

Notes on Comparative Economic Development

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Abstract

This paper will show two things: The first thing, in the first subsection, is to give a more general and comprehensive outline of economic development framework. The second thing, in the second subsection, is to answer where the originality of Japanese economy and organization came from as an application of our comprehensive economic development framework.

Japanese society also has many common bases with other countries regarding various social aspects, but simultaneously the originality can be drawn from them as well. It means that the uniqueness of Japanese economy and organization has been formed through the many common social factors and different ways of the mixture. Its geographical/environmental condition (warm humid) and the agricultural mode (irrigated rice and fish catching), the village style and the way of people settlement (coastal and mountainous, family units) are originally generated. The religious culture (Confucianism, Buddhism and Shinto) grown and introduced to there, the political decision making system (collectivism, patriarchy or paternalism) and the bureaucracy also seem to be so unique. Such centralized power and collectivism social relation were involved to a modern production system and factors of economic development were also utilized fully, and then Japan succeeded his productivity rapidly in the very short run.

Keywords Economic Developments, Comprehensive Approach, Japanese Economy, Institutional Characteristics

JEL: O10, O53, N01, D70

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I. Interdisciplinary nature of economic and social development analysis

1. Introduction

Macroeconomics as it is taught in undergraduate courses in universities worldwide is largely a type of applied financial policy related to fiscal and monetary policies and their effects. However, macroeconomics in graduate courses largely addresses topics such as dynamic optimization, for example, growth theory, which is a more-technical applied science². That is, courses in economics tend to focus on the effects of public economic policies on macroeconomic variables such as income, price, interest rates, unemployment rate, exchange rates and economic growth. In addition, they try to analyze how the results affect consumption, investment and trade and also gauge the feedback to income. These problems are, of course, very important.

Unfortunately, such orthodox macroeconomic approaches do not adequately explain the workings of an entire economic system; demand components such as consumption, investment and trade are not always determined only by macroeconomic variables, while fiscal and monetary policy must influence price, interest rates, exchange rates and other variables to some extent. Predictions regarding the effects of economic actions such as expenditures on economic variables may not be difficult; however, it is very difficult to predict what factors induced the actions because they are not always decided by economic

² Typically, it is Dynamic Stochastic General Equilibrium (DSGE) theory.

factors alone³. These aggregation variables, particularly expenditures, in the macro economy must be influenced by very comprehensive or inclusive factors from outside the economy. This critique of economics has been formulated since Karl Marx (1867) analyzed the movement of capital in more than one hundred chapters in ‘Capital’. However, to date, alternative comprehensive economics theory has failed to gain precedence over orthodox theory. In the macroeconomic system, there are too many parameters to be controlled to apply a method of estimating counterfactuals with empirical models as in the case of microeconometrics. As a result, we must argue that there is no effective framework for understanding the economy or society as a whole, although most economists know that the majority of economic predictions are not very useful for predicting future scenarios.

This section aims to provide a comprehensive social-science framework that analyzes the development of society and its economic system by reintroducing critical viewpoints into the orthodox macroeconomics framework and methodology. Additionally, based on historical thinking or an evolutionary point of view, this section tries to shed new light on the information intensive society that we live in; as a matter of course, this drastically influences traditional economic activities.

In the second section, we introduce a comprehensive social science framework as our methodology, and we review the fundamental principle of economic development,

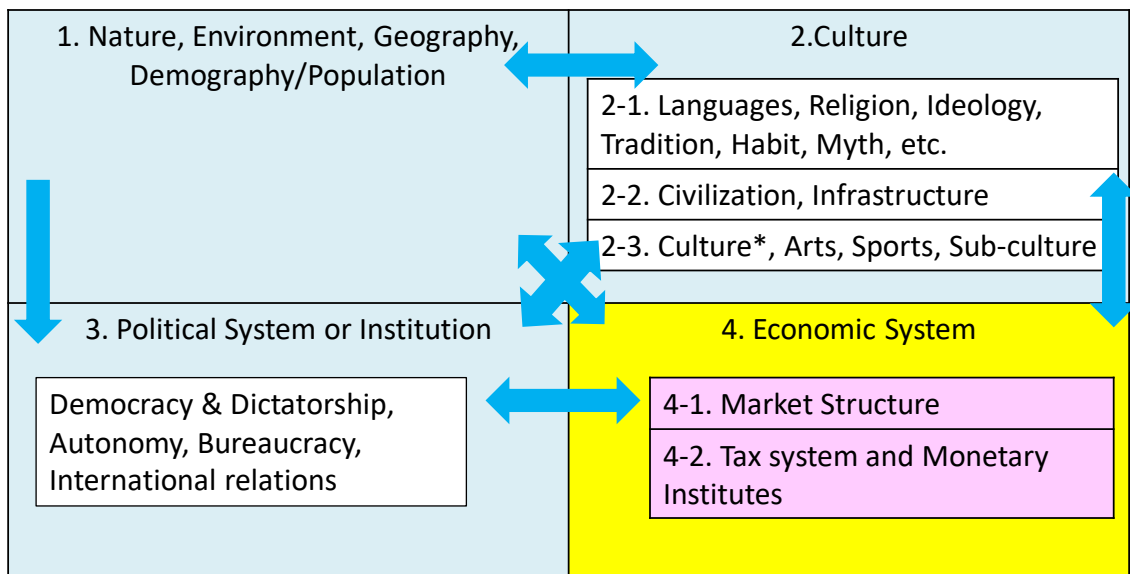
³ This point is completely different from the physical sciences. Physicists, for example, analyze how an experiment influences an object, but the motivation for the experiment is not a factor. Conversely, in economics, factors that induce a certain action and the feedback mechanism in a whole system are not ignorable. Agents themselves are also involved in the experiment to be analyzed.

combining traditional economics concepts in the third section. In the fourth section, we analyze the impact of the information intensive or concentrated society on economic development. Finally, a brief summation is provided as a conclusion.

2. Methodological extension for social science

First, let us briefly present our basic method, which describes the structure of human society. The principle consists of four major disciplines, one of which can be further divided into subcategories, resulting in six disciplines. These disciplines are largely from economic activities and non-economic activities (Fig. 1) because human activities can be grouped in either category. The first three disciplines mentioned below are non-economic activities, whereas the last consists of economic activities.

Fig. 1: Major principle by relationship among disciplines



*Culture includes Literacy and Education, Science, Medical Care and so on.

The first discipline is based on physical circumstances such as the natural environment, geographic factors, climate, and population change. Accordingly, let us name the first discipline the natural discipline. The second discipline is based on a cultural discipline, which can be decomposed into three subcategories. One subcategory consists of basic cultural factors, such as language, custom, religious belief and ideology, which may include mythology, folk tales, philosophy and thought. These very primitive factors affect our society. The second subcategory consists of civilization's function in developing social infrastructure. The third subcategory consists of individual cultures in a narrow sense, such as education, medical care, music, sports, and public entertainment. Accordingly, let us name the second discipline the cultural discipline. The third discipline is a political and institutional discipline. This discipline essentially includes all procedures for social decision making such as laws, administrative organizations, bureaucratic systems and political institutions based on the separation of powers. Accordingly, let us name the third discipline the institutional discipline. Finally, the fourth discipline is an economic discipline that is basic and diffuse and can grow through the division of production and exchange. Accordingly, let us name the fourth discipline the economic discipline.

Our society can be briefly described as a mixture of these four disciplines and their equilibrium, but if we decompose the second discipline into its three subcategories, the social structure can be depicted by six disciplines. Moreover, the economic discipline can essentially be explained using two fields: market structure, as introduced by

standard macro- and microeconomics, and economic development. We can deepen its development or growth mechanism using six factors that are essential to this discipline, as addressed in later sections.

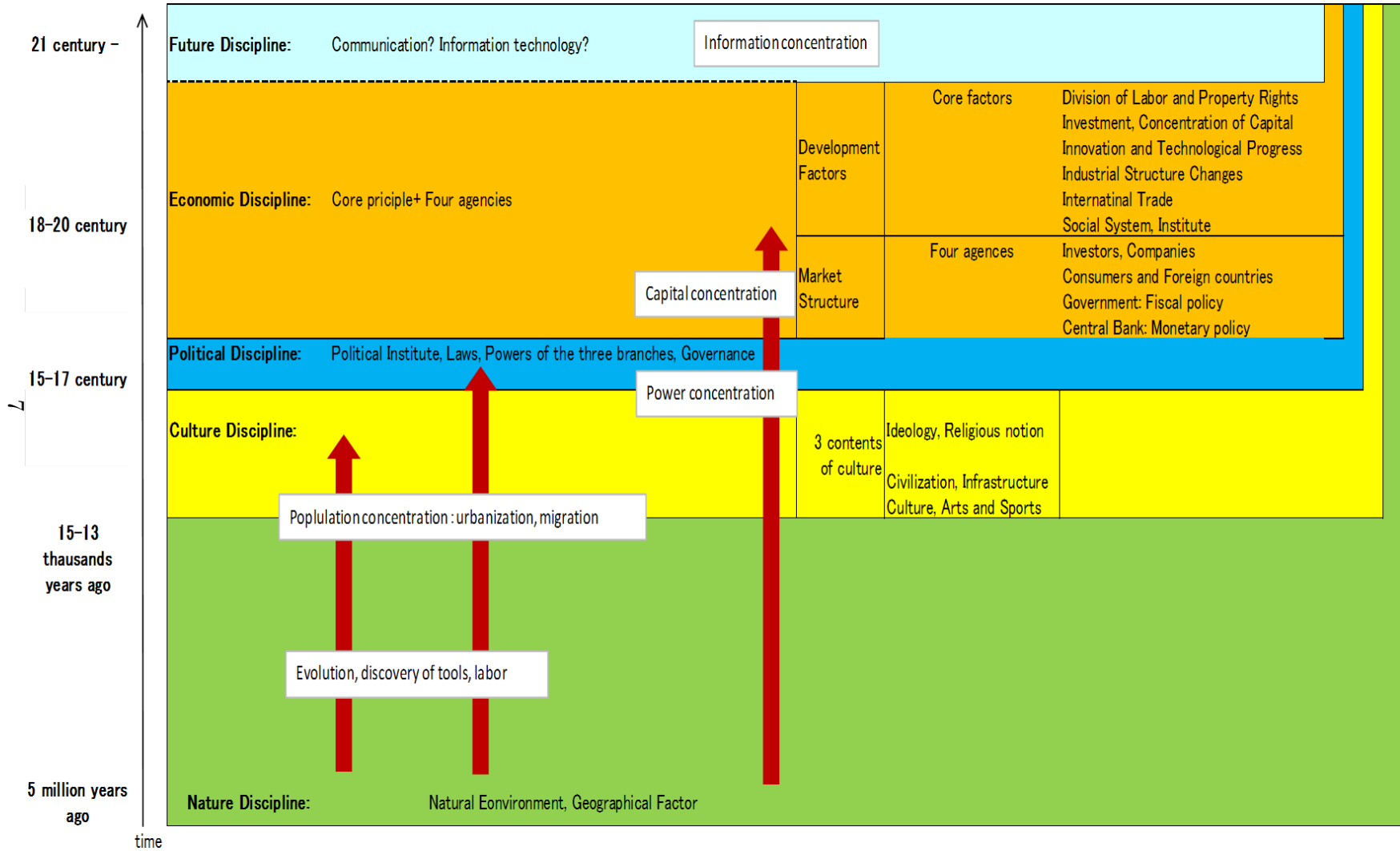
In the future, new disciplines other than those mentioned above might be able to describe the social structure. For example, the most powerful possibility is that of an information-intensive discipline. Information-intensive technologies, generally characterized by the emergence of the Internet and cellular telephones, have had an impact on society similar to or greater than the advent of computers. Such technologies are drastically changing our communication style, whether within families or among nations. This information-intensive discipline may change our notions of society and life. Currently, it is difficult to identify precisely what changes will be induced by the intensity and fluidity of information, but history may show such changes to have been both positive and negative. Therefore, the information-intensive discipline might be added to a new discipline to describe the social structure in the near future.

Although we can describe the social structure according to the six disciplines mentioned above, we describe below some of the difficulties inherent in our method. First, each discipline has been enhanced by its own academic development and accumulation, which has been widening and deepening for a long time. Second, because each discipline contains an almost infinite number of small events, a limitless number of convenient facts about almost all problems can be gathered for analysis. Therefore, because it is possible to describe many of the problems in each discipline using minor facts, it is possible to fail to grasp the essence of the social structure. Because there are countless

pitfalls in any field, no matter how small, the danger of losing our way is always present.

Third, it is difficult to test hypothetical inferences and analytical results using our meth-

Fig.2: accumulation of social evolution and system



od. These difficulties raise another potential danger: Our analysis may result in no more than a historical narrative.

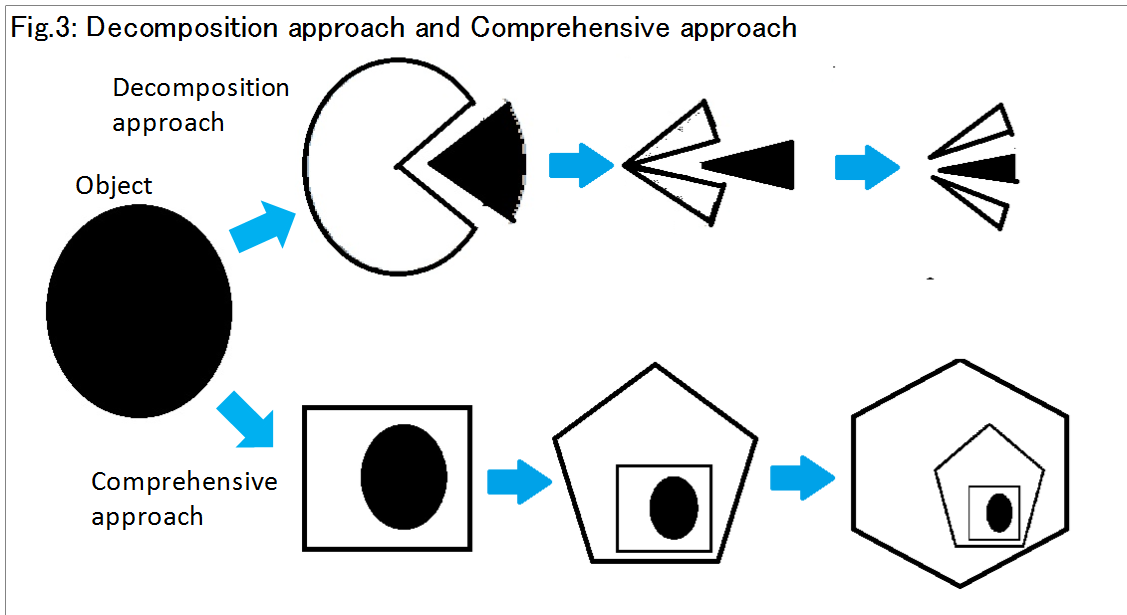
Can these problems be overcome? A common characteristic of the social sciences in the past is that it was not difficult to find numerous counterexamples for any type of social issue, which suggests that it is almost impossible to compare and verify any hypothesis in the historical sciences in the strict meaning of the term. This cause is seriously related to the methodology of the social sciences, particularly that of economics. For example, one popular economic method is the simultaneous equation model wherein one particular variable has been decisively influenced by other variables. Conversely, the other variables are themselves influenced by further variables, including the first variable. This situation is usually referred to as interdependency, which can be described using mathematical models. If the model is a linear equation system, it must have an intersection (equilibrium point) to arrive at a solution. However, if we interpret this intersection as a social phenomenon, the existence of an equilibrium point can mean that in our society, mutual interactions between one side and another are always occurring. Although one factor acts upon another, the second factor usually counteracts the first. This phenomenon can be interpreted to mean that when a particular event occurs in our society, an opposing event always occurs. If this interpretation is correct, almost every time we analyze society, it is possible to find a counterexample that can disprove our analysis. Because of this feature, economics is often criticized as a pseudoscience, and the credibility of the social sciences is damaged⁴.

⁴ In the past few decades, social science and behavioral science including epistemology have been

However, as Karl Popper has noted, guaranteed falsifiability is an important index that shows scholarship to be science. The ease of finding counterexamples does not deny the scientific nature of an analysis. Most likely, it is not difficult to find counterexamples to our fundamental rule of economic development. Nonetheless, these counterexamples can enrich our conclusion and the facts that support our hypothesis because they can deepen the analysis.

Conversely, the empirical method, embodied by econometric models and statistical tests; the demonstrative method, marked by individual historical facts; and deductive methods, such as mathematical models and others, remain powerful analytical tools. These methods tend to be decomposition methods and specific approaches. However, it would likely be difficult to decide quickly whether they are always useful for testing an economic hypothesis. The reason is that, as noted above, a social structure is essentially an open system. It is not at all rare for fundamentally unpredictable events (for example, innovation) to change society drastically. The method is a type of comprehensive or interdisciplinary approach, such as historical science, but somewhat different from both the deductive and inductive approaches. Overall, for our purposes, we could judge the validity of the hypothesis or theory only by balanced analyses. Thus, historical approaches would remain significant.

developing the methodology. For example, randomized control treatment, propensity score matching, difference in difference and instrumental variable approach are broadly employed to infer causal relationship between outcome and treatment in many empirical social science research. There, random sampling can play the role like natural experiments in natural sciences to cut reverse causality problem even though it's still difficult to control many possible biases or uncertainty perfectly. See Angrist and Pischke (2014) and Imbense, and Rubin (2015).



In addition to the above, one more methodological difficulty of economics is that the feedback mechanism is not a closed system in an economy. On the one hand, a certain economic policy or action can affect other economic variables. On the other hand, such policies and actions can be influenced not only by feedback from changes in the variables but also quite often by other social and environmental factors. Thus, the feedback mechanism in the economy represents an open system from the beginning. Such complicated or comprehensive structures of the economy or society cannot be sufficiently analyzed by orthodox macroeconomics. We must therefore extend the analytical method for our society by a more comprehensive principle that combines some of the disciplines mentioned above.

3. Essentials for economic development

Historically, the exchange of goods (or trade) spread worldwide once the world's sea routes were discovered in the 15th to 16th centuries. This fact has been recognized by many economic historians. Global trade, including colonial rule and the slave trade, contributed to the accumulation of overwhelming wealth. Consequently, there was a conversion from so-called physiocratic activities to mercantilism. Global trade was initially engaged in by Portugal and Spain, which had established centralization-of-power-type political systems that concentrated their authority in their respective kings. Economic activity at that time was strongly supported by the ruling class because Spain and Portugal needed to accumulate wealth to win the battle for religious hegemony against the Ottoman Empire (i.e., Reconquista). Moreover, Catholicism needed to increase its numbers relative to the Protestants due to the Reformation in Europe. Thus, preparation for the full deployment of capitalism was completed; following the Netherlands' achievement of world hegemony in the 17th century and as a consequence of revolutions in Britain and France (which had caught up with Spain and Portugal), international trade spread.

According to orthodox economics, these trade activities can be summarized in 4 points as follows:

- (1) Producers (or firms) as suppliers and consumers (including investors and foreigners) as buyers compose the market supply and demand sides in the microeconomic sense.
- (2) Some companies or industries could become monopolistic (natural monopolies) or oligopolistic markets, and transaction costs, information asymmetry, externalities,

uncertainty and so on might distort market competition (i.e., market failure).

- (3) Government could improve those market distortions through fiscal policy (redistribution of income) in the macroeconomic sense, and a central bank could control prices, interest rates and exchange rates through monetary policy.
- (4) These public policies, however, might generate another problem such as a serious budget deficit or distortion in the market (i.e., government failure).

Although these explanations for market structure—that eight main agents (producers⁵, consumers—governments, central bank and foreigners' ones) and their activities produce Value Added—are orthodox, they remain insufficient because they do not include the movement of the entire market, human relationships, historical factors and more. It is difficult for the market structure itself to derive the path of economic development and growth.

According to the accumulated knowledge of many economists, factors that can lead to economic development or economic growth can be summarized into the following six factors, which we shall refer to as the core principles of economic development:

- (1) the globalization of international trade;
- (2) the concentration of capital (investment) and the establishment of institutions to accomplish that goal;
- (3) innovation (including technological progress);
- (4) the social division of labor, which involves improvement in productivity and the

⁵ In the context of SNA, we can divide producers into non-monetary corporations and monetary institutes. In this case, totally ten main agents are players in the markets.

diffusion of private property rights; (5) social infrastructure including political institutions and the rule of economic activities and regulation by laws, which guarantee the aforementioned activities; and

(6) structural changes in industry.

Historically, these core principles have played the roles set forth below.

Point (1) is an essential activity of economic development that is efficiently explained by David Ricardo (1817). Trade of goods and services is the base of economic development. Trade's primary function is as the driving force of not only economic development but also the investment activities mentioned in point (2). Global trade is the ultimate developed form of goods exchange. Historically, it brought prosperity to European countries (and simultaneously, the colonization of Asia, Latin America and Africa) by spreading trade beyond the Mediterranean following the Great Navigation Age of the 15th century. International trade and global trade continue to play a central role in economic development.

Point (2) was emphasized by K. Marx in his classic book (1867) and was analyzed in accordance with economic growth theory by economists such as Keynes (1936), Harrod (1939) and Solow (1956). Investment is an essential economic activity of capitalism, in which capital is concentrated in a specific economic activity but also distributed to other activities and an investor anticipates demand, focuses on targeted economic activities and concentrates funds. This investment also includes spending money on human resources (e.g., education and skills training). Moreover, the establishment of financial institutions to support these investment activities is

indispensable. For example, since the creation of central banks in Britain and Sweden in the 17th century, various financial institutions have developed rapidly in many countries. These financial institutions systematically facilitated the selection and concentration of investment, which led to high economic growth, including business cycle fluctuation.

Point (3) is the systematic problem noted by Schumpeter (1934), who stated that there were five main innovations: new acquisitions for the procurement of raw materials, new methods of production, new goods, new supply routes and new organizations. Furthermore, particularly in the field of business management or administration, innovation is emphasized by many researchers (Bernard (1938), Drucker (1967), Simon (1976), Toffler (1980), etc.) as an important economic activity that achieves breakthroughs. Recently, Akerlof and Shiller (2009) re-evaluated “animal spirits,” which refer to human characteristics identified by Keynes. These spirits are an important factor that generates not only innovation or new breakthroughs but also entrepreneurship.

However, the most important (and difficult) point of innovation is that we cannot plan it beforehand. The key is whether the supply side or producers that predict near-future needs in the market can flexibly adjust their organizations to respond to such innovations. In addition, although this point is related to point (5) below, whether such free economic activities can be guaranteed as a societal institution is a decisive question. Innovation cannot be planned exactly, but it can be incubated with freedom in human activities. This characteristics of innovation could cause *uncertainty* of social and

economic development.

Point (4) was described in detail by Adam Smith. It is a necessary condition for exchange and world trade and is a condition for the rapid improvement of productivity. A necessary condition for generalizing the division of labor is to establish private property (i.e., exclusive possession) rights over the means of production. In addition, a free labor force, called “wage workers,” released from positions as feudalistic serfs or farmers, must exist throughout society. This point is historical in nature; factors created by modern revolutions have enabled liberal economic activities dating back to approximately the 16th or 17th centuries.

Point (5) is an institutional factor that can guarantee free economic activity. This problem has been noted by, for example, Hayek (1945), Friedman (1961), Buchanan (1975), and D. North (1991) in the 20th century, and the de facto failure of socialism’s planned economic systems clarified this problem again as a factual matter. This problem had already been mentioned by M. Weber (1922) in the 19th century. The important role played by bureaucrats in modern society was also noted by both Galbraith (1967) and Drucker (1967). Bureaucrats should be elites in the society and be able to address complicated social problems such as taxation, welfare, national defense, and foreign affairs and have the power to manage them.

However, bureaucrats can be the source of another failures in market competition and trade. For example, the political power of Marxist-based Communist Party administrations, which should have been elite groups, led not only to extreme

centralization and corruption but also to totalitarianism and now represents a serious obstacle to free economic activity. The feature of socialism was theoretically proven by O. Lange (1936), but the truths told by Mises, Hayek and Friedman, who radically criticized constructionism, were proven by fact. After all, the market mechanism did not function in the socialist countries⁶.

Conversely, it became clear that many capitalist countries could not avoid the hypertrophy of fiscal policy (or Keynesian policy) and faced chronic budget deficits, which will result in large tax increases in the future. Moreover, the Virginia School (including Buchanan), proponents of public choice theory, has noted the problem of rent seeking problem—i.e., vested interest groups attempt to make strong connections with powerful classes, such as politicians and bureaucrats—and the free-rider problem—i.e., stakeholders attempt to take advantage of public goods and welfare. The Virginia School criticized the problems that accompany government behavior, including government failure, regardless of differences in political systems.

Furthermore, North (1991) has suggested incorporating the viewpoint of the institutional frame within the analysis of economic history, including transaction costs, which are not ignorable in actual economic trade. Although his perspective, which views the presence of institutions as a rule of the game, is somewhat different from that of Aoki, who views institutions as an equilibrium of the game, as noted in the Introduction, the two find common ground in their emphasis on a comparative institutional analysis for

⁶ Of course, China has been developing rapidly after instituting policies of reform and openness in the 1980s under the socialism system. However, because the country had to introduce a market mechanism very different from the planned economy, no one would believe now that China is a typical socialist country.

economic growth theory. Thus, problems related to how political power distorts economic activity are persistent challenges in the field of institutional economics as well.

This point (5) is not only a political institution problem. Energy supplies such as water, electricity and crude oil, distribution networks such as transportation systems, an improving literacy rate and maintaining basic education and welfare, as well as the religious or ideological environment are all fundamental bases for economic development as *social infrastructure*⁷.

Finally, point (6) indicates that the economic results of the industrial structure and income distribution led by the points above work simultaneously. It also relates to the diversity of the industrial structure, which is addressed by theories such as Petty = Clark's law (1951), Akamatsu's flying geese pattern theory (1961), Vernon's product cycle theory (1979), and Kuznet's curve (1971). Quantitative method was also provided by W. Leontief (1986) in the form of Input-Output analysis, which was recently extended to the CGE model or SAM. Changes in industrial and employment structures have historically been experienced in many countries through productivity improvements enabled by agriculture, labor immigration from agriculture to other sectors and other spillover effects such as reductions in transaction and transport costs. These industry structural changes should result in more economic development than would occur in a monocultural economy⁸.

As briefly demonstrated, the above six principles combine and drive economic

⁷ These bases are equivalent factors to the disciplines mentioned in the previous section.

⁸ See Deaton (2013) on the recent income inequality situation and the difficulties remaining for developing countries.

development intensively. Reconfirming this point, the social division of labor results in changes to the industrial structure and to the development of international trade. New goods and services produced by the division of labor are selected through market competition and concentrated investment and innovation. Moreover, market competition requires rules that are as fair and transparent as possible, but it also requires a free and flexible political system that guarantees those rules. These six principles deeply and simultaneously (or game-wise) affect one another through the economic activities of agents such as general corporations, monetary institutes, consumers, governments, a central bank and foreign countries. In addition, these core economic principles and each agent's behavior simultaneously affect political discipline, cultural discipline and natural discipline as mentioned in the above subsections, and vice versa. Thus, economic development depends upon not only the market mechanism but also non-economic systems.

Historically, it is clear that since the advent of capitalism's expansion in the 18th century, the past 300 years of economic development have been remarkable. The reason of the development could be that some countries, including Britain, created the concentration and distribution of capital, the free investment and flexible innovation that could support the core principles of economic development following the establishment of world shipping routes and the globalization of economic trade.

Since the 20th century, world capitalism has developed into an industrialized society that clearly separates production from consumption and labor from consumers ("Line and Life"). Additionally, industrialized society has been changing into a service-

economy society, and now the advancement toward an information society is ongoing, which does not clearly differentiate production and consumption. This integrated situation of the core economic principles mentioned above and other disciplines of non-economic systems in our societies have been continuing since the Industrial Revolution. Therefore, it is necessary for our research to address the integration of these disciplines.

4. Impact of the information-intensive society on the economic system

Based on the previous subsections, we consider that our society is balanced by the interactions among the four disciplines of nature, culture, politics and the economy, and we can approximately describe each country's history and primary features according to their differences. We believe that in line with the historical process, these factors accumulate into society similar to strata, which reflects the process of evolution. The difference between society and genuine strata is that in the case of society, the old stratum not only regulates the new one but is also influenced or transformed by new ones because each factor may interact with the others.

In summary, society's situation can be characterized by three "concentrations." The first is a concentration of population (e.g., community growth and urbanization). The second is a concentration of power (establishment of a powerful state). The third is a concentration of capital (economic globalization).

The key factor of the first point is that population concentration was a very important feature of human society beginning with the discovery of farming and the

establishment of the settled lifestyle approximately 15,000 years before recorded history. Life and farming were influenced by nature to such an extent that humans formed village areas to cooperate with each other easily and to maintain their safety. As populations increasingly concentrated in village areas, they became urban areas. After accumulating a large number of people, urban areas generated culture and politics.

The second point primarily involves the birth of the nation state in recorded history, although much of that time overlaps with the first point. Communities such as villages or urban areas require bases for their lives such as rules, order, infrastructure, organizations, networks and entertainment. They might select a king as a symbol of their authority in some areas and try to concentrate political power to make decisions and allocate their wealth. Additionally, they might try to arm the state to counter their enemies. As a result, political power must be concentrated and strengthened.

The third point involves contemporary society, which began in the 16th or 17th century when global shipping routes were established and the modern citizen-society was established. International trade led to much accumulation of wealth in many areas. Liquidity such as money and deposits from the exchange of goods and valuables generated much capital for investment in many types of economic activities. Thus, it is possible to characterize society based on the interaction of these concentrations.

In addition, if society is based on such an idea, there is a possibility that we can add a new discipline to our view of future society, as described in Section 2, a so-called fourth concentration. Although we do not yet know exactly what it is, the most likely factors are communication or social activities based on information technology, as can

already be seen. The computer, which can calculate anything using digital signals composed of binary numbers, appeared around the middle of the 20th century. The Internet, which enables communication between computers, appeared in the 1990s. Later, the Internet was combined with the telephone to create mobile phones and smart phones, which spread in an explosive fashion and changed our methods of daily communication, allowing the collection of information at a surprising speed in the 21st century. As a result, the globalization of our society advanced further, and scientific analyses of humans progressed rapidly to the DNA level. In other words, information has been treated as a new and valuable commodity, and it has assumed an important meaning and power in our life and economic activities. As A. Toffler (1980) noted, it appears that the Information Revolution must be *the third wave*.

What do the concentration and distribution of information bring to society as a whole, and what types of changes do they bring to us? The signs have already appeared. First, the concentration and distribution of information changes the nature of time management, which drastically changes our notions of time. Information-gathering and -negotiating costs, including the transaction costs noted by North, will fall dramatically due to information technology. For example, the notion of time based on the rotation of the earth and centered on the sunrise and sunset must have been standard in an agrarian society in ancient times. As industrial society became mainstream in the 18th century following the Industrial Revolution, the work day was artificially managed and bound workers to the factory, and the production line was standardized. The eight-hour, 9 a.m. to 5 p.m. working day appeared in the 20th century. Work time in a factory or an

office is managed, working hours are measured according to a compulsory period that falls within the 24 hours in a day, and wages are paid according to adherence to that schedule. However, in the service society, particularly in the information society, necessary information has been concentrated in the decision makers or people in general. As a result, it is now possible to work promptly every time a policy or an idea is suggested—anytime and anywhere. A compulsory work day of eight hours that adheres to a regular schedule has become meaningless. Instead, people are now expected to work at any time during a 24-hour day. Although an entire day can thus consist of working hours, this point does not mean that a person must work all day long or only during continuous, fixed working hours. It instead implies a new life and production style; a person can work as much as necessary when necessary and can rest as much as possible when possible. In other words, labor has transformed into a style of work similar to that of artists and creators⁹. That is, the distinction between working hours and leisure time has become unclear, implying that working patterns have changed dramatically.

Second, the concentration and distribution of information allow us to drastically change how labor is instituted. For example, some types of labor in Japan—such as permanent part-timers (Freetor) and non-regular employees—and even staying at home (Hikikomori) with the status of NEET (Not in Education, Employment or Training) might be popular. Actually, these lifestyles are not new. In Europe and the US, hippies, bohemians and job hoppers have been known as workers who are not restrained by

⁹ For example, see Ichihashi (2000).

managed working hours. According to historian Yoshihiko Amino (1996), in the Middle Ages, there were nomads who migrated within Japan. These types of people are considered to have been a minority in urban areas since the Middle Ages through the mid-20th century. However, they are increasingly in the majority in the Information Age. In a positive sense, a nomad-like group could become the majority in the near future because of information technology. If a working pattern that restrains people to one factory for a definite period (as in industrialized society) becomes unnecessary, labor will change dramatically, and working in only one place will not be necessary to earn income. Therefore, people could work multiple jobs concurrently, evaluated only by output. Moreover, it would also be common to change jobs many times. In other words, everybody could work in a manner similar to that of the self-employed. Laboring would be only one part of life, and the limitation of freedom in life due to labor might decline. People disengaged from farming labor or released from manufacturing and industrial production can migrate globally and improve the mobility of their labor.

Third, the concentration and distribution of information will change employment (in terms of paying wages) and tax collection. Wages based on hourly payment would not be suitable for this new situation because time management has changed. Accordingly, an annual salary system or a perfect-performance-based system could likely replace the monthly paycheck system. In addition, because wages are not always derived from a single source and are further diversified and complicated, taxation would be greatly changed. The present method of tax-collection, which primarily depends upon direct taxes such as income tax and corporation tax, would become more difficult,

and indirect taxation, which taxes consumption, would become the primary tax-collection method. Such a reformation of taxation is inevitable for the central and local government to realize stable revenue.

Fourth, changes in employment enabled by the concentration and distribution of information will also change people's relationships, thus fundamentally changing human relationships in social organizations such as the workplace, the local area, and the family. Change in employment would cause much friction and confusion between institutional customs of the industrialization age and the style of the new era. However, the new era would gradually be occupied by a new majority. The conventional style of community based on agricultural or industrial society may collapse. Conversely, social networking systems (SNS)—Facebook, Twitter, LINE and so on—might pioneer a new version of community. Thus far, it is true that the virtual, Internet-based community has a great deal of influence on people's actual behavior, human relationships and communities; however, how a virtual community can truly reform local communities is not at all clear.

Finally, the concentration and distribution of information might result in new habitat circumstances derived from connections with specific knowledge and services. The most significant possibility is that local municipalities might be drastically reorganized and many market-based city-states will be formed. Although the cost of information transmission and transportation would decline sharply, people would want access to the same quality of services. Accordingly, the style of nation in which people are scattered among rural and urban areas would be transformed, and cities might

develop rapidly. Agricultural and industrial products could be produced in the suburbs. Additionally, the infrastructure that connects cities could be maintained, and the productivity of agriculture and industry would be improved to their utmost. However, services related to those industries could be provided efficiently in the resulting city-state; thus, most people would move into an urban area and settle there. Therefore, a city-state-type society might be the most reasonable expectation for a social structure in the near future.

The points mentioned above are brief descriptions of historical changes to our society based on the emergence of a new social discipline. As mentioned, some (but not all) of these changes are already appearing. These changes might remain minor phenomena because our society has continued to work according to industrial customs and has remained accustomed to old habits. However, the concentration and distribution of information should have a strong influence on people's relationships and basic structure in contemporary society. We are certain that this mobilization of people will determine the direction of the next society. The most important problem would be to reform society smoothly, maintaining a balance between the high mobility of people and social order.

The change in society mentioned above is a common element throughout the world, including in Japan. Thus, each country's new characteristics appear on the common platform of change combined with its own institutions, culture and so on. However, no one can foresee its ultimate resolution.

5. Concluding Remarks

This section considered methodological problems based on economics, particularly macroeconomics, and attempted to provide a new socio-economic philosophy to overcome those difficulties. In addition, it tried to make clear the impact of an information-intensive society on economic development.

Points we mentioned above are as follows:

- (1) The feedback structure among variables in a macroeconomic system constitutes an open system, not a closed one within the economy.
- (2) Although we can predict how an economic policy or action might affect individual economic indicators to some extent, based on orthodox macroeconomics, we can say little about what the policy brings to economic agents or how such agents would behave after policy implementation because their behavior is usually influenced by economic and non-economic factors.
- (3) Therefore, economics should be open to other fields in terms of the analytical methodology. Thus far, we can simply say that there are five disciplines within the natural, cultural and political areas to meet such a requirement.
- (4) Additionally, in actual economic development, social infrastructure added to core principles plays an important role. This social infrastructure is provided by non-economic factors.
- (5) Today's economic society features information technology. This information-intensive society will transform our notion of time and drastically change our overall labor style and lifestyle. Industrial society, which suited the 20th century economy, will be

dismantled eventually, and new social development toward the establishment of information-intensive urban states worldwide will most likely appear.

In summary, analysis of economic systems without including other non-economic factors seems to be dangerous because the focus of the research tends to narrow. Conversely, more-comprehensive macroeconomic analysis that also addresses actual historical transitions, cultural factors and institutional factors should be necessary for both classical and new social sciences.

II. The origins of Japanese social order and economic development

1. Introduction

There are three typical puzzles in economic history. First, why were England and the U.S.A. the most successful countries in the 200 years from the 17th to 19th century? Second, why was China behind in terms of economic development around the Ming dynasty (14th to 17th century) after a long period of prosperity? Third, how did Japan become a unique country so rapidly when caught up with powerful countries from the late 19th century to the post-World War II period? These three puzzles remain unsolved. This section attempts to answer the last question by addressing how the originality of the Japanese economy and Japanese organizations flourished; a

comprehensive framework of the social science fields is reformulated to accomplish our goal¹⁰.

It is clear that each society throughout the world has a unique history, and Japan is not an exception in this sense. However, the development of Japan is an interesting and worthy topic of study because of its rapid ascendance in the short term after the feudal system of the Edo period in the late 19th century was ended and after its defeat in World War II. Kuznets (1971) mentioned that Japan is a unique instance of one of four types of nation-states around the world, and R.C. Allen (2011) recently emphasized the uniqueness of Japanese economic development. To date, it has been difficult for many Japanese to adequately answer this question. This section attempts to provide an answer regarding the originality of the Japanese economy and Japanese organizations based on a comprehensive framework of the social sciences.

The comprehensive social framework is based on several principles from the fields of social science. It is apparent that Japanese society shares many bases with other countries based on this framework, but at the same time, originality can also be drawn from it. In other words, the uniqueness of the Japanese economy and Japanese organizations has been formed by many common social factors and different mixtures.

We first discuss our methodology in this subsection. Although there have been many notable attempts to analyze society as a whole, they have tended to use only one

¹⁰ For the former two questions, important studies have been published by R.C. Allen (1982), (2008), Pomeranz (2001), Greif et al. (2011), Acemoglu / Robinson (2012)& (2009) and so on.

or two aspects of the framework presented here. These predecessors have provided important discussions regarding social theory because they emphasized a single factor. For example, economic theory, particularly microeconomics, emphasizes human economic rationality, whereas social psychology asserts the irrationality of human behavior. However, we see that real society includes both factors.

It is possible to classify previous social theories into four approaches that generally consist of theories focusing on natural or environmental disciplines, cultural disciplines, political and institutional disciplines and economic development disciplines. The first three of these approaches essentially do not aim to conduct an economic analysis in which society is analyzed from each viewpoint. However, as described below, these three approaches are not only useful but also occasionally decisive for economic analysis. Therefore, it is impossible to ignore these three disciplines to understand economic systems. It is even desirable to combine them with the economic analysis. In this respect, it is useful for us to know that in the 20th century, similar movements in the methodology of historical science occurred.

Another example is that of the historical analysis that views geographic factors and folk viewpoints as important inputs, as noted by the French *Ecole des Annales* and Braudel. Braudel (1966) extensively described the importance of geographical advantage in the Mediterranean and the trade activities there in his volumes of history books. Another example is analysis known as the “Modern World-System,” which Wallerstein (1974) has advanced and which is developed by viewing world trade as existing between a center and peripheries. Wallerstein also emphasizes the evolution of historical

development through international trade. In addition, Pomeranz (2001) recently showed us his global historical approach, which concluded that two key causes of Britain's hegemony beginning in the 18th century were coal energy and the discovery of the New World. Although these historical analyses feature comprehensiveness or historical materialism, a common factor among them is that they are based on economic development.

The above suggests that it is not appropriate to analyze social history without considering economic factors. Historical analysis is neither a simple list of sequential facts nor tales of kings and heroes. Perhaps the scholar who first made this observation was Karl Marx. He inherited Feuerbach's idea of "historical materialism" and established his own historical viewpoint, which is formed by social class conflict. After the 20th century, the significance of the viewpoint of economic development was again recognized in the fields of historical science and sociology, for example by Braudel and Wallerstein, implying that contemporary society evolved to an economy-oriented society from a global trading system.

However, particularly since the end of the Cold War, institutional problems and policy-decision problems have been the focus of analyses, and it seems that economics is again moving toward the adoption of a more realistic perspective. As far as we know, there are four large, prominent and typical streams in realistic economic analysis, including history and institutional factors. The first stream includes historical and empirical analyses in the field of economic development such as those by Acemoglu and Robinson (2012) & (2009), Acemoglu (2009) and Diamond and Robinson (2011). This

stream has recently attracted a great deal of attention. The second stream includes comparative institutional analyses by North (1991), Ostrom (1990), Williamson (1996), Williamson (1985), Aoki and Okuno (1996), Greif (2006) and others¹¹. The third stream is a series of economic historical studies that include R.C. Allen (2011), Pomeranz (2001), Wallerstein (1974) and Marxist economic history research. The fourth is economic anthropological research, which was originated by Polanyi (1944).

We note that these four streams continue to suffer from major weaknesses, although they retain their major features.

First, the concepts of Acemoglu and others suffer from serious flaws, although their opinions of institutions are quite clear. They argue that an economy with extractive institutions is more disadvantageous to economic development than is an economy with inclusive institutions. According to their explanation, the people's revolutions in Britain, France and the United States all resulted in inclusive institutions, whereas despotic states and dictatorships, such as Czarist Russia and many countries in Latin America and Africa, have established extractive institutions. However, as Aoki (2014) has noted, relying on MacLeod (2013), finding a reasonable answer beyond "serendipity" to the question of how Britain, France, and the United States created their inclusive systems is very difficult. Although serendipity can be an answer to all types of questions, it can also be no answer at all. Unfortunately, economic growth models and empirical analysis using long-run historical data have not provided an effective explanation of why inclusive systems were established only in Britain, France, and the United States but

¹¹ This stream of economic theory originated with T. Veblen, J.K. Galbraith and others.

not in Latin America or Africa. The answer should contain an actual historical reason that an extractive political system was required. It should also acknowledge a mixture of social and evolutionary conditions, including cultural and geographical factors, because social institutions seem to be indispensable with those factors. In addition, there is the fact that all of the aforementioned countries that created inclusive institutions were also engaged in colonization and the slave trade. These practices most likely allowed these countries to accomplish economic growth more rapidly than did other countries. Nevertheless, the relationship between colonial rule and inclusive institutions has not been clarified in their papers.

One feature of the comparative institutional analyses of, for example, North (1991), North (1955), Aoki (1986), and Greif (2006) is their interpretation of the institution as a rule or an equilibrium point of a game. Because the Nash equilibrium in a game can represent not only a prisoner's dilemma situation but also an equilibrium solution by cooperation, equilibrium points are not necessarily singular in nature. Comparative institutional analysis scholars argue that the existence of two or more equilibrium solutions is what makes institutions different from one another. Moreover, the principle that generates organizations such as labor unions or cooperative associations over the long term in history is demonstrated using the Folk theorem, which suggests that an equilibrium solution can be obtained through either cooperation or conspiracy in an infinitely repeated game. These interpretations certainly appear to be an attractive explanation for differences among countries.

However, in the context of the Folk theorem, the reason that two or more

equilibrium solutions exist in a game depends so deeply upon the design of the game that there is no guarantee that those solutions will be reflected in reality. An explanation of institutions in terms of multiple solutions or the Folk theorem is limited by the mathematical conclusions of the closed model. It appears that generality or universality is sacrificed to an extent by adhering to the mathematical formalism of game theory. Consequently, no substantial difference exists between comparative institutional analysis and the conventional neoclassical model that attempts to formulate economic activities but occasionally fails to express their universality. Conversely, actual individual historical facts usually contain many details that flow in and out of a society under open conditions, and such details should occasionally appear when it is necessary and rational for them to do so. However, their conclusion is apparently justified by very specific and detailed historical facts that fit the mathematical results. The rationality linking their mathematical results to those specific historical facts appears ambiguous. Greif (2006) himself recognizes the peculiarities of historical context¹². He argues that “institutions are the engine of history— ... (and they are) self-enforcing systems of rules, norms, belief, and organizations¹³.” However, their terminology for institutions is neither consistent nor clear. For instance, even when the term “institution” is replaced with “society” in their papers or books, the context in which it is used remains unchanged. This equivocal definition for institution is also a limitation of their approach.

The third stream of realistic economic analysis is an economic historical

¹² Chap. 12 in Greif (2006).

¹³ Ibid. pp. 400.

approach such as global economic development, including Marxian economics. Until approximately 40 years ago, this stream was quite strong, particularly in Japan. However, history thereafter was very different. The weakest point of the Marxist approach is its historical view of the simple development of materialism and its interpretation of capitalism as a linear step toward socialism, an approach termed the “stage theory of economic development.” In addition, the simple historical view of class warfare (i.e., capital versus wage labor; the rich North versus the poor South; and the advanced Occident versus the delayed Orient) embodied by, e.g., dependency theory, is problematic. The description of economic history in terms of such a simple historical view, such as the right-and-wrong confrontation theory, is cartoonish. In fact, socialism has already failed, and the corruption that appears in socialist regimes appears more terrible than that in capitalist countries. According to the website of Transparency International¹⁴, the corruption perception index in 2013 shows that China’s score is 1.8 times worse than that of the USA and that North Korea’s score is the worst, 9.1 times that of the USA. Marxism’s view of historical development cannot describe the principle of actual economic development.

However, in this economic field of history, there are active studies, not only the global economic history of Wallerstein (1974) but also cliometrics such as R.C. Allen (2011) and comparative economic history such as Pomeranz (2001) as previously mentioned. Such studies are restoring traditional economic history research by

¹⁴ <http://www.transparency.org/cpi2013/results#myAnchor1>

approaching it from the point of view of global economic development. This stream will undoubtedly be one of the most influential approaches in comprehensive economic analysis.

The fourth stream of comprehensive economic analysis is based on research in Economic Anthropology. This field was founded by Karl Polanyi (1944). He and his successors are considered Substantivists within economic anthropology, but that classification is not the point here. More important is that they view an economic system as a part *embedded* in society and view the cultural and traditional institutions surrounding the economic system as inseparable social factors. Such a viewpoint is lacking in Marxian economics but is common in our framework. Their classical works are Polanyi (1944), Dalton (1961) and Kurimoto (1979); these works are actively used to introduce economic anthropology to Japan. Unfortunately, since the 1990s, this stream of the literature does not appear to have had a major influence on economic research. However, the points that they try to include, that is, a human network in villages or communities and cultural and traditional institutions/customs in economic analysis, should be useful in helping us understand our society. Shedding light on regional human ties and traditions is an important function of cultural and economic anthropology. Recently, Gudeman (2008) and Hann and Gudeman (2015) tried to clarify social hardness in terms of the relationship between an economic system and traditional folk rituals. Such anthropological approaches have weak points in quantitative or statistical analysis because they often seem to focus too much on ancient civilization and society. It is not necessarily clear how their analysis of traditional social norms can feed back to present

society and norms.

We can learn how to analyze our society based on comprehensive economic research from four large streams as previously examined. Note the following two points as our position for epistemology and analysis. First, societies have existed as open systems from time immemorial; it is impossible to forecast a priori what leads to their development. Essentially, uncertainty rules societies¹⁵. Because contingency and uncertainty can change the role or the degree of influence of each discipline working to achieve social transition, it would be effective to explain social transition through the interactions of these same disciplines. Second, interdisciplinary and integrative analytical methods are effective for social analysis, and historical analysis would be an appropriate use of such methods. The use of a solely reductionist approach as a method of economic analysis not only would be insufficient for our analysis but also would in many cases be the wrong choice for a total policy analysis due to the quite narrow conclusions derived from such an approach. Only a macro analysis integrated through a combination of many disciplines might be suitable as a social-science method¹⁶.

This section is an attempt to explain the origin of the features and originality of the Japanese economy and organization through a mixture of social disciplines that largely consist of the society as an application of comprehensive economic thoughts. In a previous paper¹⁷, I provided a rough sketch (in Japanese) for grasping the relationship

¹⁵ Concerning this point, Taleb (2008) provides us with a very important implication.

¹⁶ Popper (1957) criticized the 'historicism' in his book, but his criticism was on the determinism of history by holism. He recognized the importance of historical analysis for our open society.

¹⁷ Ichihashi (1996).

between the social frame and peripheral fields. That sketch will again be provided in this section. Moreover, an appearance of the post-service-economy society within these frameworks and an ideological consideration for the features of such an economy are introduced in another paper¹⁸ in Japanese. This section is an attempt not only to further consolidate the analysis of these frameworks but also to strengthen the social analytical framework.

In addition, our idea is partially but fundamentally based on Morishima's idea¹⁹. His research analyzed the Japanese economy using a type of interdisciplinary approach that he called "a symphonic work". In two of his works, he mentioned both the strong and the weak points in the Japanese economy. The secret of the former point is the ethos of Japan's own Confucianism and Taoism and collective action based on those religious beliefs; an example related to the latter point was population decline in Japan, resulting in Japan's aging society. His books met with much criticism²⁰. However, the Japanese economy currently appears to be trending in the direction that he predicted. This section provides points similar to those he noted in Morishima (1982) but more comprehensively and systematically.

In the following sections, we briefly explain the origin of the uniqueness of Japanese behavior. We check factors that are common to other countries and original factors in the natural environment and culture generated in Subsection 2. In Subsection 3, we describe Japanese religious ideas and behavior. Subsection 4 explains the

¹⁸ Ichihashi (2000).

¹⁹ Morishima (1982) and (1999).

²⁰ For example, Henry Wan Jr. (1988).

relationship between the collective decision-making process and political power in Japan in terms of social characteristics. In Subsection 5, we elaborate the original hardness of Japan's economy and its social organization. In Subsection 6, we provide a brief conclusion based on the analysis.

2. Origin of the uniqueness of Japanese behavior

The study that reminded us that our society determinately depends upon the natural environment was that of Jared Diamond (1997), but many archaeological and historical studies have made similar points. The human race evolved from the ape approximately five million years ago. It is believed that for a very long time since that time (i.e., four million years or more), we have been evolving into modern humans. Essentially, people have been moving their habitats and forming villages when hunting and gathering in accordance with, for example, the climate, temperature, and rainfall. According to J. Diamond, the human race's expansion along east-west lines was much faster and more widespread than it was along north-south lines because the difference between southern and northern climates is much greater and has more-serious repercussions for human life.

Because the human race is physically inferior to other large animals, humans hunted those animals in teams that leveraged the community, linguistic communication, the invention and use of tools and the control of fire. In Japan, for example, humans were making various Neolithic tools, called *Jomon*, approximately 15,000-16,000 years ago. As Engels (1896) noted, those tools must have played a decisive role in human labor. On

the path of human evolution, the formation of villages, the acquisition of language, the invention of tools and the use of fire, for example, likely occurred at approximately the same time. The reason is that village formation, group communication and food acquisition and preservation are interdependent. These elements develop a relationship of mutual dependence. Group hunting and the efficient use of tools were essential to human survival. As a result, the human race evolved in an entirely different direction than did other animals. Subsequently, approximately 10,000 years ago, humans finally invented farming, resulting in their transformation from hunting-and-gathering migrants to settled farmers.

We can easily infer that this settled lifestyle increased the human population and the number of villages. Because farming is severely restricted by natural conditions, whether a village's land was appropriate for farming must have been decisive. As J. Diamond has noted, the plants that humans have succeeded in cultivating, such as wheat and rice, are quite limited in number. The animals that humans have succeeded in domesticating also represent a small percentage of many kinds of animal . Consequently, places with mild climates and moderate rainfall (or humidity) were chosen as appropriate farming locations. The human population became concentrated in areas of Western Europe with a Mediterranean climate, areas of Southeast Asia with mild humidity and parts of Latin America with vast and prolific land resources. Relatively dry lands (primarily in Southwest Europe) would have been appropriate for cultivating wheat, and humid, well-watered regions (primarily in Southeast Asia) would have been appropriate for cultivating rice. These types of natural and geological variations are the

basic differences among the European, American, Latin American and Asian regions.

The points in favor of the notion that physical factors such as the natural environment and the geographic or geological climate have influenced the human race can be summarized as follows:

- Tool development
- Fire
- Communication methods
- Farming and a settled life
- Movement of large-scale populations and village formation (i.e., the beginning of urbanization)

The difference in the process of cultivating wheat versus rice, particularly irrigated rice, affected the cooperative work performed in each village. Each production process—for example, water supply and retention, seeding, harvesting and storing—must have been conducted differently with group cooperation. The philosopher Watsuji (1935) and the ecologist Umesao (1957) have noted that the natural climate has had a strong influence on both communities and civilization²¹. In other words, the natural environment and geographic climate have had a strong influence on the cultural aspects of society. A great deal of research has confirmed that the important changes in human evolution occurred from approximately 20,000 years ago until a few thousand years ago; rapid societal changes also emerged. The physical environment, including natural and

²¹ Additionally, Suzuki (1938) & (1965) noted that Japanese Buddhism, called 'Zen', was hugely influenced by the natural environment, particularly in the 12th century.

geographical conditions, for example, a warm humid temperature, would have affected people's movement and the formation of communities and urban areas.

Furthermore, farming methods must have affected cultural disciplines , including rules, norms and customs. The relationship between the natural environment and primitive (or basic) culture would have been indivisible. These interdependent influences must have formed the basis of society. The differences inherent in a settled farming lifestyle would have generated the following new features of human communities:

- Different religious ideas
- Different festive occasions and different senses of season and time
- Different infrastructure and civilization styles
- Concentrated and increased populations and rapid formation of villages and cities
- Differences in lifestyles and customs
- Various social organization styles.

Thus, the settled farming lifestyle could have facilitated massive population concentration and the formation of large communities, generating various cultural styles in villages based on either wheat production or rice farming. Moreover, control of the natural environment, such as that provided by farming, must have served as the origin of social-order thinking and the primary driver of societal norms. Additionally, the concentration and increase in population caused by a settled lifestyle would have facilitated the construction of infrastructure as the basis of that lifestyle and would have introduced civilization. Individual cultural features such as education and medical care

(i.e., cultural factors in the narrow sense) developed out of those basic features.

3. Japanese religious ideas and behavior

Religion is assumed to have developed in the very early stages of human society because the world's principal religions date back to the B.C. era. For example, Buddhism is not the only influential religion in Japan. Buddhism is a relatively new religion that was imported from China in the 7th century. Japan's ancient religion is Shintoism, which is based on animism. Traditional Shinto-based ceremonies, such as coming-of-age, marriage and ancestral worship ceremonies but not funerals are often still held in Shinto shrines, and Shintoism has continued to be part of the Japanese lifestyle. In addition, familialism resulting from Confucianism's influence has taken root in Japanese living habits. The idea of self-sacrificial devotion, which is manifested in loyalty and compassion (*Giri Ninjo*) and self-annihilation for its own sake (*Messhi Hoko*) is derived from Confucianism's eight moralities (human-heartedness, justice, etiquette, wisdom, loyalty, belief, dutifulness and respect). The philosophers Nakamoto Tominaga (1738) and Baigan Ishida (1739) conducted a comparative study of the religious ideas of Confucianism, Shintoism and Buddhism, which at the time were spread throughout Japan, and attempted to characterize Japanese society. The philosophers taught that an honest heart and frugality are important moral lessons to take from these religious ideas and that an ethical people should adhere to them. These three religious ideas regulated behavior in daily life. Religious ideas and habitual behavior based on them such as a Confucianism education were widespread in Japan in the Edo Period of the 18th century.

Sociologist Kenichi Tominaga (1997) notes that the organizational feature supporting the Japanese economy is the “Kindness-Obligation-Humanity Complex” (*On-Giri-Ninjo* Complex).

Moreover, religious outlook and behavioral principles have been broadly established as a code of conduct in both homes and villages (*Yie to Mura*/Japanese patriarchy or paternalism²³). The code was a type of strict rule within them. Those residents who violated the code were thoroughly excluded from their communities, a practice known as “social ostracism” (*Mura Hachibu*). This principle originated in the manor system of the Nara Period (approximately the ninth century) according to Yasusuke Murakami (1998). That system was based on land ownership for farming; i.e., villagers had to protect their land by cooperating with one another to produce their rice²⁴.

In addition, the ruling-class samurai in the Edo Era accepted Confucianism because Japan’s academics had strong societal influence. Both China and Japan introduced Confucius and Mencius’ teaching (i.e. Cheng-Zhu school) as monarchy theory. However, in the 16th century, Japan also introduced the counter-philosophy of Laozi and Zhuangzi (i.e., Taoism), combining this philosophy with Buddhist thinking such as that of the Zen sects. This fusion systematized Japanese beauty and traditional Japanese culture, as manifested in customs such as tea ceremonies. This viewpoint is emphasized by Kakuzo Tenshin Okakura (1906) and Soetsu Yanagi (1941). Suzuki (1938)

²³ We can add one more term called ‘Kumi’ here, as Ostrom (1990) mentioned.

²⁴ Some recent studies positively evaluate these Japanese collective activities that affect economic development, for example, Sakane (2011). He emphasizes that Japan’s extreme immobility in the village for long time cause of its own unique autonomy.

also mentioned that Japanese daily behavior was broadly regulated through religious ideas such as '*Zen*'²⁵, although they might not consciously be aware of it. Thus, Confucianism penetrated the manners of Japanese society in every area of life and deeply affected the political system by introducing it as the monarchy theory.

4. Collective decision making and the concentration of power in Japanese society

As mentioned in the previous subsection, the settled farming lifestyle is likely to have been established in many human villages that partly retained hunting and gathering, and it cultivated cultural activities. The resultant concentration of population and burgeoning of villages inevitably would have necessitated collective decision making within communities, or collectivism, and would simultaneously have generated a system of governance, that is, centralized power. This process is the origin of the political institution. When the size of communities remained relatively small, decision making could occur idyllically. However, after populations and villages became increasingly large, more-efficient governance systems and methods of decision making doubtless must have become necessary. The simplest or easiest approach to rule and govern is through violence. In ancient times and the Middle Ages, most countries were ruled by military power. Instilling fear with the threat of violence was a straightforward means to make people obey.

In addition, because the harvest was subject to the strong influence of yearly

²⁵ However, according to his explanation, Zen is a part of Buddhism that must be arranged to fit Japanese society, including Confucianism, Taoism and Shintoism.

climate change, there must have been villages that were lean and others that were skilled at harvesting. Due to this harvest gap among villages, pillage and theft likely occurred frequently. Therefore, people would have been dispatched to guard and organize armed forces to prevent such pillaging and to ensure the safety and order of the village. Such forces would initially be organized voluntarily in their village as a group of guardsmen and would gradually become efficient and eventually institutionalized. Finally, such organized armed forces were institutionalized as military organizations. These organizations would have been the essence of the nation²⁶.

Moreover, the germination of a political system in which some people define their role by ranking and differentiating within organizations would have inevitably emerged. Following the king's order or village decision, they were deployed according to their roles and abilities. This classification must have developed into social classes. Thus, the form of the nation evolves based on the definition of political roles and positions.

Moreover, because collective decision making requires both promptness and efficiency, concentration of power and the burgeoning of organizations would have eventually emerged. This process generated the ancient state, and people viewed the king as a symbol of the state. The king of the ancient state was supported by an extreme concentration of authority and wealth. For example, although the monarchy was later replaced by the religious nation, the power of kings was defended by the absolute monarchism of the Middle Ages for hundreds of years, until the 15th or 16th century. To

²⁶ Fukuyama (2011) also mentioned that violence plays an important role in the rule of the nation state.

provide another example, Japanese society from the *Yāyoi* era circa the third century BC to the aristocratic society of the 11th century was later replaced by the samurai society, which governed through violence and concentrated political power at the top of the hierarchy.

Thus, the necessary conditions for forming a nation would likely have included the following:

- Organizing violence
- Concentrating authority
- Dividing the ruling system

The political institution that formed under these conditions became a governance system in which some people ruled over others.

Several schools of thought that considered the governance system arose concerning the process through which large organized nations emerged. One of these schools of thought was the moral-based ruling principle (*Toku chi syugi*), otherwise known as the person-based ruling principle (*Jin chi syugi*). Another was nomocracy, or the rule of law. Nomocracy flourished after society had become peaceful, which to some extent resulted from lasting periods of war. For example, to establish a country ruled by law, some European countries had to experience a great deal of conflict and sacrifice. Historically, countries experienced, for example, the Puritan revolution (1642) and the Glorious Revolution (1688) (Britain), the War of Independence (1776) (U.S.), and the French Revolution (1789). Thus, the age of the rule of law arose after the 17th-century emergence of the modern society of citizens. Christianity, which is based on the idea of a

conversation between God and individuals, might have affected those social systems; i.e., the rule of law acts as a proxy of the rule of God in these systems. Accordingly, natural law is originally created by God; not only society but also individuals are ruled by the law. Therefore, human beings cannot change the law and they can rule their society partly with artificial norms. Such ideas, based on individuals, would have resulted in the invention of the concept of the contract and would have generated consideration of the social contract. As a result, authority is tied up with the rule of law, and the political system restricts people under legalism.

Conversely, many Asian societies, including China and Japan, accepted the moral-based ruling principle or the person-based ruling principle. Religious thought, such as Confucianism and the polytheism of Buddhism, would have affected these social systems, and direct rule of the people became popular. Moreover, the role of interveners (i.e., the bourgeoisie and government officials) was decisive to these governments, and the organization or hierarchy that later led to the bureaucracy was important. As a result, paternalistic rule became the primary feature that organized such societies, and so-called familialism, in which the head of the organization had jurisdiction and managed it, was established. Thus, we can interpret the difference between the Western and Eastern political systems.

Exceptions to this difference include the fact that many European countries dominated colonies beginning in the 15th century. Examples include the colonization of Latin America by Spain and Portugal (15th and 16th centuries), of Canada, West Africa and Indochina by France (16th century) and of India after the establishment of the East

India Companies by the Netherlands and Britain (17th century). Their governance might have differed from that of the colonial masters; thus, it would be worthwhile to study how these colonies were ruled.

Significantly, the nature of governance and political institutions in the home countries was most likely organized almost simultaneously with the emergence of gigantic colonies and the colonial culture. Because communities had been urbanized, they needed to establish collective decision making and governance so rapidly that the concentration of power and the organization of violence must have occurred simultaneously. Thus, the rule of people by the elites or the privileged must also have been determined at the same time. Centralized power would have induced the powerful king and the absolutist church, systematized violence would have induced war, and the established states would have then created empires and federations. This form of government would have become very systematic and would have been highly developed in both home countries and colonies. However, the political style was formally based on the rule of law. Thus, the very different governmental systems of Europe and Asia could have coexisted.

Ancient Japan introduced the moral-based ruling principle, the person-based ruling principle, and the bureaucrat system of higher civil-service examination from Sui in China around the 6th or 7th century. The country successfully established a centralized bureaucrat system from the Shogunate system in effect during the Meiji restoration. This centralized bureaucrat system informed the administrative organization of Japan and remains there today. As Tuji (1969) noted, the strength of the Japanese bureaucrat

system appears unique and is based upon ideologies such as the higher public and lower private (*Kansonminpi*), which was founded in Japan from the Meiji to the Showa period (from the late 19th to mid-20th century)²⁷.

5. Hardness of institutions and organizations in Japanese society

The history of society is formed by the mixture or integration of principles mentioned in the previous subsections, but how it generates concretely is realized through organizations, villages and regions. In this subsection, we approach this problem primarily from the perspective of organizations and decision making in Japan²⁸. When a commodity economy globalizes and spreads, production organizations, sales organizations, and banking systems develop uniquely and rapidly as a natural result. The originality of these management organizations has primarily been analyzed in the field of business and management. Specifically, although such analyses are generally related to business entities, including limited companies, the state of these organizations is influenced by historical features, politics and governing institutions, as previously mentioned. Organizations are units of collective behavior. Of course, organizations do change as a result of social transitions and development. Not only base organizations

²⁷ Tsuji (1969) Chap 1, 2 and 3.

²⁸ Japanese economists who analyzed the uniqueness of Japan's modern economy include Nakamura (1986) and Noguchi (1998), (2001). Both noted that the modern Japanese economic system was established from the late 1930s to the mid-1940s as a wartime regime and has continued since WWII.

In another context, Ostrom (1990) and McKean (1996) focused on traditional common lands (*Iriaichi*) since the Edo period in Japan as an effective means of the governance of commons by small units of several households (*kumi*). However, McKean's research treated only three villages in one region (the foothills of Mt. Fuji in the Yamanashi prefecture).

These analyses sound quite interesting, but we focus here on more comprehensive and radical reasons for the existence of Japan's originality.

such as families but also communities, decision-making organizations, educational organizations, regional organizations and so on play roles and are interdependent. In contemporary society, companies as units of production are integral as primary actors and are dependent as social members²⁹.

To consider this proposition, as an example, observe that the term “Japanese-style management” (*Nihon teki Keiei*) was frequently used from the late 1980s to the early 1990s when the Japanese economy was booming and is thought to represent the uniqueness of the organization of Japanese firms. The main characteristics of Japanese companies include lifetime employment, a seniority-based system, enterprise unions, and cross-shareholding. Among these characteristics, cross-shareholding is often criticized as requiring reform as soon as possible because it is likely to become a type of barrier to investment and a serious symbol of rigid organization. What types of factors are involved in forming such Japanese organizations? It is often mentioned that Japanese companies are management-labor corporations that care for both workers and their families as community-like organizations. However, the question of why they developed as community-like organizations remains unclear. As mentioned previously, scholars such as Murakami and Kenichi Tominaga viewed Confucianism and Buddhism and the cultural state of the country as the root of such organizations³⁰. If their opinion is correct, we can expect change within such organizations and institutions to be difficult because they represent not only groups or rules but also inherently historical structures.

²⁹ The main features of management organizations and social organizations can be classified into two categories according to Tonnies: communities (*Gemeinschaft*) and functionives (*Gesellschaft*). See Ichihashi (2000).

³⁰ As mentioned previously, Morshima also had a similar image.

In fact, a common criticism is that it is quite difficult to reform Japanese society, implying that organizational reform can hardly be accomplished by organizations alone other than by external structural changes such as the Meiji Restoration and the end of World War II. This problem is fundamental in today's Japan.

Japan's outstanding economic development has been classified by Kuznets as an exception, but its historical development has also been unique. Japan is a country with a long history centered on the Festival King, called the Emperor (*Tennou*). However, the history of the country since the introduction of the principle of economic development has been relatively short. At most, this history has lasted approximately 150 years since the late 19th century, when the country entered modern society as a follower. Moreover, Japan's history since the Meiji Restoration has experienced a sort of "disconnection" as a result of its defeat in World War II. Therefore, we can view Japan's contemporary history as being approximately 70 substantive years. Since the collapse of the economic bubble in the early 1990s, Japanese society has yet to achieve a sustained economic recovery and has continued to stray, failing to reform its institutions and regulations.

The weak economy is a consequence of politicians and groups of business leaders with vested interests who have strong connections, causing them to collude with one another; moreover, bureaucrats have substantial authority in governmental institutions in Japan.

We can observe that the cultural and institutional customs that have formed over Japan's long history continue to act as the foundation of Japanese society, as noted above; thus, the tendency to be bound by tradition and history remains today. Accordingly, the population may tend to be hesitant and may resist efforts to reform their society or

system. Most Japanese believe that not only nature but also tradition and history have an existence that transcends human society and intellect (sometimes called '*Seiken*'). There is a sort of fatalistic ideology; thus, artificial or social institutions cannot be easily changed. These symbols are the rules of the family and village (*Yie to Mura*), as noted in subsection 3. Concepts of social order based on Confucianism and Buddhism introduced by the Japanese from ancient China and Korea are reflected in the ideology of "*Yie to Mura*".

Of course, this idea is actually a type of fiction. Esteeming tradition and history is completely different from changing the system and its rules. We can reform the social system sufficiently while retaining positive traditions. However, it seems that Japanese society does not attempt to renew its fixed ideas unless it is undertaken in response to external shocks, such as the black ship and the defeat in World War II. Vested interest groups and bureaucrats often use this fixed idea to retain power because they seem to believe that it is the Japanese tradition. Japanese emperor system is also an example of social institution, but the right wing in Japan believed that the emperor's position was not mutable. The novelist Yukio Mishima, who committed suicide in 1970, used to answer in interviews that he strongly believed the Japanese emperor system was the absolute norm in Japan. This belief can exist because social customs including cultural and natural elements strongly influence not only political institutions but also the economic system; society consists of interactions among those elements.

This type of ideology might arise out of the perspective of Buddhism or Confucianism, which indicates that the world consists of natural and social layers. In his

book, Fukuzawa viewed this notion as a convention that must be overcome to achieve modernization³¹. Thus, decision making approaches that he strongly criticized depends upon collective units rather than individuals, as symbolized in the concept of “family and village” in Japan. Decision making based on collective units differs from a democratic approach. There is an absolute pecking order between a leader and subordinates, referred to as a “bias of power” by Fukuzawa (1875), and the leader can control the initiative to make a decision. However, although heads of organizations or groups such as a chief of village and a family head lead the decision-making process, they often take into account opinions from members of their organizations. As a result of democracy-like ‘discussion’, their decisions are stronger. However, many subordinates tend to follow the opinions of colleagues at the expense of their own lest their opinion be perceived as extreme and be viewed by their boss and colleagues as a show off. We note that this style is systematically designed to inhibit risk-taking behavior.

In addition, in this decision-making approach, the members of a group participate in the decision formally, resulting in a lack of clarity concerning who is ultimately responsible. The ‘*Ringi* system’ (internal memo) is a typical example of this point in Japanese bureaucracy from the Meiji Period. Likewise, ‘*Nemawashi*’ (root bindings) has also functioned in private and regional organizations as a traditional Japanese collective decision-making style and still does today³².

Conversely, European and American societies, which have been based on the

³¹ See Fukuzawa (1875), Chap. 9.

³² See Tsuji (1968).

rights of the individual since the modern civil society revolution, embrace the idea that the individual should be the final decision maker or final contractor, which is derived from the Christian worldview. For example, Americans, aware that contracts are executed by people instead of by gods, usually require the correction of various errors or mistakes because humans, unlike gods, are not perfect. Flexible responses to such reformism must have been crucial in the age of the Industrial Revolution because the accumulated experience of many trials is necessary for technical breakthroughs. Subsequently, Britain and the United States, which enabled their economic activities to be highly liquid, for example, in the concentration and distribution of capital, could have developed more than other European countries. The Bank of England was established in 1694, six years after the Glorious Revolution. It was able to support England's financial system before other countries were able to do the same for their economic systems.

However, because Britain obtained extractive profits from colonialization, including those derived from the East India Company and the African slave trade, and the US also traded many slaves as workers, the economic development of these countries was not derived from pure and fair trade. As Marx emphasized, the accumulation of capital was also drawn from flesh and blood. The liquidity of their economic activities was guaranteed by affluent money and cheap labor and resulted in the successful accumulation of wealth.

Conversely, there remains the question of why other European countries, including France, Germany and Sweden, lagged in their economic development. For example, Bismarck, the Prime Minister in the Kingdom of Prussia, engaged in lengthy

wars against Austria and France in an attempt to build a unified Germany in the mid-19th century. In addition, Germany retained feudal production by way of the guild system. Such a situation might have caused its late development. In France, an anarchic situation following the revolution of the late 18th century resulted in Robespierre's autocracy, as noted by Edmund Burke (1790), and social confusion and instability continued until Napoleon's rule. Moreover, France's ruin, caused by its defeat in the war against Germany (the Franco-Prussian War), influenced its economic development. According to Acemoglu and Robinson (2012), in Austria, Russia, and Asian Turkey (the Ottoman Empire), powerful governance by a mighty king or feudal establishment prohibited the release of serfs and forced them to remain on the land for a long time. Thus, the centralized system of monarchy and extended wars, which was different from the British and American situations, might have slowed economic development.

As the discussion above shows, differences in each country's economic development are not determined by economic disciplines alone. Form of governance, political institutions, cultural factors, historical coincidences, uncertainty, economic disciplines, and so on also interact with one another. Therefore, it is reasonable to infer that their delicate balance is what generates actual economic development. It is most important to note that the prominent disciplines surrounding the economy interact and that historical results are created akin to simultaneous determination.

With this in mind, we ask the question, "Which approach is the best for Japanese economic development?" As mentioned above, if the difficulty that Japan confronts is to be bound to the fiction that the Japanese believe in tradition and history

fatalistically, Japan must first be released from such an ideological situation. To do so, the general method would be greater mobilization of forms of social governance, particularly in politics and the economy. For example, flexibility is desirable not only in the recruitment of bureaucrats and the entire political system but also in employment and investment. However, according to history, it is obvious that such reforms would face strong resistance from vested interest groups, bureaucrats and elites³³. The power to overcome this difficulty depends upon other investors as newcomers, consumers who can obtain a surplus through free competition and politicians who are aware of new trends. Therefore, the basic structural outline of societal conflict is a fight between the group supported by vested interest groups, bureaucrats and politicians on the one hand and an opposing group supported by newcomers such as emerging investors, layers of consumers and politicians on the other hand.

As noted by North (1991) and Bernard (1938), the emerging group would initially appear to be in the minority and might form informal styles and organizations, which differs from the class struggles described by Marx in the 19th century, as this process is not a struggle between fixed classes, i.e., “capitalists versus laborers” or the feudal classes. The conflict may be a universal fight in response to changeable economic interests. In an extreme scenario, a type of civil war combined with a military power could occur. Whether Japan can better restore its society by paying that cost ultimately depends upon its degree of seriousness.

³³ According to Sakane (2011), Japan’s society has been forming its immobility based on the “family and village” system for hundreds years. The change of such system must be more difficult than other societies because many Japanese might believe that keeping the system is to protect their identity or originality.

In general, vested groups are at an advantage in the fight to prevent social change because the profit that is at stake is relatively obvious, whereas the benefits to the newcomers and consumers are uncertain. To analyze this proposition, let Π represent the profit vested groups hold, which represents their loss if social change occurs. Let random variable ρ represent the new profit that newcomers gain. Therefore, if $\Pi > E[\rho]$, it is difficult to realize social change. Assuming ρ is a Bernoulli variable, newcomers could gain $\rho = \Psi - C$ with probability p from social change. Here, Ψ is the total gain from the change, and C is the cost of the change. We assume that the same cost C must be paid, even when the social change fails. Therefore, the expectation of ρ is as follows:

$$E[\rho] = p(\Psi - C) + (1 - p)(-C) = p\Psi - C$$

This equation shows that total gain includes uncertainty with the probability p , whereas the cost for social change can be realized as a non-random variable. In other words, social change and reform have a type of cost structure of which society is strongly aware. Therefore, the comparison between the loss and the gain is $\Pi + C$ and $p\Psi$. Unless gain $p\Psi$ is far greater than loss $\Pi + C$, vested groups could easily prevent social change because the total gain is not a certainty³⁴.

In addition, this cost even for a change in government, revolution and coup would increase as the social structure becomes robust or rigid. For example, Keynesian fiscal policy in advanced economic countries tends to increase the budget deficit and the

³⁴ If we assume this cost as a loss, humans must react more sensitively to a loss than to a gain. Kahneman (2011) shows us that there is a large asymmetry of cognition between loss and gain in humans, and such cognitive bias occasionally operates seriously in decision making. This psychological cognitive bias appears to support the points mentioned here. According to Kahneman, the magnitude of the negative effect from a loss seems approximately double the magnitude of positive effect from a gain.

political power of bureaucrats and politicians. Thus, changing a system results in an increased cost. In addition, Marxist dictatorship and individual dictators tend strongly to prevent the mobility, diversity and freedom of people because dictators fear a loss of power. Therefore, dictators raise the cost to prepare and organize a change to the system, and thus social change becomes more difficult.

The necessary condition for social change is that a summation of the loss of vested groups Π and the cost of change to newcomers C does not exceed the amount of expected gain $p\Psi$.

$$\Pi + C \leq p\Psi$$

The benefit of vested groups tends to be large in general, and newcomers tend to care about the cost more than the gain of change. However, if newcomers expect the gain after the social change to be large despite the uncertainty, the inequality above would hold. Those conditions are

- (1) The loss of vested groups Π and the cost of change to newcomers C are not large—e.g., a situation where the country remains underdeveloped or is now developing.
- (2) People can easily forecast that the benefit after social change Ψ is very large—e.g., a situation where there is large potential for new industries.
- (3) The probability of success for change p is large—e.g., a situation where most of the social members agree with the change or where vested interests consist of only a few groups.

For instance, the Industrial Revolution in Europe, the War for Independence in the US, the French Revolution, the Meiji Restoration in Japan, the Russian Revolution and the

IT Revolution in the US satisfied all or some of the conditions above.

However, these conditions are at most necessary but not sufficient for the change. For example, there remain many autocratic states in Africa and Asia despite these countries also satisfying three conditions, and most countries in Latin America seem to remain in a state of development, never exceeding the developed economic level.

In addition, to the extent that the new gain from the social change is a random variable, the possibility of failing or falling back is sufficiently high due to uncertainty. Because the instigators must pay the cost for the change regardless of whether it succeeds, the burden would be serious for them. Therefore, whether social change occurs even after they sufficiently take into account uncertainty does not depend upon various rational calculations, as it is a type of social passion that exists beyond those rationales. The passion that fueled change would mature only within a historical process involving a mixture of many elements that composed the society, as noted previously.

6. Conclusion

From the argument above, we draw conclusions concerning the originality of Japan's economy/society and organization:

The same social elements exist in Japan that exist in other countries worldwide. However, its geographical/environmental conditions (warm, humid), agricultural mode (irrigated rice and fish catching), village style and settlement patterns (coastal and mountainous, family units) are unique. The religious culture (Confucianism, Buddhism and Shinto, and '*Yie to Mura*'), the political decision-making system (collectivism,

patriarchy or paternalism) and the bureaucracy appear unique. Such centralized power and collective social relationships joined with a modern production system that was similar to those in Western countries and that utilizes principles of economic development such as intensive investment and financing. Thus, Japan succeeded in increasing productivity rapidly in a very short period³⁵.

The rapid growth of Japan's effective economic system was outstanding, particularly after WWII, but studies indicate that this system was established during the war. Moreover, there are arguments that the system's establishment can be traced to the Meiji Restoration (late 19th century) and that the governance of traditional commons had been conducted since the Edo period (17C). We believe that Japan's system is much older and based on not only economic and political factors but also the religious characteristics of the culture. In other words, the social structure and the central bureaucratic institutions were formed as a result of accumulative historical habit.

This unique system of mixing cultural and political factors has survived over long historical periods and exists today, which is the essential point of both Japan's strength and its weakness. Reforming such a historical, habit-based society would be difficult because the risk-averse populace would choose to avoid losses associated with serious conflict with vested interest groups. Overall, this challenge is the main cause of Japan's long recession.

³⁵ As Hayami (2001) noted, in the late 17th century, the Japanese excluded the use of livestock to cultivate their land and instead established a labor-intensive approach to farming due to land area constraints. This change is known as the "industrious revolution" in economic history research. Conversely, this change implies that improving productivity in manufacturing sectors has been constrained by the labor supply since the 19th century.

This hypothetical idea should be tested further. Our view is that such research will require us to consider interactions between economic factors and non-economic factors based on actual history and institutions³⁶.

References:

Acemoglu, Daron: *Modern Economic Growth*. Princeton: Princeton University Press, 2009.

Acemoglu, Daron / Robinson, James A.: *Why Nations Fail*. New York: Profile Books, 2012.
———: *Economic Origins of Dictatorship and Democracy*. Cambridge: Cambridge University Press, 2009.

Angrist, Joshua D. / Pischke, Jorn-steffen: *Mastering Metrics*, Princeton: Princeton University, 2014.

Akamatsu, Kaname: "A Theory of Unbalanced Growth in the World Economy," *Weltwirtschaftliches Archiv*, Hamburg, no.86, pp.196-217 1961.

Akerlof, George A. / Shiller, Robert J.: *Animal Spirits: How Psychology Drives the Economy, and Why It Matters for Global Capitalism*, Princeton: Princeton University Press, 2009.

Allen, R. C.: *Global Economic History: A Very Short Introduction*, Oxford University Press; 1 edition, 2011.

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- Amino, Yoshihiko:** *Muen, Kugai, Raku*, (in Japanese), Tokyo : Heibonsya, 1996.
- Aoki, Masahiko:** *Aoki Masahiko no Keizaigaku Nyumon*, (in Japanese), Tokyo: Chikuma Shobo, 2014a,.
- : 'Chapter 1 What is the institution,' (in Japanese), mimeo, 2014b.
- : "Horizontal vs. Vertical Information Structure of the Firm," *American Economic Review*, Vol. 76, No. 5 (Dec., 1986), pp. 971-983, 1986.
- Aoki, Masahiko / Okuno, Masahiro ed.:** *Comparative Institutional Analasys of Econoic System*, (in Japanese), Tokyo: Tokyo Daigaku Syuppankai, 1996.
- Bernard, Chester Irving:** *The Functions of the Executive*, Harvard: Harvard University Press, 1938.
- Braudel:** *The Mediterranean and the Mediterranean World in the Age of Philip II*, California: University of California Press, 1966.
- Buchanan, James M. / Wagner, Richard E.:** *Democracy in Deficit: The Political Legacy of Lord Keynes*, The Online Library of Liberty: <http://oll.libertyfund.org>, 1977.
- Buchanan, James M.:** *The Limits of Liberty: Between Anarchy and Leviathan*, The Online Library of Liberty: <http://oll.libertyfund.org>, 1975.
- Buchanan, James M. / Tullock, Gordon:** *The Calculus of Consent: Logical Foundations of Constitutional Democracy*, The Online Library of Liberty: <http://oll.libertyfund.org>, 1962.
- Burke, Edmund:** *Reflections on the Revolution in France*, Oxford University Press; Reissue edition, 1790.
- Colin Clark:** *The Conditions of Economic Progress*,
<http://www.questia.com/library/100123747/the-conditions-of-economic-progress#/>, 1951.

Dalton, George: "Economic Theory and Primitive Society," *American Anthropologist*, vol.63, pp. 1—25, 1961.

Deaton, Angus: *The Great Escape*, Princeton: Princeton University Press, 2013.

Diamond, Jared / Robinson, James A: *Natural Experiments of History*, Belknap Press, 2011.

Diamond, Jared: *Guns, Germs And Steel*, Vintage, 1997,.

Drucker, Peter F: 'The Effective Executive,' Harperbusiness, 1967,.

Engels, Friedrich: "The Part Played by Labour in the Transition from Ape to Man," <http://www.marxists.org/archive/marx/works/1876/part-played-labour/>, 1896.

Friedman, Milton: *Capitalism and Freedom*, Online Library of Liberty: <http://oll.libertyfund.org/titles/2492>, 1961.

Fukuyama, Francis: *The Origin of Political Order*, Farrar Straus & Giroux, 2011.

Fukuzawa, Yukichi: *Bunmeiron no Gairyaku*, (in Japanese), Tokyo: Iwanami Syoten, 1875.

Galbraith, John Kenneth: *The Age of Uncertainty*, Houghton Mifflin Company, 1977.

———: *The New Industrial State*, Princeton: Princeton University Press, 1967.

Greif, Avner / Iyigun, Murat: "Social Organizations, Violence, and Modern Growth,' *American Economic Review*, 103(3),pp. 534-538, 2013.

Greif, Avner: *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*, Cambridge, Cambridge University Press, 2006.

Harrod, Roy: "An Essay in Dynamic Theory," *Economic Journal*, 49 (March), 14-33, 1939.

Hayami, Akira: *Rekishu Jinko Gaku de mita Nippon*, (in Japanese), Tokyo: Bungei

Shunju Sya, 2001.

Hayek, Friedrich A.: "The Use of Knowledge in Society", *American Economic Review*, XXXV, No. 4. pp. 519-30, 1945.

Ichihashi, Masaru: "Nihon no Sangyo Kozo to Syakai Chitsujo no Keisei", (in Japanese), *"Kyokai" wo meguru Gakusai teki Kenky'*, edited by Furushim,M., Ichihashi, M. and Koike, S., Proceedings in Faculty of Integrated Arts and Sciences, Hiroshima University, 2000.

———: "Gendai Syakai Kagagu no Taikeika ni kansuru Kenkyu", (in Japanese), *Syakai Bunka Kenkyu*, vol.22, Faculty of Integrated Arts and Sciences, Hiroshima Univeristy, 1996.

Imbense, Guido W. / Rubin, Donald B.: *Causal Inference for Statistics, Social, and Biomedical Sciences*, Cambridge: Cambridge University Press, 2015.

Ishida, Baigan: "Tohi Mondo", *Tominaga Okimoto and Ishida Baigan*, (in Japanese), edited by Kato, Syuichi, Chuokoron sya, 1739.

Kahneman, Daniel: *Thinking, Fast and Slow*, Farrar Straus & Giroux, 2011.

Keynes, J. M.: *The General Theory of Employment, Interest and Money*, Chap.12, The Macmillan Press LTD, 1936.

Kojima, Kiyoshi: "The "flying geese" model of Asian economic development: origin, theoretical extensions, and regional policy implications," *Journal of Asian Economics*, 11, pp.375-401, 2000.

Kurimoto, Shinichiro: *Economic Anthropology*, (in Japanese), Tokyo: Toyo Keizai Shinpo Sya, 1979.

Kuznets, Simon: *Economic Growth of Nations: Total Output and Production Structure*, Harvard: Harvard University Press, 1971.

Lange, O: *On the Economic Theory of Socialism I*, *The Review of Economic Studies* V4 N1 53-71, 1936.

Leontief, Wassily W: *Input-Output Economics. 2nd ed.*, New York: Oxford University Press, 1986.

MacLeod, W. Bentley: "On Economics: A Review of Why Nations Fail by D. Acemoglu and J. Robinson and Pillars of Prosperity by T. Besley and T. Persson," *Journal of Economic Literature*, 51:1, 116-143, 2013.

Marx, Karl: *Capital*, vol.1 - 3, Penguin Classics, 1867.

Marx, Karl / Engels, Friedrich: *Manifesto of the Communist Party*, <https://www.marxists.org/archive/marx/works/1848/communist-manifesto/>, 1848.

McKean, Margaret A.: "Common Property Regimes as a Solution to Problems of Scale and Linkage," *Rights to Nature*, ed. Susan Hanna, Carl Folke, and Karl-Goan, Maler. Washington, D.C.: Island Press, 223-243, 1996.

Morishima, Michio: *Why will Japan fall down?*, (in Japanese), Tokyo: Iwanami Syoten, , 1999.

———: *Why has Japan 'succeeded'?*, Cambridge:Cambridge University Press, 1984.

Murakami, Yasusuke: *Bunmei no Takei Shikan*, (in Japanese), Tokyo: Chuokoron sya, 1998.

Nakamura, Takafusa: *Showa Keizai Shi*, (in Japanese), Tokyo: Iwanami Shoten, 1986.

Noguchi, Yukio: *1940 nen Taisei*, (in Japanese), Tokyo: Toyo Keizai Shinpo Sha, 2010.

———: "The 1940 System: Japan Still under the Wartime Economy," *American Economic Review*, vol.88, No.2, 1998.

North, Douglass: *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press, 1991.

———: "Location Theory and Regional Economic Growth", *Journal of Political Economy*, Vol. 63, No. 3, pp. 243-258, Jun., 1955.

Okakura, Kakuzo Tenshin: *A book of tea*, Dover Publications, 1906.

Ostrom, Elinor: *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.

Pomeranz, Kenneth: *The Great Divergence*, Princeton Univ Press, 2001.

Polanyi, Karl: *The Great Transformation*, Beacon Press, 2nd ed., 1944.

———: *Dahomey and the Slave Trade*, Ams Pr Inc; Reprint, 1966.

Popper, Karl: *The Poverty of Historicism*, Routledge, 1957.

Rahmaddia, Rudy / Ichihashi, Masaru: "The role of foreign direct investment in Indonesia's manufacturing exports," *Bulletin of Indonesian Economic Studies*, Volume 49, Issue 3, pp. 329-354, 2013.

Ricardo, David: *Principles of Political Economy and Taxation*, Dover Publications, 1817.

Sakane, Yoshihiro: *Nihon dentou syakai to Keizai hatten*, (in Japanese), Tokyo: Nousan gyoson bunka kyokai, 2011.

Schumpeter, Joseph: *Capitalism, Socialism and Democracy*, New York: Harper and Roe Publishers, 1942.

———: *The Theory of Economic Development*, Transaction Publishers, 1934.

- Simon, Herbert:** *Administrative Behavior* (3rd ed.), New York: The Free Press, 1976.
- Smith, Adam:** *An Inquiry into the Nature and Causes of the Wealth of Nations*, Book 1, Createspace, 1776.
- Solow, Robert M.:** "A Contribution to the Theory of Economic Growth". *Quarterly Journal of Economics*, 70 (1): 65-94, 1956.
- Suzuki, Daisetsu:** *Zen Buddhism and its Influence on Japanese Culture*, The Ataka Buddhist library, 1938.
- : *Zen Buddhism*, Encyclopedia Britannica, 1965.
- Taleb, Nassim Nicholas:** *The Black Swan: The Impact of the Highly Improbable*, Penguin, 2008.
- Tominaga, Kenichi:** *Keizai to Sosiki no Syakai Gaku Riron* (in Japanese), Tokyo: Tokyo Daigaku Syuppan Kai, 1997.
- Tominaga, Okinaka:** "Okina no Fumi", *Tominaga Okimoto and Ishida Baigan*, (in Japanese), edited by Kato, Syuichi, Chuokoron sya, 1738.
- Toffler, Alvin:** *The Third Wave*, William Morrow & Company, 1980.
- Tsuji, Kiyooki:** *Nihon Kanryosei no Kenkyu* (in Japanese), Tokyo: Tokyo Daigaku Syuppankai, 1969.
- Umesao, Tadao:** *Bunmei no Seitai Sikan* (in Japanese), Tokyo: Chuokoron sya, 1957.
- Vernon, Raymond:** "The Product Cycle Hypothesis in a New International Environment," *Oxford Bulletin of Economics and Statistics*, Volume 41, Issue 4, pages 255-267, November, 1979.
- Wallerstein, Immanuel:** *The Modern World-System: Capitalist Agriculture and the*

Origins of the European World-economy in the Sixteenth Century, Academic Press, 1974.

Wan Jr., Henry: "Nipponized Confucian Ethos or Incentive-Compatible Institutional Design: Notes on Morishima, "Why has Japan Succeeded?", *International Economic Journal*, Volume 2, Issue 1, 1988.

Watsuji, Tetsuro: *Fudo* (in Japanese), Tokyo: Iwanami syoten, 1935.

Weber, Max.: *Economy and Society*,

<https://archive.org/details/MaxWeberEconomyAndSociety>, 1922.

Williamson, Oliver: *The Mechanisms of Governance*, Oxford: Oxford University Press, Inc, 1996.

———: *The Economic Institutions of Capitalism*, The Free Press, 1985.

Ymamoto, Shichihei: *Nippon jin towa nanika*, (in Japanese), Tokyo: Syoden sya, 2006.

Yanagi, Soetsu: *Mingei to wa nanika*, (in Japanese), Tokyo: Kodan sya, 1941.