Comparing two Korean Ministries from a Time Perspective

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Abstract: This paper proposes a new approach to organizational studies that places greater emphasis upon the temporal dimension. Time is seen to be a key variable to explain the observed differences in organizational effectiveness. To explore the relationship between a ministry's core function and its internal operation, this study examines two polar cases for the Republic of Korea: the Ministry of Agriculture and Forestry (MAF), and the Ministry of Information and Communication (MIC). The hypothesis is that the time span required by the core functions of the Ministry of Agriculture and Forestry is greater than that of the Ministry of Information and Communication.

In order to test this hypothesis, this study administered questionnaires to high-ranking civil servants in both ministries. From their responses, we find that the hypothesis is rejected. Indeed, the opposite hypothesis is supported with a statistical significance of 0.10. This finding can be explained by the uniform standard operating procedures used by Korean ministries in areas such as planning, decision-making procedure, career system, etc. To interpret this phenomenon from a time perspective, we argue that there is a discrepancy between task time and sequential time and the role of politics in the bureaucracy. This paper proposes to consider time variable as important in the sense that to become more effective, each ministry must differentiate between its organizational structures and internal operational principles with explicit reference to the temporal characteristics of the ministry's core function.

Introduction

Time is an important issue. 'Just-in-time,' 'quality time,' 'speed,' 'timing,' 'rhythm' and 'time management' are all well-known organizational terms. The introduction of the Internet has especially changed the concepts of time and space, and the information society has made people think and act differently than in previous eras. This is true in Korea, the country with highest per capita high-speed Internet access in the world, with a stable, established economy that is the world's 12th largest, and a member of OECD. Traditional Korean society was known for tardiness and deep thinking as 'land of the morning calm' indicates. However, in contemporary society, speed is a virtue and delay is a vice. 'Just-in-time' is an especially desirable value, as it is in Japan (Ikuko, 1999). Government must adjust to this new way of thinking because government's raison d'etre is to satisfy citizens' needs.

Nevertheless, as the new phenomenon of 'well-being' illustrates, tardiness is better than speed. Thus, time has become an even greater challenge. Unfortunately, most Koreans, who are preoccupied with haste, ignore the necessity of proper timing. Because they take their time in responding to people's needs, Korean bureaucrats always seem busy for no particular reason. This paper

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emphasizes the concept of proper timing in the internal operation of the government and tries to find explanations why this time concept cannot be reflected in Korean bureaucrats' way of working. Placing greater emphasis on the different concepts of time, we describe the organizational structure and its operation inside ministry. To this end, this study explores the time dimension perceptions that employees of two ministries have about their work.

Theoretical Background

This topic is such a new issue that no previous Korean study exists. If the topic is expanded in the broadest sense, the relationship between work characteristics and time can be traced to the Aston Group's study on organization and technology. The Aston Group explored the degree to which an organization's performance was influenced by technology.

The concept of 'technology' has a number of senses depending upon the researcher's definitions. Thompson (1967) classified technology as long-linked, intermediary and intensive. Scott's typology (1998) comprises operations, materials and knowledge technologies. Both studies proved that each technology has an optimum method of coordination within the organization and its environment.[1] In terms of time, standardization presupposes the greatest time span because it requires no drastic changes in the operation. By the same line of reasoning, mutual adjustment presupposes that the organizational members perform in the shortest time span, while the time span presupposed by 'plan' lies somewhere between the two.

Thompson and Scott both wrote about the optimum method of coordination because 'coordination' is accompanied by a cost in the broadest sense of the term. An organization is an entity in which many actors interact, and their actions and reactions expand over time. Standard operating procedures (SOP) economize the time an organizational worker spends on solving routine problems.[2] Therefore, coordination in an organization is a method of time management.

Western entrepreneurs consider labor time an important resource. Time became a commodity that was measurable, buyable and controllable (Ancona, Okhuysen and Perlow 2001:515). In this context, we can understand the importance of F. Taylor's study (1947) on time and motion argues that rearranging laborers' movement in work place can be remarkably increase productivity. Using the concepts of 'Chronos' and 'Kairos,' Hedaa and Tornroos (2002) develop richer argumentation about time.

Contrary to this western tradition, Korean public administration scholars have

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1) Thompson (1967:56) for instance, proposed that the pooled interdependence could be appropriately coordinated by standardization, while sequential interdependence can be coordinated by a 'plan,' which is the same as 'reciprocal interdependence' by 'mutual adjustment.'

2) Cyert and March (1963:103-112) concretely classified SOP as task performance rules, records and reports, information handling rules, and plans.

paid little attention to time until recently. In 2002, a pioneer in this field, C. Chung, proposed a so-called, 'time lag approach to policy'(2002a; 2002b; 2002c). His first paper emphasized that the order of two or more variables have an effect on treating a dependant variable. If independent variable 1 intervenes before independent variable 2, the final effect on the dependent variable is completely different from what would occur should the inverse happen. In his second paper, Chung notes the importance of the historical maturation effect on the policy targets' group. His last paper concerned the different perceptions of time. All these studies, however, are conceptual discussions that lack empirical evidence.

It is in this context that we can apply the previous management research studies on the relationship between organizational structure and its environment. Burns and Stalker (1961) proposed that a complex and changing environment goes as well with organic structure as with a simple and static one that requires a mechanic structure. The contingency approach to organizations represents this logic in organizational studies. Lawrence & Lorch(1967) empirically proved the hypothesis that the pace of market change determines the organizational structure of an enterprise, which means achieving a degree of integration and diversification. Their study is useful for this discussion because it focuses on the speed of time in the changing environment of an enterprise. Their statistical methods, however, oversimplified the rate of change in environmental and organizational structures by reducing the rate to two or three scales of 'high' and 'low'. This study tries to apply this logic of reasoning to the field of public organization in a more elaborated way.

Research Design

Since a society is composed of numerous different types of organizations, it is important to choose a level of analysis that is appropriate for a governmental organization. Organizational units include such divisions as the executive branch; a ministry; a directorate; or a service or a bureau or team. To properly explore the research question, this study requires more than two organizations whose main functions contrast one from the other from the time span perspective.

A ministry is a relatively autonomous government organizational unit and acceptable for study. Employees at each ministry probably share a peculiar organizational culture, because inter-ministerial mobility in Korean government is extremely limited. A minister is delegated a certain function by the head of government and required implement policies to solve problems under the minister's purview. In Korea, a ministry is the most stable organizational unit because its creation is subject to approval by the National Assembly; consequently, a ministry is the most appropriate level of governmental organization to this study.

Theoretically, the creation of a ministry or a department in a government is based on four criteria: goal, process, client and place (Gulick 1937). For example, the Ministry of Foreign Affairs is responsible for interaction with other countries, the Ministry of the Interior attends to national issues, the Ministry of Veterans Affairs has veterans as clients and the Ministry of Finance and

Economy oversees the process of budgeting and financing government activities.

If we examine a ministry closely, the departmentalization analysis is not so simple. No government forms its ministries according to a single specific departmentalization criterion. Usually more than two criteria are applied (Gortner et al. 1997:98); however, the most familiar criteria are probably those found in departments that are similar in program and policy areas because the program and policy areas constrain the complexity of internal management. Some public bureaus fail in their missions because of their operational rigidity, their inability to coordinate tasks or the lack of appropriate communication channels for monitoring the success or failure of a project (Gortner et al. 1977:103). Therefore, ministries depend on core technology to be effective.

In this regard, this study raises questions about the time relationship between the core technology and the operation of a ministry. The departmental mission as described in the Government Organization Law has technological time implications that must prevail over the employees' mode of thinking. We need ministries whose concepts of time span contrast sharply with one being short and the other long.

The Ministry of Agriculture and Forestry (MAF) is charged with management of agricultural production, irrigation, animals and the transmission of these products to consumers (Clause 36 of the Government Organization Law). The production of rice, which is the essential aliment of the Korean diet, requires a year to grow, while the other products demand a certain expanse of time for production. Traditionally, the ministry is charged with preventing food shortages and the management of their production and consumption. This charge requires those who work at the ministry to think in a correspondingly long-term perspective.

The Ministry of Information and Communication (MIC) is responsible for transmitting and communicating information, broadcasting, postal services and postal banking, and payment transactions (Clause 38 of the Government Organization Law). MIC's activities concentrate on promoting an informatization policy, for example, through the expanded use of the Internet and mobile phones. Technological innovation in this field is extraordinarily rapid and in some cases, revolutionary. Employees of the ministry must be extremely flexible, and respond rapidly to technological and market changes, as the speed of thinking in the Internet era has become extremely important (Gates 1999).

For aforementioned reasons, MAF and MIC were selected as the two ministries with the greatest diversities in the time elapsed. We can describe a hypothesis as follows.

From a time perspective, the internal operations of MAF require a greater time span to produce results than does MIC.

Research methods

To test the hypothesis, a questionnaire was sent to civil servants in the two ministries. Samples were confined to those working at the central administrations

located in Seoul because their work concentrates on policymaking and evaluation rather than program implementation. In general, central policymakers are more concerned with time than are frontline employees.

From among 423 MIC employees, 81 replied to the questionnaire. Respondents were chosen according their availability. A ministry employee distributed and collected the questionnaires in confidence, and selected representative samples in terms of age, work experience and rank. Methodologically, random sampling minimizes sampling error in general, however this method was chosen because many employees, especially high-ranking employees in central administrations, are too busy to answer a questionnaire; consequently, subordinates reply in their place. The same method was applied to MAF where 114 of 503 employees responded.

Lacking randomness of sampling, the respondents were over-representative of lower ranking and administrative employees. Therefore, a detailed analysis such as testing according to diverse sample categories was meaningless. This sampling method was inevitable because relevant answers are critical to test the hypothesis, but Korean administrative culture dictates that most high-ranking civil servants use subordinates to respond to questionnaires.

In a society that communicates indirectly and discretely, it is unlikely that the answers provided on a voluntary questionnaire are entirely reliable. This is particularly true for those young men and women who are trained to respond to multiple-choice tests by selecting the "correct" answer rather than the answer they prefer. Therefore, it was necessary to follow-up the questionnaires with in-depth interviews based on semi-structured method. These interviews were conducted with 9 MIC employees and 21 MAF employees. Each interview lasted between one and two hours, depending on the interviewees' cooperation.

Findings

The questionnaire was designed to conceal the research question from the respondents because of the aforementioned tendency of civil servants to choose a "correct" answer in line with the researcher goal so that the employee does not lose face if the results are published. Therefore, questions that ask about the respondents' values are placed in the first part of the questionnaire, and questions concerning the respondents' socio-economic status are in the final part. Two questions were posed to test the hypothesis. One concerned the respondents' perception about the normative time span of their work, and the other concerned their perception about "real work" time.

Perceptions about Normative Time Span

Before testing the hypothesis, it is important to learn the time span that civil servants deem appropriate to accomplish their ministry tasks. Agency activities for planning and implanting agricultural policies should be different from those that must promote the use of information technology and respond to the rapidly

changing environment of the international market. If the employees in both ministries agreed on the same time span, we would not need to test the hypothesis.

After open questions about their ministries' principal missions, respondents were asked a question about the representative time span of their ministry.

> "You may have experienced instances where policies become obsolete or even detrimental because important, unanticipated changes occurred at the policymaking stage. How long do you think that ministry employees should work to accomplish the ministry's core missions?"

The respondents were asked to choose from among six time periods (see Table 1). Because the civil servants replying to this question deal with a variety of tasks, it was difficult for them to calculate the exact time span of their work. In all likelihood, they responded to this question after reflecting upon their own work. Consequently, the results must be interpreted with caution.

Table 1 shows that 40.5% of MAF employees chose shorter periods, i.e., less than 6 months, in comparison with the 26.2% of MIC employees who chose shorter periods. This means that according to the employees' perception of the two ministries, the normative time span required to complete a task in MAF is shorter than in MIC. At any rate, it is problematic that Korean policymakers have such a short-term perspective that 55.2% of MAF respondents and 40.7% of MIC respondents believe that the tasks should be completed shorter than a single year.

Table 1. Normative Time Span

Time span	Ministries		Total
	MAF	MIC.	
Less than 1 week	3 (2.8%)	3 (3.9%)	6 (3.2%)
Approximately 1 month	15 (13.8%)	8 (10.5%)	23 (12.4%)
2 months ~ 6 months	26 (23.9%)	9 (11.8%)	35 (18.9%)
6 months ~ 1 year	16 (14.7%)	11 (14.5%)	27(14.6%)
1 year ~ 3 years	27 (24.8%)	23 (30.3%)	50 (27.0%)
Longer than 3 years	22 (20.2%)	22 (28.9%)	44 (23.8%)
Total	109 (100%)	76 (100%)	185 (100%)

The interpretation of the table cannot be statistically tested because of the scale; that is to say, that each choice contains different range of time period. For gauging statistical significance, the choices are transformed into median values (see Table 2). The mean normative time span that MAF employees think is approximately 15 months, while MIC employees opt for a mean of approximately 19 months although the standard deviations are quite large.

Table 2. Summary of Statistical Description

(unit: month)

Ministry	N. of Sample	Mean	Standard deviation	Statistical error
MAF	109	15.1752	13.6844	1.3107
MIC	76	19.2579	13.8378	1.5873

Table 3 is the result of T-testing the hypothesis concerning the difference between the ministries. The hypothesis can be accepted under the significance level of 0.05 whether the samples have same variance or not. Therefore, we can conclude that MAF employees perceive the normative time span to complete their ministry's mission to be shorter than do MIC employees. This is exactly opposite to the first stage hypothesis.

Table 3. Results of T-Test

	T	Degree of freedom	Probably of two tales significance	Mean difference
Under the same variance	-1.987	183	.048	-4.0827
Under a different variance	-1.983	160.372	.049	-4.0827

Differences in workplace

This study explores the relation between employees' perception of time and the ministry's technological core. To discover how long the employees of the two ministries worked each day, the following question was posed.

> "In a 'real work' situation, you handle tasks of varying degrees of importance daily. How long-term do you think as far as the important tasks for achieving your ministry's principal mission are concerned?"

In order to avoid confusion with the previous question concerning the normative time perspective, the notion of 'real work' is added to the question. The choices were daily, weekly, monthly, yearly, 1 to 3 years and more than 3 years.

The results summarized in Table 4 demonstrate that in this regard there are no noticeable differences between the two ministries. In MAF, 27.5% of the respondents answered monthly, while 26.3% of the MIC respondents answered

yearly. From this information, it can be assumed that MIC employees have a longer time-perspective than do their counterparts in MAF.

Table 4. Time-Span in Workplace

	Ministry		Total
	MAF	MIC	
Daily	3 (2.8%)	2 (2.6%)	5 (2.7%)
Weekly	17 (15.6%)	14 (18.4%)	31 (16.8%)
Monthly	30 (27.5%)	15 (19.7%)	45 (24.3%)
Yearly	19 (17.4%)	20 (26.3%)	39 (21.1%)
One ~ three years	21 (19.3%)	11 (14.5%)	32 (17.3%)
More than three years	19 (17.4%)	14 (18.4%)	33 (17.8%)
Total	109 (100%)	76 (100%)	185 (100%)

In order to statistically test this conjecture, the answer variable is transformed into a ratio scale. Contrary to the previous question, a week is chosen as the basic unit, and each answer is re-calculated so that 'monthly' represents 4 weeks, 'yearly' represents 52 weeks, 'one to three years' represents 104 weeks and 'more than 3 years' represents 156 weeks. The basic statistical characteristics are summarized in Table 5. Contrary to expectations, the difference in the means between the two ministries is small; however, it must be remembered that because of the re-coding, the standardized deviations are quite large.

Table 5. Summary of Question 2

Ministry	Sample	Mean	Standard deviation	Statistical error
MAF	109	57.5620	59.3354	5.6833
MIC	76	58.4584	58.2286	6.6793

Table 6 shows the results of the T-test to demonstrate the difference more clearly. Whether we presume the two groups have the same variance or not, the statistical significance makes no great difference. Through this, it becomes more evident that the two ministries have no significant difference in their employees' perception about their time span of working.

Table 6. T-test of Question 2

	T	D.F	Probability of two tales	Mean difference
Under the same variance	-.102	183	.919	-.8964
Under a different variance	-.102	163.425	.919	-.8964

In summary, the initial hypothesis cannot be maintained. According to the empirical evidence, MIC employees have a longer time perspective in terms of the normative time required to achieve their ministry's mission than do MAF employees; yet there is, however, no significant difference between two ministries in the way their employees handle daily tasks.

Discussion

Technology refers to the programs and procedures that are designed to respond to situations and to process cases to achieve the results specified by law and public policy. Each ministry studied has its particular way of dealing with policy issues. By nature, the cases they handle should have different time dimensions. Considering only the peculiarities of production or technological innovation cycles, it was assumed that agricultural field required a longer time perspective than the information and communication field.

However, the survey shows that MAF employees think that the policy time necessary for their ministry's goal is shorter than for MIC employees. This is because agricultural policy is considered old fashioned, but information technology policy is seen as entering a golden age and essential for the country's economic growth. In other words, the Ministry of Agriculture performs more routine work than does the Ministry of Information and Communication. To employees, routine work does not seem to require a long-term perspective, while non-routine work does. This difference must influence the employees' perception about the normative time span required in their particular ministry.

The interpretation of the technological imperative as it applies to public agencies is that programs are technologies, and these technologies are based on complex political and professional values as ratified by legislatures and agency regulations. In particular, Korean society is accustomed to rapid economic growth driven by a strong government in the personification of elite bureaucrats. Bureaucrats rely on diverse instruments to cope with uncertainties in the work environment. The government used to establish 5-year Economic Development Plans to which each ministry's executive plan had to be attuned (S.B. Kim 1999). Although central 5-year planning was abolished in 1991, each ministry has various policy implementation plans. Therefore, comparing the existing plans in the two ministries is a good way of examining the hypothesis.

MAF has only seven different plans: the 5-year Basic Plan for Agriculture Informatization, the Basic Plan for Mechanization, the Reform Plan for the

Chamber of Agriculture, the Plan for Ecological Agriculture, the Ginseng Industry Plan, the Garlic Production Plan and the Rural Infrastructure Plan. However, there is no systematic relationship between the different plans, and the ministry officials who were interviewed do not consider the plans as an important reference in their work. In depth interviews revealed that some of the plans were dead documents. Even though the government promoted agricultural restructuring programs accompanied by a huge financial outlay, the programs have proven a total failure (Im 1997; Seo 2003). This explains why Korean agriculture still faces a crisis with the opening of markets as imposed by the Uruguay Round.

In contrast, MIC planning has greater significance. In addition to the Basic Plan for Informatization of the Country, there are 26 other plans in effect that cover the various information and telecommunication sectors. They are systematically linked so that a basic plan, an executive plan and detailed plans exist for sub-fields. Normally, the basic plan has a 5-year timeline; the executive plan has a 3-year timeline; and the detailed plan, one year.

During the interviews, MIC employees often mentioned the plans, which was not the case for MAF employees. This means that the plans affect the MIC employees' work, but they are regarded as just so much paper in MAF. It is interesting also that the MIC plans are more flexible than expected. In most cases, the detailed plans adapt quickly to environmental changes, or executive plans have 'rolling system' that means the plans are regularly revised.. This is understandable because the employees face tremendous uncertainty since information technology changes so rapidly. MIC stakeholders of, (IT investors, for example) require MIC to prognosticate and to keep policy consistency forward looking because they want to avoid risk originating from unanticipated policy changes.

The contrast in planning between the two ministries is probably best reflected in the results of survey on the normative time span. MIC employees are forced to think more in the long-term than are their MAF counterparts. In other words, MIC's work is related by the future while MIC's work is preoccupied with the past; the former is more dependent on coordinating interests such as investors, consumers, international commerce and R&D, etc., while the latter is more dependent on nature. Thus, for MIC's employees planning signifies managing the environmental complexity of the future in the present and enables the employees to design 'reasonable and predictable' action steps.

The survey results show no significant difference in the time span of the real workplace between the two ministries. Theoretically, central government employees should concentrate on policymaking and evaluation, while the employees at local offices and local governments focus on implementation. However, the employees of both ministries are preoccupied with implementation. In a country such as Korea with a long tradition of strong and centralized government, ministers are accountable to the President for every error, accident or scandal that occurs in their policy area, and the President, who will force their resignation if necessary. Therefore, ministers are generally defensive, which in turn means that ministry officials must pay attention to implementation in order to avoid politi-

cal damage to their ministers.

In addition, the institutional constraints, annual budgeting and financing, personnel administration, an internal decision making procedure known as pumyui and organization charts are the same among all ministries (Cho 1992). Korean bureaucracy is based on linear career development system, a so-called "class system," and bureaucrats, in general, are strong career oriented. Because of the pyramidal bureaucratic structure, bureaucrats encounter a bottleneck as they are promoted up the hierarchical ladder. To deal with the discrepancy between bureaucrats' eagerness for promotion and rare availability of a vacancy at a higher position, a frequent rotation named "Z type mobility" is formed (Im 2000). As the letter Z shows, an employee experiences several lateral movements for short periods before being promoted. The average longevity of a director in a position in the central government is about 13 months. To support this study's hypothesis, employees should remain in a position longer than the time span that its core function requires, otherwise short-term promotion seekers, would havea shorter time span than necessary.

To understand better the survey results, it is necessary to distinguish two types of time span: task time and sequential time. As this study's hypothesis implies, sequential time refers to the time span that elapses for accomplish a policy. It is part of the organizational psyche; consequently, it cannot be observed by outsiders because it is determined by the core function or technology that an organization relies on. Task time indicates the time that employees spend in the workplace, and it can be measured through observation. These concepts of time explain why there is no significant difference in the sequential time of the employees' real work despite of the difference in normative time span. If task time of employees is so tightly 'structured,'the employees cannot have an appropriate time horizon because the former perceptually suppress the latter.

The decision-making mechanism, pumyui, is typical of the factors that influence task time in a manner that creates a total collectivist organizational culture. Each program or issue is initiated in written form at a lower staff level and is circulated successively up the hierarchy until the individual at the top of the chain of command makes the final decision (Cho 1997). This is the best process for specific fields that require group thinking or consensus, but it is inefficient and inappropriate in fields where creativity or speed is required. Nevertheless, pumyuiis the norm in every Korean ministry. The interviews show that MAF typically employs pumyui to all decision making, while MIC more frequently utilizes ad hoc group discussions to determine policy alternatives. Consequently, task time inversely influence sequential time at normative level. MIC task time of consists of discussing the future development of the information society or exploring policy development in this field, so as a result the employees l have a long term concept of time. Compared with MIC, MAF's task time relates more to dealing with 'small' problems and policy implementation. Rather than thinking about future of agriculture, employees are normally submerged in everyday concerns, such as insect defections, diseases,

fires, floods, importing agricultural products, etc. Naturally, MAF's task time prevents employees from reasoning with the long-term time horizon that the core technology requires.

A number of interviewees complained about their heavy workload, and made remarks such as, "I'm like a vending machine. I spend one day to the next without thinking because I am too busy with small tasks to think in a long-term perspective." It is surprising that most interviewees, especially those working at MAF, have no concept at all about the time span that this study explores and even deny the necessity of it in their work. Their attitude represents a passivity in the sense that they loyally, and unreflective of their ministry's mission, think and implement whatever their superiors expect them to do. We can conceptualize this relationship of authority- obedience inside bureaucracy as a panoptic prison as Michel Foucault explained (Foucault 1979). Ministers serve for short periods usually one to two years and are aware of the possibility of being forced to resign at any time as a political scapegoat. This focuses ministers' internal management on the short term and leads them to closely monitoring their staff's activities. No high-ranking civil servant can afford to antagonize his superior without necessarily jeopardizing his chances of promotion. Thus, the hierarchical structure tends to homogenize subordinates' task time and this, in turn, deprives subordinates of a differentiated sequential time horizon in terms of their missions accomplished.

A historical explanation can be added on the discussions above. MAF is the oldest ministry with a history of more than 60 years, while MIC has only celebrated for its 12th anniversary. Furthermore, legislation limits MIC's existence to 10 years[3]. This time limit on MIC means that employees strive justify their existence as a ministry, which leads them to think in a strategically long term. One interviewee explained the logic of their justification as follows.

> This goal (indicating a specific sub-goal for informatization policy), which is critical for the international competition in the field, requires at least 5 years of consistent governmental involvement. If MIC is dismantled, it is certain that the goal will not be attained. International competition is intense, so that if Korea wastes time now, it will be impossible to catch up. Look the Japanese. They speak of 'lost ten years' as everyone knows. You must understand that the performance of the Korean IT economy was possible only because of MIC's role.

In contrast with MIC's survival problem, MAF's existence has never been threatened. It has its own organizational history that materialized in the form of a deep structure that determines its task time. The organizational history is the ultimate reservoir of all problems and their solutions. The employees' reasoning

3) Despite the legislation, MIC is in its 12th year of existence. This is an example of the survival principle that an organizational will never dies if created.

in their work is bounded by this reservoir and the reservoir does not easily change.

In summary, despite different explanations between the two ministries, there is no significant difference in the respondents' replies about the real work time span. The similarity of their organizational structure combined with the similar task-time leads employees in ministries of contrasting sequential time span to think identically in their daily tasks.

Concluding Remarks

A ministry manages 'the public time.' Public time means the time required to accomplish the ministry's goal. Most decisions made by ministries comprise a time span determined by either nature, or the client's expectations, or both. This study presupposed that MAF's core functions require a longer time span than MIC does. Surprisingly, the perception by the two ministries' employees shows the opposite proposition. This can be explained because, in addition to the differences in the natural constraints imposed on the two ministries' missions, MIC's mission with regard to its environment is particularly uncertain, and the employees are seeking to justify the ministry's existence.

The similarity of employees' perception about their real time span is explained by the uniformity of internal operation, i.e., the task-time, between the two ministries. Thus, the task-time prevails over the sequential time required because of the core technology; the internal operation of Korean ministries must be differentiated by the time span required by core technology unless the employees' task time is wasted doing unnecessary tasks. For example, every ministry in every country does not need to have a Directorate of Planning and Programming as with the same organizational status as the Directorate in Korea.

The discussions above can be attributed to Korean politics, which remains authoritarian, because the bureaucracy is centralized at the top and supervised closely, especially in the political arena; the President is omnipotent. Ministers want to closely monitor every employee in order to please the President. Thus, political factors prevent bureaucrats from working on a different time line. In other word, politics tightly controls bureaucrats' task time, which results in making bureaucrats unconscious of the necessary time span required by their core function. The tension between task-time and sequential time on the one hand and politics on the other hand continues to violate the separation between the two time factors. Therefore, democratization in terms of introducing voting, a merit system or external controls on the bureaucracy makes no sense to the high-ranking Korean civil servants.

As the consciousness of democratization of the work places increases and the expert knowledge deepens, the ministry's functions should be decentralized. Politics in a large sense should stop violating the necessary reasoning of time spans that public administrators must consider. Thence, the technical imperative and the environmental uncertainty that a ministry faces differ completely from one ministry to another and from a service to another. These aspects should

come in for serious study. Each organization should be redesigned according to the time characteristics that the core technology requires. This reorganization will remarkably improve the efficiency and effectiveness of the bureaucracy.

For further research, we propose considering a 'subjective time span' the time span that stakeholders think necessary because, unlike the private sector, public administration is a service organization that must fully respond to its environment, i.e., the policy target group. Citizens in general and the policy target group in particular, have policy expectations in terms of the time necessary to achieve results. One policy group may think that one or two years is a legitimate period in which to produce an intended policy effect, while another group may consider two years is excessive. In most cases, their judgment is not entirely subjective and retains a modicum of objectivity due to physical constraints of certain policies. For example, the organizational structure of forest administration must adapt to these two time-spans specificity. The administrative work of an American forest ranger was described by Kaufman (1968).In any cases, it is important to explore subjective time span in order to better understand policy implementation.

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