

Innovation Crisis and Intrinsic Rigidity in Public Organizations in Korea

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Abstract

This study explores whether or not the system-wide change can be reconstructed as a micro approach through idea competition in the public organization. For the purpose, this research differentiates the system into the smallest Institutional factors and analyzes word by word. It analyzes the Korean economic policy directions from 2001 to 2016 by the text mining method. The analytical results show that the proportion of existing words maintaining the system continuity has decreased as the system has persisted for a longer duration and they were replaced by the newly-introduced institutional factors. The neutral institutional factors have functioned to make the economic policy directions differentiated from generation to generation and to cope with the policy environments in a resilient manner.

Key words: public organization change, intrinsic rigidity, text mining

1. Introduction

New institutionalism, especially historical institutionalism, focuses on explaining why similar institutions are influenced by different trajectories. Historical institutionalism has in common with the other branches of new institutionalism in that it establishes institutions as the central concept of analysis, but it does not understand the present and future choices from the past and the past as a description of institutional evolution is different

in that it emphasizes historicity (North, 1990: vii). What does institutional evolution mean? By exploiting the evolutionary biological metaphor (Krasner, 1984: 240), evolution is to differentiate into a new species with reproductive isolation that cannot be reproduced by crossing, or a completely different species from the past can do. Cloning and reproduction are contradictory in that they seek continuity to produce the same thing, and that evolution and change emphasize dynamics, but both phenomena have both sides of the same mechanism

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with applying different analytical units (Bernard, 2012: 9). Past trajectories and institutions are historical drivers of continuity and causality as well as future change.

But there has been argument as to how evolution or change occurs. Opinions based on Darwinian thinking suggest that small mutations within an individual are accumulating and progressing into larger mutations. It is realistic to change gradually little by little, and to argue that a complex form suddenly emerges is a lazy explanation (Dawkins & McKean, 2012: 30). Darwinic thinking reflects the political ideology that seeks orderly change of the existing system rather than the social revolution, and it is suggested that radical and discontinuous change is more explanatory (Gould, 1982, 2010; Gould & Eldredge, 1977). In institutional research, contradictory discussions have been made on whether changes are continuous or discontinuous, gradual or abrupt, exogenous or endogenous, and stable or unstable. Recently, possibility of gradual and progressive change due to internal factors is attracting attention.

Despite these arguments, the historical institutional approach has commonly employed research methods that compare and analyze the contextual specificities of the system in a narrative and process (Immergut & Anderson, 2008; Ragin, 1987; Skocpol, 2003; Skocpol & Somers, 1980). It prefers to interpret the historical process and results in a contextual way and to storytelling with historical comparison. This is also a reflection of the characteristics of an institutionalist study (March & Olson, 1984: 735–36), which criticizes the reductionist approach to behaviorism that derives macroscopic results from micro-behavior. However,

it is necessary to reflect on the application of similar methodology to institutional research. The habit of choosing research methods can regulate the development of the theories and suppress the attempts to approach new ones. Encouragingly, efforts have been made recently to provide alternatives to narrative methodology. In addition to increasing the use of fuzzy set-quality comparative analysis (Lee, *et. al.*, 2014; Ragin, 1987, 2008) that fills the gap between qualitative and quantitative methods, (Lieberman, 2001) and a computer-based analysis using data mining (Lee, *et. al.*, 2016a).

This study explores whether the change of the system as a whole can be reconstructed as a micro approach through competition of ideas in the system. It try to deal with 'The lack of a microscopic framework for analysis of macroscopic phenomena' (Jung, 2005: 92) and to find a way to describe the aspects of endogenous institutional change in detail. This is an analysis of individuals with an emphasis on the system as a whole. It differs from the approach of institutions based on the preferences and desires of actors. To do this, it borrows the concepts of molecular biology and genetics, and uses text mining techniques to decompose the constituent elements. The following section summarizes the prior discussion on institutional change and demonstrates the approach that this study attempted.

II. Theoretical Description

1. Micro and Macro Evolution

Historical institutional research on how institutions evolve (Thelen, 2004) has developed considerably into evolutionary biological concepts.

Historical institutionalism and evolutionary biology have a similarity in that they are concerned with the dynamics of change. However, the process of discussion has been in different directions. First of all, evolutionary biology begins with Darwin's *Origin of Species* (1859), in which a new species is formed by successive accumulations of small mutations according to natural selection. Nature is never lean (Lee, 1993: 148), and small variants that adapt to the environment develop into large mutations that are speciation and diversification. With theoretical support of genetics, phylogenetic taxonomy, and paleontology in the 1930s, Darwin's theory of natural selection was further reinforced and developed into an 'Evolutionary Synthesis' (Huxley, 1942; Rensch, 1960). Along with the discovery of the DNA structure, molecular biology of the 1950s reveals that the characteristics of species change as gene frequencies in the gene pool become scarce or increased. There has been some discussion that there is no competition between individuals for survival, but evolution to genetic competition (Dawkins, 1976) to leave more genetic information behind.

On the other hand, rather than reacting immediately to the surrounding environment, it is argued that the species are replaced with when it is subjected to a great deal of global pressure while maintaining a stable state for a long time. Paleontologists Gould & Eldredge (1972, 1977) noted that it is difficult to find evidence of evolution. If progressive and gradual evolution is occurring, fossils corresponding to intermediate species between species and species should be found, but the reality is not. Rather, it suggests a punctuated equilibrium in which fossil record is preserved for

a long time without any change, and replaced with a new species by short, accidental and sudden change. This means that the new species suddenly replaces existing species, or that it is a macroscopic evolution in which life belongs to genus, family and order differ from speciation in micro-evolution. The continuous causal explanatory structure, macroeconomic global contingency, and discontinuous explanatory structure in the system of micro-evolution affect the endogenous and continuous change possibility and exogenous and disconnected explanation of institutional change, respectively.

2. Continuity and disconnection of institutional change

The punctuated equilibrium of Gould & Eldredge (1972, 1977), which emphasizes rapid change and substitution, has influenced early institutionalism, particularly the account of state as an institution. Krasner (1984, 1988), who recognizes the state as an institutional structure with its own ability to pursue its own preferences and interests despite social resistance, argues that institutional stasis is restrained for a certain period of time. In addition, it seems to be swiftly replaced with new institutions in critical junctures by the pressure of external and systemic change beyond the capabilities of the state. At this time, the newly introduced system is completely different from the existing system, and the continuity of the system becomes hard to find. The system is an economic and political macro structure that restricts the preferences and behavior of members in society, therefore, it does not respond immediately to small changes in the social environment (Ikenberry, 1988), and it is regarded as a change only by a strong external shock that

threatens the survival of institutions.

Mahoney (2000) argues that punctuated equilibrium should be distinguished from explanations of institutional formation, such as decisive moments, and the process of explaining the reproduction of the system. Thus, the reproduction of the trajectory after the selection of history is explained by the concept of path dependency. The path dependence is that the system undergoes a process of economic increasing returns once the system is selected, and the initial choice is locked-in (Arthur, 1988, 1994; David, 1985). It reproduces politically and socially by self-reinforcing processes or by positive feedback effects, and restricts choices afterwards (North, 1990; Mahoney, 2000; Pierson, 2000). In this way, the initial situation in which the system was formed strongly defines the current system, and it has a stickiness that is difficult to escape from the initial path (Moe, 1990). Due to this characteristic, it is necessary to punctuated equilibrium by the external impact in order to depart from the path-dependent trajectory.

On the other hand, there is criticism for relying only on change models that regard institutional change as exogenous and discontinuous. In the analysis of the vocational training system in Germany, Thelen (2004) showed that while the core characteristics of the skill system remained flexible even in the period of great turmoil such as several system changes and defeat in the world war, there was a change in the vocational training system in the stable period. Sudden and discontinuous institutional changes are very rare, and it is more realistic to have a gradual transformation in a continuous and gradual manner with small adaptations and variations (Djelic & Quack, 2003,

2007; Schickler, 2001; Skowronek, 1982; Streeck & Thelen, 2004). It is not a substitute for a new system, but it is a typical form of institutional change that the system transferred from the past is transformed into various social and political situations. Many studies of historical institutionalism reflect this aspect of institutional diversity, such as differences in capitalist diversity and production regimes (Amable, 2003; Hall & Soskice, 2001; Mahoney & Thelen, 2009; Stark, 1991; Soskice, 1999; Thelen, 2004).

Gradual and gradual institutional transformation is possible by recognizing institutions as a composite of various components rather than a single entity (Campbell, 1997, 2001, 2004; Lieberman, 2002; Orren & Skowronek, 2004; Pierson, 2004; Stark, 1991; Streeck & Thelen, 2005; Thelen, 2004). Institutional changes may be triggered by internal conflicts in the process of reunification of existing institutional components, and institutional changes may occur in the process of reintegration of new components. In this process, existing elements are constrained to new elements, and loose path dependence appears because existing schemes coexist with new elements (Campbell, 2004; 73).

Thus, the discussion of historical institutionalism about institutional change has evolved into an explanation that emphasizes the micro-change of institutions in the explanation of radical institutional substitution and long-term stability. The acceptance of the notion that small variations of institutional components can be differentiated or transformed into new institutions can explain the continuity and variability of the system at the same time. It reveals endogenous changes due to cracks and contradictions in institutional components.

Explanations of exogenous, disconnected, and rapid changes and discussions of endogenous, continuous, and differential changes have different logical structures, but they have used the comparative analysis of cases and historical descriptions in common. The comparative analysis and historical narrative provide a synoptic insight into policy differences and provide a framework for analyzing the context in which institutions are formed. However, the characteristics of incorporation, export, duplication, and reproduction of the components of the complex system need to be approached from a different viewpoint than the storytelling method. It can reconstruct the whole institutional change by decomposing institutional components into more granular units and by examining how such units work to change.

This effort will be analogous to the more concrete theories of early evolutionary theory that have gained theoretical inspiration from observations of biological changes with the help of gene-based molecular biology and population genetics.

III. Research Framework

The institution is not a uniform one but a complex combination of various elements, and it has a mechanism to explain the gradual and endogenous changes of the system. The system as a composite is that the heterogeneous sub-elements transferred at different points are organically rearranged and coexisted, and interdependencies and complementarities exist between sub-elements (Amable, 2000; Amable, *et. al.*, 2005; Campbell, 1998, 2010; Greif, 2006; Hall & Soskice, 2001; Orren & Skowronek, 2004; Thelen, 2004). Differences in

growth rate and interdependence among components formed at different times have both sides of change at the same time. The robustness of tightly linked subelements restricts the transition of some element variations to changes in the overall system, and institutional changes remain stable with path dependence. On the other hand, when the interconnections between components are not robust, variations in some components can trigger changes in the whole.

From this point of view of the institution as a composite of components, this study can subdivide the subcomponents to a finer degree and reach the smallest entity that constitutes the system. By looking at the variation of these entities, it can deduce the aspect of the whole system. For this purpose, this study utilizes the concept of population genetics and analyzes variation of institutional population. This study assumes the analysis structure and mechanism as follows.

First, this study can differentiate the system into the smallest individuals, and set these individual entities as institutional factors. For example, if the economic system is divided into sub-components such as finance, labor relations, and education and training, and the sub-components are continually dismantled, the institutional factors that are the smallest unit with institutional characteristics will be reached. The institutional factor is the concept corresponding to the gene of an organism, and in social science, this is the word meaning unit. This approach of this study is to set the whole as premise and to approach from the 'whole-centric' perspective in which the individual is defined by the whole. This is distinct from the individual-centric perspective which consists entirely of

individual preferences, needs, and political intentions. Individual in the overall centric view can only participate or depart from the whole, and have no identity. It is such a structure that the words included in the system are not self-supporting and have meaning in combination with other words in the system. A recent study (Lee, *et. al.*, 2016a, 2016b) has attempted this approach by analyzing the relationship between the research of the whole institutional change and the relationship between ideas and the direction of economic policy by decomposing the personal information protection system into words.

Second, each institutional factor is fixed and differential growth (Streeck & Thelen, 2005; 23). The combination of institutional factors changes between existing institutional factors or because of differences in growth rates between new institutional factors. The new institutional factors do not directly replace existing institutional factors, but the repetitive and redundant use of fast – growing institutional factors will change the frequency of institutional factors. The coexistence of slow growth and rapid growth leads to gradual change and path dependence. If external institutional factors grow at a rapid pace and replace existing institutional factors in a short period of time, institutional changes may appear radically and on a large scale.

Third, the institution consists of pool of institutional factors, which is the total amount of institutional factors. Institutional factors include not only active and externally expressed institutional factors but also inactive institutional factors that are latent in the form of remnants testifying the past. Some of the recently formed

inertial factor plays a role as a kind of storage tank that can be reactivated at a specific time, but the old inertial factor is gradually disappearing. The introduction of new institutional factors can be imitated or learned through the practices and techniques of other countries or organizations, or through experimental trial and error, and creative thinking (Nelson & Winter, 1982). The new institutional factors may be combined with existing institutional factors, and they may be converted to inactive institutional elements after a short period of time.

Fourth, the institutional factors of stability and peripheral institutions of adaptation coexist in the activated institutional pool. The core institutional factors are replicated and reproduced repeatedly so that institutions show path-dependent characteristics, and peripheral institutional factors play a role as a diversity securing mechanism by being flexible in the social environment and shifting locally. The institutional factor pool has a complex nature with both core and peripheral factors. As a result of differential growth (Streeck & Thelen, 2005; 23), some new institutional factors in the marginal area grow faster than the existing institutional factors and move to key positions. Displacement where critical factors and peripheral factors intersect is the starting line for evolutionary innovation and improvement.

Fifth, institutional change is caused by a change in the institutional factor pool. If there is no internal variation and external environment do not work, the institutional factors constituting the pool will be kept constant and replicate the same system. However, in reality, no matter how precise the duplication of institutional factors can be made,

it is not possible to make the same thing. This is because the frequency of institutional factors varies with the generation. Changes in the frequency of institutional factors will change the system of institutional factors. It can be said that ideas change the frequency of institutional factors, which institutional factors are preferred and less preferred as generations change (Blyth, 2002; Campbell, 1998, 2004; Mehta, 2010) suggests what to recognize as a policy problem and how to respond to it in a situation where the political and economic situation is constantly changing. While institutions may constrain ideas, ideas influence the frequency of institutional factors through their role as a benchmark in addressing not only macro-directionality and worldview but also acceptable problem solutions.

Sixth, not all of the institutional factors that are expressed affect institutional change. In other words, some of the institutional factors have neutrality which has neither positive nor negative impact on institutional change. These neutral institutional factors provide a framework for policy implementation within institutional constraints. The existence of the neutral institutional factors makes it possible to see the policies that appear from generation to generation differentiated and resilient to the policy environment, but this does not mean that the nature of the system has changed. Neutral variation at a specific point in time is potentially accumulated in the pool of institutional factors, and may be opportunistically adopted by specific ideas to cause institutional change.

This study summarizes the concepts borrowed from population genetics and its application in order to approach the institutional change microscopically.

In short, institutions can be distinguished by institutional factors, which are the smallest individual units, and the differential growth of institutional factors leads to institutional changes that change the frequency of institutional factors and thereby change the pool of institutional factors. Not all institutional factors influence institutional change, and some of the new institutional factors have neutrality that does not affect change. Institutional change is gradual and continuous because of the integration of institutional factors and the accumulation of the process of withdrawal and the interdependence of the system as a whole.

IV. Results

1. Descriptive Analysis

In order to demonstrate institutional changes through institutional factors, this study decomposes the annual Korean economic policy directions into words. The analysis of the economic policy direction is based on the assumption that the existing studies related to institutional change consider the aspects related to the economic system (Ha, 2004: 51), and the economic policy direction includes the comprehensive institutions of the time (Lee, 2016: 226). In the analysis, individual words in economic policy direction from 2001 to 2016 were extracted and refined using text mining technique. Although the economic policy direction prior to 2000 was not analyzed due to the lack of open data, it analyzes as the starting point of the comparative analysis of 1959 'Economic Rehabilitation Policy' which is the first economic policy direction. The total number of words used in the analysis was 65,297, and the average of 3,841 words was used each time. Among

the used words, there were 9,203 analysis standard words excluding duplicates, and 1,451 averages were used in the economic policy direction report.

As shown in <Figure 1>, 34.5% of the new words appeared in the year compared with the previous year, and the remaining 65.5% were used again in the previous year. Approximately one third of the current year is replaced by a new institutional factor each year, and the remaining $\frac{2}{3}$ continues to appear as an institutional factor. There was a yearly variation in the percentage of new words compared to the previous year.

In particular, the proportion of new words has decreased in the latter half of the term, while the ratio has been relatively high in the first half of the presidency (Lee, *et. al.*, 2016b: 231–33). It suggests that the new government's idea of operating state affairs and pledges are influenced by the choice of institutional factors and reflected in the economic policy direction. Lee, *et. al.* (2016b) explains policy elites as "self-competition of ideas" that intentionally and regularly changes the policy packages they have built to preserve legitimate authority. The policy elite's intentional self-competition suggests that institutional change can occur even in a situation where the policy

environment is stable.

On the other hand, the degree of change of new words was different according to the comparison point. When compared with the previous year, the expression level of the new word was 34.5% on average, but 43.7% on the basis of 2001. On the basis of 1959, which was the first point of the economic policy direction, the average of 73.9% was the new word, and the remaining 26.1% were common words used in 1959. In addition, as the time period is expanded, the change in the use of new words is not large, but it presents a stable change. It shows that the pattern of institutional change can be changed depending on the time and scope of analysis (Capccia & Kelemen, 2007).

2. Analysis of institutional factors

In order to examine the continuity and variability of institutional factors, it was divided into four types according to how words expressed in the year (t) appeared in the previous year ($t-1$) and the next year ($t+1$). These include: 1) the word "common manifestation" that appears consecutively in the previous year, the year, and the following year; 2) the word "expression substitution" that appeared in the previous year and year but not in the next

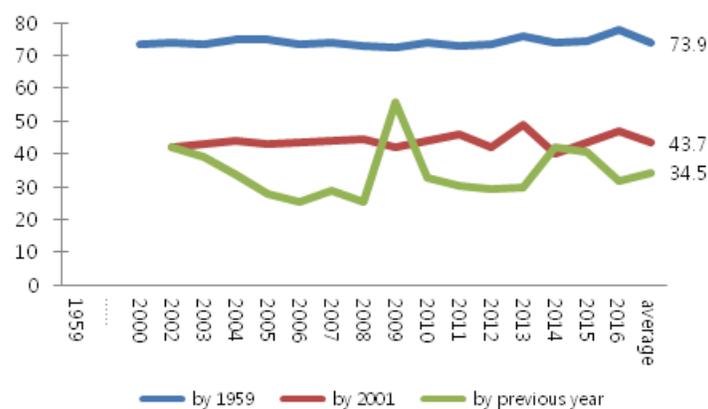


Figure 1. Change of new words rate in 1959, 2001 and previous year

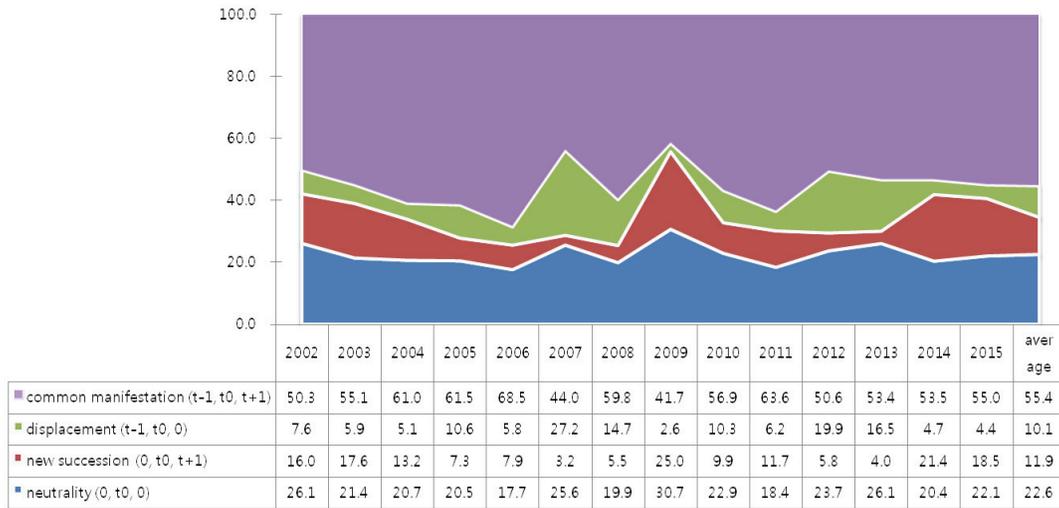


Figure 2. Ratio of the four types of words to the immediately preceding year

year; New succession "words that follow in the following year; 4) new neutral words that are used only in that year and not in the previous and next years. <Figure 2> shows the cumulative percentage of these four types for each year based on the previous year. This will be described in detail as follows.

First, the word 'new neutrality' belongs to a kind of neutral mutation that is used only in the relevant year and not expressed in the previous year and next year. The average of 22,6% is included in the lower part of <Figure 2>. And the average number of new succession words that were used successively until the next year after the new ones was 11,9% on average. In other words, not all new words introduced through learning, imitation, and creative thinking exist and are passed on to the

next generation, but only a part of them that are consistent with the social interest and ideas of the time were continuously expressed. In contrast to the previous year, $\frac{2}{3}$ of the newly appearing words were used only in the relevant year and showed neutrality that did not appear in the next year, while the remaining $\frac{1}{3}$ was used in the following year. These neutral words function to make the direction of economic policy different every year. Policy elites can use the new neutral word to make the policy direction appear to be updated every year, and to respond flexibly to changes in the policy environment. In order to secure legitimacy, the discussion of Lee, *et. al.* (2016b), which suggests that policy elites continue to change their program ideas (Campbell, 2004), can be explained by the existence of these new neutral words.

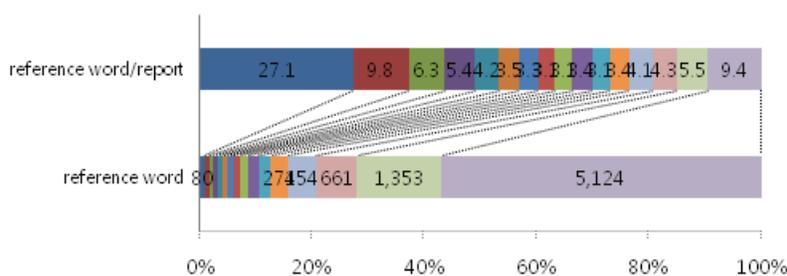


Figure 3. Economic policy direction report composition word proportion comparison

The characteristics of the new neutral words can be seen as in <Figure 3>. A total of 9,203 analysis terms were used in the 16th economic policy direction report, of which 5,124 words were used only in one report, accounting for 56.9% of the total analysis terms. However, annual reports only accounted for an average of 9.4%. In addition, 1,353 analysis terms were used in the two economic policy directions, but the percentage of the report was 5.5% on average. In other words, 6,477 of 3/4 of 9,203 words were used only in 1 or 2 reports, and they were not expressed in other reports.

On the other hand, the proportion of words (common expression and manifestation substitution words) that continued to appear in the year following the previous year was 65.5% on average, and these words play a role in ensuring continuity of the system. The percentage of 'common expression' words that occurred consecutively in the previous year, the year and the next year was 55.4% on average. Common expression words prevent sudden changes in economic policy direction and maintain path dependency by maintaining constant traits. On the other hand, the percentage of manifestation substitution words that did not appear in the next year after the last year and last year was an average of 10.1%. Manifestation substitute words function as areas where continuity of past and present disappears, bringing as many as possible the new institutional factors to be imported.

The characteristics of the word 'common manifestation', which plays an important role in the stable change of the system, can be deduced from the <Figure 3> above. The number of common manifestation words commonly used in all 16 economic policy directions was 80, which was only

0.89% of the analytical word, but these words were repetitively and redundantly used, with an average of 27.1% in the report. There were 75 words in 15 reports, with 9.8% of them in the report. In other words, the repetitive duplication of a few core institutional factors has created the whole aspect of the economic policy direction with the formation of the bifurcation and path of the economic policy direction and attachment of the remaining words.

3. Comparison by baseline

If the external environment is the same and there is no internal variation, the frequency of the expressed institutional factors remains constant over generations. In reality, however, these conditions do not exist, and the frequency of institutional factors changes differently as the generation progresses. Changes in the frequency and the pool of institutional factors will occur due to the substitution and displacement of institutional factors and the introduction and departure of institutional factors.

In order to compare these changes from a diachronic perspective, the four word types were compared as shown in <Figure 4>, with reference to 1959, 2001, and the preceding year respectively. As of 1959, on average 73.9% of economic policy directions since 2001 were new words, of which 31.7% were new neutral words and 42.2% were new successors. The average of 24.6% was used in 1959, the same as the word. As of 2001, 43.7% of the economic policy direction was newly emerged, of which 26.1% were new neutral words and 17.6% were new successive words. And the average 49.7% of economic policy direction was the same word used in 2001.

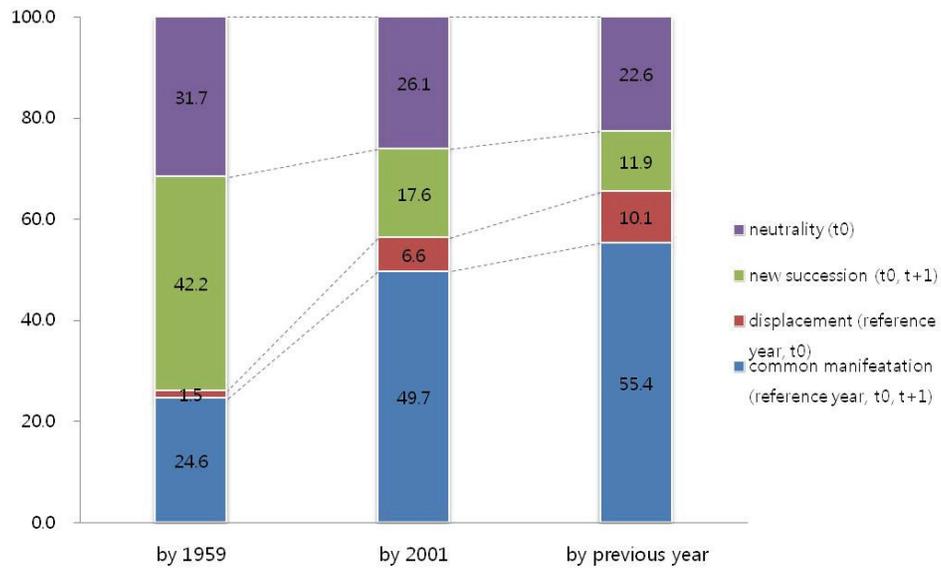


Figure 4. Percentage of word composition compared to the year before in 1959 and 2001

Compared to the years 1959, 2001, and the previous year, the proportion of common manifestation words decreased as the analysis base year moved away. As of 1959, the common manifestation word was 24.6%, which is 30.8% lower than the previous year. The ratio of newly reduced successive words was reflected in the ratio of new successive words. As a result, the percentage of new successive words as of 1959 was 42.2%, which was increased by 30.3% points from the previous year. The common manifestation word functions as a link between the past and the present system in order to maintain continuity. The fact that the proportion of such words is lowered means that the area shared by the past and present has been reduced accordingly. As the new institutional factors are introduced into the place where the common manifestation words are reduced, the direction of economic policy is changing.

The proportion of manifestation substitution words that did not appear in the next year after the previous year and the same year was 1.5% in 1959, 6.6% in 2001, and 10.1% in the previous year.

The substitute word is the area where the continuity of the system disappears, while it also holds a neutral character that does not affect the next generation. As a result of this neutral nature, the proportion of new neutral words increases as the percentage of substitute words decreases, as shown in <Figure 4>. If the manifest substitute word eventually becomes 0%, the institution will be separated into a fixed form in which the ratio of the common word to the new word is fixed without the common word being lost any more.

On the other hand, the proportion of 'new succession' words that have continued until the next year after the new appearance has increased from 11.9% in the previous year to 42.2% in 1959. This is to play a role in changing the economic policy direction by absorbing newly introduced institutional factors in the area of reduced common alternative words and accumulating continuously. The fact that the proportion of new successive words increases means that the institution is transformed into a new one.

In addition, 'new neutrality', which appeared only

during the year and did not affect the next year, absorbed the change in the ratio of the emerging substitute word, which increased to 31.7% in 1959, up 9.1% from the previous year. However, the rate of increase of new neutral words appeared to be slower than new successive words. The new succession words were settled at a rate faster than the neutral variable rate, resulting in a differential growth in institutional change.

The institutional pool with continuity and variability gradually changes due to the growth of institutional factors with different characteristics. The proportion of the common manifestation and the substitution words that support the continuity of the system has decreased as the time for which the system survives has become longer and the new institutional factors have settled the place. The common manifestation word is displaced as a manifestation substitution word and converted to an inactive institutional factor, and it is adopted by a specific idea and reappears or disappears as a new word. On the other hand, not all new words have an effect on institutional change, and some have neutrality to institutional change. New institutional factors are accumulated due to the differential growth rate of new successive words and new neutral words among newly introduced new words, which is the driving force of institutional change.

V. Discussions

The institution is divided into small units, and how the system changes can be explained through the economic policy direction. Basically, institutions are duplicated. The current system is

both a copy of the previous system and future. However, in reality, no matter how precise replication is done, it can not create the same thing but make the same thing. In the process of duplication, there are more institutional factors and fewer other institutional factors. This is because the choice of institutional factors is guided in the direction of political and economic situation and ideas, and new institutional factors are continuously introduced. This change in the number of institutional factors leads to changes in the institutional pool, resulting in a change in the typical pattern or trait of the institution.

This study does not define the whole by individual objects but the way in which individuals are defined by the whole. The institution as a whole has an interdependence and complexity that is more than a collective simple combination of institutional factors. Institutional factors can participate and depart from the institution as a whole, but they can not exist independently. Due to the accumulation of the process of coming in and out of institutional factors and the interdependence of the institution as a whole, the s changes gradually, continuously and progressively. It is not that the institution is replaced with another institution at a time, but it changes microscopically due to the reduction of institutional factors that have been passed from the past, the introduction of new institutional factors and the departure of existing institutional factors. In particular, the differential growth of institutional factors can be said to be a driving force to change the system gradually and continuously.

On the other hand, institutional factors constitute a system as a whole, but not all institutional factors influence institutional change.

Some of the institutional factors have neutrality that have neither positive nor negative impact on institutional change. The existence of such a neutral institutional factor makes the economic policy direction for each generation differentiated and it can cope with the policy environment flexibly. In addition, the neutrality of institutional factors is a starting point for explaining the relationship between institutions and policies. The policy as a product of the system (Immergut, 2006) is implemented in a volatile manner by combining neutral institutional factors centered on core institutional factors. By the transitory nature of the neutral institutional factors, the policy then has its own characteristics, but the neutral institutional factors can not exist completely out of the institution because they are sorted and selected within the influence of the institution.

This study is meaningful in that it attempted to solve the absence of a microscopic analysis framework for macroscopic phenomenon by analyzing the mechanism of incremental and continuous institutional change through the differential growth and neutrality of institutions. However, the following limitations in the process should be reinforced in future studies. First, this study does not take into account the informal aspects of norms and practices (North, 1995: 21–22), which are included in the analysis of externally published economic policy directions. Such an aspect may be reflected in the potential institutional factors in the institutional pool, but its boundaries are unclear and the certainty as an entity is not so easy to manipulate and analyze. It is a need to complement these areas as qualitative research. Second, this study examines the institutional change based on

the introduction of new words and the frequency of existing words, but it is also necessary to analyze how the institutional factors are combined and arranged in order. This is because institutions can form different meanings depending on the sequence and arrangement order of institutional factors. Third, this study sees individuals on the basis of the whole, but it is a debate as to whether this overcomes the reductionism of the existing theory. (March & Olsen, 1984) In addition, the institutional factors are regarded as word units, but in order for these assumptions to be valid, there should be accumulation of continuous follow-up studies. In the future, efforts should be made to reinforce the logical structure that can explain not only elaborate genetic knowledge but also the specificity of the institution as a social science.

Acknowledgment

This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2014S1A3A2044645).

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Received: May 29, 2017 / Revised: Jun. 6, 2017 / Accepted: Jun. 19, 2017

공조직 개혁위기와 내재적 경직성에 관한 연구

국문초록 본 연구는 진화이론적으로 공조직 내 제도변화를 실증하기 위해 매년 발표되는 경제정책방향을 단어 단위로 분해하여 분석하였다. 분석대상은 2001년부터 2016년까지 발표된 경제정책방향이었으며, 최초의 경제정책방향이랄 수 있는 1959년의 발표 자료를 분석의 기준시점으로 삼았다. 분석결과, 제도의 연속성을 유지하는 기존 단어의 비중은 제도가 존속하는 시간이 길어질수록 줄어들었고, 그 자리에 신규로 이입된 단어가 정착하였다. 제도를 구성하는 단어의 들어오고 나오는 차등적 성장 과정의 축적은 점진적이며 연속적인 제도변화의 동인으로 작용하였다. 한편 새로 이입된 단어 모두가 제도변화에 영향을 미치는 것은 아니며, 일부는 제도변화에 영향을 미치지 않는 중립성을 가지고 있었다. 이러한 중립성은 공조직 내 정책혁신이 매 세대마다 차별적으로 운색되도록 함으로써, 내적 정책환경의 경직성을 유지하는 인자로 작용하였다.

주제어 : 공조직 변화, 제도진화, 내적 경직성, 텍스트분석

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