of the elites can also be educated, even it is not valid to all people. Because almost all cultural elites in all times or in every society know that it is very impossible to let all people to give up the selfish action mode and follow the altruism mode just by the education of collectivism culture and altruism moral, but they understand it clearly that the society they live in will have more opportunity to survive only if there is enough elites to become the altruism and willing to promote cooperation in their group. Especially, when the pressure from outside increases, it is particularly necessary to initiate such as an education or propaganda work. The collectivism fostering in the religion process of Muslim, Christian or Confucian aims at this goal, and both of the topics in movies and the requirement by leading universities on social responsibility aim at the similar goal as part of the effort by social cultural elites to promote the human civilization evolution.

3.4 The dynamics and path of the first modern civilization transformation

As we said above, the first improvement of the public economic efficiency comes from the social division between the public economic activities and the private economic activities, however, the rise of the transaction cost from the labor division or the transaction between the private goods providers and the public goods providers blocks the further improvement of the public economic efficiency. At the same time, the inertia of the demand structure of public goods also blocks the experiment of new systems. In particular, the demand for the survival public goods is not only absolute in the amount, but heavily depending upon the geopolitics around, so that it is

1 Darwin once pointed out in his the Origin of Human Being that the tribe with the high level of moral has the higher competition.
2 Zhang and Song, 2015.
reasonable to explain the dynamics of the civilization transformation from the perspective of the relationship between the demanders (private goods suppliers) and suppliers of public goods.

At first, as suggested in my previous work (Song, 2015a), the public economic system is determined endogenously by the demand structure of public goods. In the early stage of the traditional agricultural civilization, because of the oneness of the demand of public goods—the collective survival, the showing and coordination of public goods demand are not important relatively, the improvement of public economic systems is mainly focused on the effort to strengthen the ability in enforcing and supervising. While the ability of the public economic system in enforcing relies upon the ability of rulers in coercing and monopolizing (such as the standing army and the stable taxation system), the ability of supervising mainly results from the frequent pressure from the ruled and symbolled as the frequency of the dynasties varying. Thereafter, the Physiocracy in public economics will be the hub principle of most agricultural civilizations with the despotic polity which is more efficiency than the democratic ones in enforcing efficiency.

Secondly, the appearance of the Mercantilism is the result of the effort to meet the serious survival challenge in the backward periphery areas of the agricultural civilization. In those societies where the condition for agriculture is inferior, but the ones for nomadic is superior, the effect of the natural disaster on the agricultural production and the survival needs for the stable supply of the food arouses the trying of business and transportation, because of the limitation of technology on the animal food reservation, and thenleads to the business boom under the condition of the improvement of transportation and the knowledge explosion about the globe. So that, the commercial activities become a way to earn life and is recognized by the elites in these societies, finally the Mercantilism had been one of the public economic system to achieve the goal of the collective survival.

Thirdly, the birth of the modern civilization is the accidental outcome of the seeking developmental public goods by mercantilists basing on the prerequisite of the shrink of demand of the defense public goods. On the one hand, the development of
mercantilism make the merchants to show a strong demand for the provision of developmental public goods which benefits the market economic development; on the other hand, that the geography of island in England has no strong demand on the defense makes sure that the requirement of mercantilists can be met. At the same time, the developmental public goods required by the merchants have the characteristics of variation and dynamics, the efficiency of making decision about the kind of public goods is becoming a key point. Just for this, the mechanism of preference showing once existed in ancient times, that is, tribal military democracy, is reutilized in new situations and in new ways, they are finally transferred to the parliament, which is a budget system dominated by the big taxpayers, then the modern fiscal state appeared.

Fourthly, the modern fiscal system lead to the Industrial Revolution in the Britain. Factually, many scholars realized that the market requirement from the Mercantilism is critical to the happening of the Industrial Revolution,1 and that the market economic system is the catalyst of the Industrial Revolution.2 However, it is not all known that not all business booming leads to the happening of the Industrial Revolution, only a few economies where the market expansion and the demand pulling result in the change of production mode to evolve to the Industrial Revolution.3 The breakthrough of the Industrial Revolution firstly combined all the people in the world together with the steam machines, then aroused the global collective survival struggle and the economic resources competition which embodied as the local wars and world wars during the past two centuries. Absolutely, in the process of new kind of struggling or competition globally, the European powers with the new technologies rapidly increased their ability in defensing even or in attacking and plundering other groups, then controlled or dominated the globe by a number of wars. In virtue of this model effect, the rest of the world started to copy the modern fiscal state by

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1 The old mode of production cannot meet the requirement of the bigger and bigger new market, the size of new market makes it possible to change the mode of production to industrial production basing on the scale of economy (Rosenberg and Birdzell, 1986).
2 The market system fostered the entrepreneurs, who initiated the change of production mode. (Rosenberg and Birdzell, 1986)
3 In fact, the industrialization process consisting of the machine production mode and the energy utilization mode is just the result of demand pulling from the market expansion. But the pulling force of market does not come from the technological change in the industrialization, rather from the Mercantilism principle which results from the survival struggling pressure. In the process of the modern civilization transformation, the expansion of market brings them the condition of the scale economy, on the one hand; the expansion of production, on the other hand, results in the lack of labor, and lead to the increase of the price of labor, which made it possible that the mechanical production and energy utilization are cheaper way than those old ones. Then, the factory organization, the ore energy utilization and the improvement of machines were developed and used in the process of business boom. (Song, 2015)
transforming or replacing their traditional civilization or their un-civilized societies.

Fifth, the historic facts that the huge advantage of the modern civilization in the competition of the economic resources, and their utilization of the huge advantage to enjoy the dominating position in collective survival struggling, show that it is the only way for those traditional agricultural civilizations to keep their culture extension or to survive their national people, that transforms their traditional civilization into the modern ones as soon as possible.

Fortunately, because of the huge progress in technology, the struggle of human on the economic resources has lost its original sense in survival struggling. That means, a peaceful geopolitics is coming, and then it is becoming a reality to enjoy a peaceful rise by the modern civilization transformation. Indeed, there are some new models of the modern civilization transformation, that is, both of the inside democratic making-decision mechanism and the outside coordination mechanism among different countries are becoming a general goal pursued by all people in the world. So, we suggest that when there is a basic success in economic development, and when the economic resources is enough to feed all people in the world, then the modern civilization in the future should concern more about the social arrangement of the subsistence security of the weak people and the construction of the coordination mechanism between different groups’ or societies’ benefits, to let the people in the world to enjoy the benefit from the real general institutions and the boom of the real modern civilization.

That is why more and more policy makers and economists were drew to the investigation into the way to anti-poverty in undeveloped areas (Deaton, 2016). However, the repeated failure of the World Bank policy and economic theory show us that it is maybe a wrong to pursue to the survival goal of the weak people basing on those market system and the modern mainstream economics.

IV. A Brief Conclusion and Some Hints for those Less-Developed Economies

According to the discussion above, we suggest that both of the traditional agricultural civilization and the modern market civilization are one of the human

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1 For example, the developed countries are never willing to open their borders to the weak people, such as refugees, but rather to attract the elites from the developing countries, so that no so-called general (Ovigil terms)or exclusive (Acemoglu terms) is used to benefit the weak people all over the world. Even more, the developed countries worried very much about the rise of developing countries, and then tried to block the development of the undeveloped economies as their competitors, even including those ones in the same strand of the ideology group. Certainly, as a result, it is a very hard task to achieve the harmonious existence of the different modern civilization in the past.
civilization time series, and that the agricultural civilization is even the original one or the universal one, but not the inferior one in terms of moral. On the contrary, the modern civilization which appeared firstly in the west, is a particularized or exclusive institution with a strong biased discrimination on the people with different religions or other race people at its very beginning, it is up to the middle of the twenty century, when the people in the west started to enjoy a real or universal civilization after a continuing improvement in one century about. Of course, because of the universal nature of the problem that the civilization try to solve is true for all times and spaces, therefore both of the agricultural civilization and the modern one once are an universal civilization more efficient than other existed public economic systems at the same time.\(^1\) Absolutely, it is a law of human civilization evolution that the original civilization will be replaced by the more efficient one.\(^2\) If we confer that the civilization transformation is factually the choice or the change of the public economic system, we will agree at that, in the process of the modern civilization transformation, there is neither conflict problem between different states in terms of ideas or conceptions, nor co-existence problem of civilizations among different states.\(^3\) In fact, if there is a more efficient public economic system, and everybody know it, all of them will be willing to choose the new system, unless there is an error information about.\(^4\) Just in this point, there is no gap in ideology between the West and the East, or between the successful modern states and the less-developed countries.

However, the pre-condition of the modern civilization transformation is the ability to defense themselves independently and to feed themselves to make sure its collective survival, therefore, the success of the civilization transformation in any society will be enjoyed only after they obtain the monopoly to provide public goods or in the situation in which there is a relax geopolitics background. Just for this reason, there are so many misunderstanding between the so-called helpers from outside or developed societies and the local elites in poor countries, which contributes to the lots

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\(^1\) Did not this background of civilizations, Huntington (2002) once stressed the universal characteristics of the west civilization, and tried to devalue the sense of the east civilization in terms of religion and culture.

\(^2\) The more efficient civilization is not necessarily the state which win the war, but the state which supply the more public goods to its people. As an example, the Yuan dynasty is not a more efficient civilization for its ability in winning wars.

\(^3\) We do neither agree with Huntington to exaggerate the difference of cultures, nor with Muller to cover the difference.

\(^4\) As a very useful tool to compete with the developed countries, it has been covered or replaced with culture by some people for a long time. Therefore, the elites in un-developed countries were told to destroy the old system before they have a new and efficient one. The misunderstanding by themselves, the misleading by others, and the difficult to change system and interest pattern, all together set a stone in the way of the modern civilization transformation.
of failure in the efforts to reduce the poor people in the world.

Whatever the economists in those developed economies and the policy makers in the World Bank said, the fact is that they are also selfish economic person. The local elites and people in poor, especially those pre-colonized economies, cannot believe the outsiders’ efforts to anti-poverty in the world because of their bad historical records in colony times and their market economic theory which bases on assumption of selfish economic person. They perceive it clearly that the real debate or conflict between countries is the benefit or interest in the competition of economic resources, because the economic resources once was the basis of the collective survival ability which is the goal of all public economic systems. Indeed, the fact that there are so much contradiction and conflicts about the international relationship and the social orders in the developed countries and between developed countries, show that there must be some big flaws in the structure of the modern civilization in dealing with the struggling for the economic resources, or a big mistake in the mainstream economics. Therefore, the step of the improvement of the public economic system or the civilization evolution never ceases, the boom of the modern civilization will not lead to the final of human history, but to a new development of economics or a new understanding about human being’s economic behaviors.

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