The Effects of Organizational Structure on Innovativeness, Pro-activeness, and Risk-taking in the Korean Public Sector

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INTRODUCTION

In today's complex and competitive society, traditional forms of top-down government are no longer welcomed by citizens. While the government must constantly try to make changes and prepare responses to crises, public sector innovation is always slow to start compared to that in the private sector. Given that in public organizations, innovation, proactiveness, and risk-taking are closely linked to the quality and efficiency of public services delivered to citizens, the importance of public entrepreneurial values cannot be emphasized enough. Although entrepreneurial values and the entrepreneurial orientation in the public sector have long been discussed (Caruana et al., 2002; Drucker, 1985; Damanpour & Schneider, 2008; Miller & Breton-Miller, 2011; Osborne & Gaebler, 1992), few empirical studies on the South Korean public sector have been conducted.

Since the impeachment of former president Park Geun-hye in 2016, the South Korean government is preparing for an innovation revolution. In particular, from the perspective of public-organization management, the wind of change is blowing from the central core of the government. Various structural and institutional reforms are being undertaken in public agencies to enable them to operate more efficiently, beyond the great number of past failures to manage national crises. Considering recent events in South Korea's public sector, this study focuses on the effects of organizational structure on entrepreneurial values (i.e., innovation, proactiveness, and risk-taking). Based on the hierarchical and collective characteristics of organizational culture in the South Korean public sector, entrepreneurial leadership was included in this research model as a control variable, and the moderating effects of in-group collectivism were also confirmed.

To examine the relationships among entrepreneurial leadership, organizational

structure, in-group collectivism, innovativeness, proactiveness, and risk-taking, this study conducted exploratory factor analysis, reliability analysis, correlation analysis, and hierarchical multiple regression analysis. Based on the empirical analysis results, this study proposes beneficial implications for future public-sector innovation studies and extracts policy-related suggestions on the basis of the uniqueness of Korean society and culture.

THEORETICAL BACKGROUND

Organizational Structure

Organizational structure has long been a topic of interest to researchers and practitioners, as it is essential in achieving organizational goals (Aiken & Hage, 1968; Mintzberg, 1979). However, scholars' opinions on organizational structure have varied. Organizational structure can be divided into structural characteristics, meaning the physical conditions of the organization, and structuring characteristics, meaning activities and policies (Dalton et al., 1980; Campbell et al., 2004). Burns (1963) argued that mechanistic organization is effective in a stable external environment and organic organization is effective in an unstable external environment. Pugh et al. (1968) attempted to categorize organizational structure as structuring of activities, concentration of authority, line control of workflow, and size of supportive component. Nevertheless, among existing studies, three components of organizational structure have been most commonly considered: formalization, complexity, and centralization (Hage, 1965; Ivancevich & Matteson, 1987; Robbins, 1983). Therefore, this study applied the three most commonly considered components of organizational structure. In addition, red tape was also investigated in this study in light of the reality of public organizations (Rainey et al., 1995; Baldwin, 1990).

Formalization refers to the extent to which rules and regulations are formally and officially specified within an organization. In other words, it represents the degree to which tasks within departments are standardized. Oldham and Hackman (1981) defined formalization as the rules and regulations that specifically describe the work process. The main function of formalization within an organization is to reduce role ambiguity. However, when there is much more formalization than the organization needs, it can result in poor performance because it gives rise to dissatisfaction among employees.

Complexity refers to the level to which tasks are specialized and departmentalized. Fredrickson (1986) defined complexity as "the condition of being composed of many, usually interrelated, parts" and mentioned that "an organization that simultaneously has numerous levels, broad spans of control, and multiple geographic locations would be considered highly complex." Complexity includes aspects of bureaucratization, horizontal differentiation, and vertical horizontal differentiation (Hall et al., 1967).

Centralization refers to the extent to which power or authority is concentrated in the upper levels of an organization's hierarchy, meaning that the authority for decision-making is concentrated in a particular place or class in the hierarchy system. A high level of centralization can help coordinate decision-making in an organization, but can result in many employees lacking the cognition or information they need (Fredrickson, 1986; Mintzberg, 1979).

Red tape refers to the number of unnecessary forms and procedures an organization has, meaning the level of complexity in executing tasks and the extent to which organizational procedures are overly complex. Bozeman (1993, p. 283) defined red tape as "rules, regulations, and procedures that remain in force and entail a compliance burden for

the organization but have no efficacy for the rules' functional object.” Scott and Pandey (2005) proposed red tape as an important obstacle to governmental reform.

Innovativeness, Proactiveness, and Risk-taking

An uncertain external environment threatens organizations. To deal with threats, organizations must face risks, undergo change, and revolutionize themselves (Rainey, 2009). Goldsmith and Foxall (2003) defined innovativeness as the creative process arising out of engagement with new ideas and practices. In public organizations, innovativeness induces employees to bring about change in public services and their environment through the adoption of new practices. Proactiveness shows “a forward-looking perspective that is accompanied by innovative or new-venturing activity” (Lumpkin & Dess, 1996, p. 146). Proactiveness in a public organization can facilitate active innovation and the adoption of changes. Risk-taking can be defined as an organization’s willingness and capability to absorb uncertainty with regard to the future and take responsibility for decisions (Chen, 2007). Taking actions resolutely in order to achieve public goals, public organizations that exhibit risk-taking are able to make more innovative decisions and engage in challenging practices. For organizations, innovativeness, proactiveness, and risk-taking can be argued to be important elements necessary for coping with the external environment and generating efficient outcomes (Linton, 2016).

In-group Collectivism

In-group collectivism refers to "the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families" (House et al, 2004, p. 30). This

concept is related to affective pride and commitment toward a group, community, or nation (Triandis et al., 1988). The conceptual essence of in-group collectivism inheres in in-group ties between members; in-group collectivism fosters a unified sense of purpose and identity among members (Gupta & Kirwan, 2013). Because in-group collectivism in an organization is closely associated with higher levels of attachment among employees to work-related groups and teams (Jung & Avolio, 1999), it may be expected to be an important variable in advancing organizational change in South Korean society, with its strong collective disposition.

Causal Relationships among the Research Variables

Previous studies that have analyzed the relationship between organizational structure and organizational effectiveness have found that an organic, non-bureaucratic organizational structure can facilitate positive work attitudes among organizational members and improved productivity (Dewar & Werbel, 1979). It has been argued that having a bureaucratic structure does not necessarily lead to harmful consequences to an organization (Finlay et al., 1995). However, many empirical studies have suggested that mechanistic or bureaucratic organizations provide organizational members with little autonomy or flexibility. Agarwal (1999) also noted that higher levels of formalization result in a loss of control over work and a reduction in discretionary power because of the standardization of organizational members (Agarwal, 1999; Aiken & Hage, 1966). Thompson (1967) noted that work complexity negatively affects work attitudes among organizational members. Lawrence and Lorsch (1967) also suggested that organizations with high levels of unit differentiation and task differentiation and high work complexity have high levels of conflict and low levels of

organizational satisfaction. High centralization means a lack of autonomy and low levels of participation in decision-making. In addition, it is important to note that when employees are not involved in job-related decision-making, they are likely to have negative attitudes toward their jobs (Aiken & Hage, 1966; Dewar & Werbel, 1979). Red tape has also been known to negatively affect organizational satisfaction (Scott & Pandey 2005; Pandey & Moynihan, 2005). Therefore, in this study, formalization, complexity, centralization, and red tape were predicted to be hindrances to cultivating entrepreneurial values. On the basis of the discussion above, we established the following specific hypotheses:

H1: *In terms of organizational structure, formalization has a negative effect on innovativeness, proactiveness, and risk-taking.*

H2: *In terms of organizational structure, complexity has a negative effect on innovativeness, proactiveness, and risk-taking.*

H3: *In terms of organizational structure, centralization has a negative effect on innovativeness, proactiveness, and risk-taking.*

H4: *In terms of organizational structure, red tape will have a negative effect on innovativeness, proactiveness, and risk-taking.*

Fleurke and Hulst (2006) argued that approaches to organizational structure and situations should differ because it is hard to generalize how organizations are impacted by organizational structure. Child (1974) argued that organizational structure has different effects on organizational effectiveness depending on the degree of environmental change. In other words, an organizational structure's influence can be highly dependent on the internal or external environment surrounding the organization. This study predicted that the influence

of organizational structure would be altered by strong in-group cohesion, which is a prominent characteristic of South Korean society. On the basis of the Korean cultural context, we established the following specific hypotheses:

H5: *In the Korean cultural context, in-group collectivism has a positive effect on innovativeness, proactiveness, and risk-taking.*

H6: *In the Korean cultural context, in-group collectivism has a moderating effect between organizational structure, innovativeness, proactiveness, and risk-taking.*

RESEARCH DESIGN

Research Model

To explore effect relationships among the variables and to investigate the hypotheses, this study used the research model shown in Figure 1. The model included two types of entrepreneurial leadership (i.e., absorbing uncertainty and building commitment) as a control variable, as these were considered to have a high potential of revealing direct influences on innovativeness, proactiveness, and risk-taking in public organizations. Organizational structure, based on measurements of formalization, complexity, centralization, and red tape, was set as the independent variable. The dependent variables—innovativeness, proactiveness, and risk-taking—were set while considering in-group collectivism as a moderating variable in order to express the characteristics of public organizations in the Korean context. To verify the moderating effect of in-group collectivism, in-group collectivism and each of the four measurements of organizational structure were investigated with interaction terms.

Data Collection and Sampling

To ensure that the analysis produced practical results, this study extensively utilized data from the 2015 Public Sector Entrepreneurship Survey performed by the Global Research Network Research Team, in which three universities—Sungkyunkwan University, Yonsei University, and Zhejiang University—participated. These data were obtained in 2015 from 1,216 respondents at various public organizations in South Korea. Table 1 shows the specific demographic characteristics of the respondents. Among the respondents, there were 752 men (61.8%) and 448 women (36.8%); 85 (7.0%), 533 (43.8%), 423 (34.8%), 161 (13.4%), and 1 (0.1%) respondent(s) were in their 20s, 30s, 40s, 50s, or 60s or older, respectively. In terms of work tenure, the most respondents had worked for more than 15 years (29.8%), followed by 5–10 years (23.1%), 10–15 years (16.5%), 1 month to 3 years (16.0%), and 3–5 years (12.9%). In terms of organizational form, 517 respondents worked for government agencies (42.5%), 218 for executive agencies (17.9%), 418 for public agencies (34.4%), 37 for quasi-public agencies (3.0%), and 25 for other public agencies (2.1%). In looking at the characteristics of the respondents, it was possible to ascertain that the sample reflected a relatively even demographic composition.

[Insert Table 1 here]

Measurement of the Main Variables

Table 2 shows the questions and configuration of the study questionnaire. The questionnaire was created based on a review of previous studies and utilized a 7-point Likert scale. As a control variable, entrepreneurial leadership (i.e., absorbing uncertainty and building commitment) was based on Gupta et al. (2004). In looking at organizational

structure as an independent variable, the concepts of formalization and centralization were based on Aiken and Hage (1966), whereas the concepts of complexity and red tape were based on Hall et al. (1967) and Rainey et al. (1995), respectively. The dependent variables of innovativeness, proactiveness, and risk-taking were based on Diefenbach (2011). Lastly, in-group collectivism as a moderating variable was based on House et al. (2004).

[Insert Table 2 here]

RESEARCH RESULTS

Exploratory Factor Analysis and Reliability Analysis

To ensure the validity and reliability of the measurement tools used in this study, exploratory factor analysis and reliability analysis were conducted, as shown in Table 3. In the exploratory factor analysis, factor extraction was performed using the principal components analysis method with Varimax rotation. Reliability analysis was conducted based on Cronbach's alpha values. Regarding the analysis results, the Kaiser-Meyer-Olkin (KMO) values were 0.767 (for the control variables), 0.719 (for the independent and moderating variables), and 0.908 (for the dependent variables). These values indicated that the variables had been appropriately selected for factor analysis. Exploratory factor analysis yielded factor loadings that were all 0.6 or higher; reliability analysis yielded Cronbach's alpha values that were all over 0.6. The measurement tools for this research were thus considered sufficiently valid and trustworthy.

[Insert Table 3 here]

Correlation Analysis

To explore the correlations among the research variables, Pearson's correlation analysis was conducted, as shown in Table 4. As a control variable, entrepreneurial leadership (consisting of absorbing uncertainty and building commitment) was positively correlated with three dependent variables. Among the independent variables, formalization and complexity were positively correlated with three dependent variables; centralization was negatively correlated with innovativeness only; and red tape was negatively correlated with three dependent variables. As a moderating variable, in-group collectivism was positively correlated with three dependent variables. These results depict how significant positive and negative correlations were found between most variables.

[Insert Table 4 here]

Hierarchical Multiple Regression Analysis

This study examined how four aspects of organizational structure affect public organizations' innovativeness, proactiveness, and risk-taking. In particular, the study focused on the moderating effect of in-group collectivism between the research variables to capture the cultural characteristics of public organizations in the South Korean context. To investigate the research hypotheses, hierarchical multiple regression analysis was conducted. In the first step of this analysis, the two types of entrepreneurial leadership were included as a control variable. In the second step, formalization, complexity, centralization, and red tape were added as the main independent variables. Next, in-group collectivism was added as a moderating variable. Lastly, in order to examine moderating effects, interaction terms of each of the four aspects of organizational structure and in-group collectivism were included.

The results of the regression analysis on the relationship between organizational

structure and innovativeness are shown in Table 4. First, with regard to entrepreneurial leadership, only absorbing uncertainty had a positive impact on innovativeness. Second, with regard to organizational structure, formalization and complexity had a positive impact on innovativeness, but centralization and red tape had a negative impact on innovativeness. Third, in-group collectivism had a positive impact on innovativeness. Finally, among the interaction terms, only that consisting of centralization and in-group collectivism only had a negative impact on innovativeness. Therefore, with regard to innovativeness, H3, H4, and H5 were adopted. In addition, H6 was partially verified.

[Insert Table 5 here]

The results of the regression analysis on the relationship between organizational structure and proactiveness are shown in Table 6. First, with regard to entrepreneurial leadership, only absorbing uncertainty had a positive impact on proactiveness. Second, with regard to organizational structure, formalization and complexity had a positive impact on proactiveness, but centralization and red tape had a negative impact on proactiveness. Third, in-group collectivism had a positive impact on proactiveness. Finally, no interaction term had a significant impact on proactiveness. Therefore, with regard to proactiveness, H3, H4, and H5 were adopted.

[Insert Table 6 here]

The results of the regression analysis on relationship between organizational structure and risk-taking are shown in Table 7. First, with regard to entrepreneurial leadership, only absorbing uncertainty had a positive impact on risk-taking. Second, with

regard to organizational structure, formalization and complexity had a positive impact on risk-taking, but centralization and red tape had a negative impact on risk-taking. Third, in-group collectivism had a positive impact on risk-taking. Finally, among the interaction terms, that consisting of centralization and in-group collectivism and that consisting of centralization and in-group collectivism had negative impacts on risk-taking. Therefore, with regard to risk-taking, H3, H4, and H5 were adopted. In addition, H6 was partially verified.
[Insert Table 7 here]

CONCLUSION

This study empirically analyzed how aspects of organizational structure in South Korean public organizations impact innovativeness, proactiveness, and risk-taking. In particular, this study is unique in that it considered the moderating effect of in-group collectivism, taking into account the cohesion that is strongly evident in South Korean society. Two types of entrepreneurial leadership were used as the control variable. To test the hypotheses, we conducted exploratory factor analysis, reliability analysis, correlation analysis, and hierarchical multiple regression analysis.

First, the control variable, entrepreneurial leadership, consisted of absorbing uncertainty and building commitment, but only absorbing uncertainty had a positive impact on all three dependent variables. Hierarchical multiple regression analysis results indicated that building commitment had no significant effect. This confirmed that in South Korean public organizations, having leadership with insights or a vision of the future is essential to organizational innovation, as such a leadership is able to cultivate organizational entrepreneurial values. By contrast, having leadership that simply encourages organizational

members to positively engage in the organization cannot lead to an enterprising and creative organizational culture. Taking into account the strongly hierarchical character of human relations in South Korea, it may be asserted that a firm commitment by the head of the organization is critical for advancing ultimate reform and change in public society.

Second, among the independent variables pertaining to organizational structure, formalization and complexity were shown to have a positive effect on all three dependent variables. Hence, it was confirmed that South Korean public organizations with a high degree of organizational specification and standardization deal well with uncertainty regarding the future and are able to positively prepare for change. In addition, it was found that complex work structures and systems within an organization are helpful for transforming that organization into a more innovative and active one. Procedures and regulations are strictly controlled at South Korean public organizations; organizational members depend heavily on such guidelines to respond to various crises and take innovative actions based on applicable regulations. Research and development of a crisis management practice manual that can be used more actively is essential.

Third, among the independent variables pertaining to organizational structure, centralization and red tape were shown to have negative effects on all three dependent variables. In South Korean public organizations, decision-making authority is concentrated at higher levels; however, this concentration of authority hinders organizations from responding well to uncertain organizational environments and to change. In addition, overly formal procedures and rules can obstruct an organization from accurately predicting the future and pursuing change. It is essential to have a system where individual organizational members can operate actively and independently and receive compensation according to performance

through decentralizing decision-making and facilitating greater autonomy in decision-making. It is also essential to include sections in well-established rules and codes of conduct that will allow organizational members to operate with greater autonomy, with less of a reliance on formality.

Fourth, in-group collectivism, as a moderating variable, was shown to positively affect the three dependent variables. It was confirmed that South Korean public organizations with organizational cultures that feature strong cohesion and loyalty are more able to respond sensitively to changes in the external environment to create new opportunities. Strong cohesion among organizational members can be seen as helpful to creating new values and to facilitating change in the organization. It may be asserted that blindly introducing Western innovation techniques based on individualistic characteristics into South Korean organizations can weaken the strengths of the existing culture. It is therefore important to develop a Korean-style group and teamwork system based on an in-depth understanding of Korean consciousness and collective culture to ensure that manpower is precisely managed and allocated.

Fifth, among the interaction terms, the variable consisting of centralization and in-group collectivism, as well as that consisting of complexity and in-group collectivism, were shown to have a negative impact on innovativeness and risk-taking. This confirmed that the strong collectivism present in South Korean public organizations can amplify centralization's negative impact on innovation and risk-taking. In addition, complexity can reduce its positive impact on innovation. The influence of in-group collectivism was found in hierarchical multiple regression analysis to play a relatively large role; at South Korean public organizations, positively establishing a systematic culture of voluntary learning that can

enhance members' sense of belonging and enable the full utilization of the collectivism of such organizations is essential. In addition, it is necessary to further expand and systematize collective deliberation, consensus, and decision-making processes among managers and employees in public organizations to promote a culture of developing civil society.

This study empirically analyzed major variables by investigating various aspects of South Korean public organizations. This investigation of the influence of organizational structure and how this influence relates to the cultivation of organizational entrepreneurial values is meaningful in that it is based on a specific area—the South Korean public sector. In addition, this study uniquely examines organizational structure and organizational entrepreneurial values in the public sector from the standpoint of the in-group collectivism characteristic of Korean culture. In particular, this study is expected to contribute meaningfully to present discussions of organizational structure and cultural innovation plans in preparation for facilitating changes and reform in Korean public society.

Despite the theoretical and practical implications of this study, it has the following limitations. First, the study is limited by its dependence on only quantitative research. Future research should develop a more in-depth analysis through the supplementation of qualitative research. Second, although this study comprehensively investigated public-sector organizations, it did not distinguish between sub-organization types; elaborate and careful follow-up research in this regard is needed. In future studies, it is necessary to overcome these limitations by applying a wide range of research methods and utilizing various data.

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Figure 1. Research Model

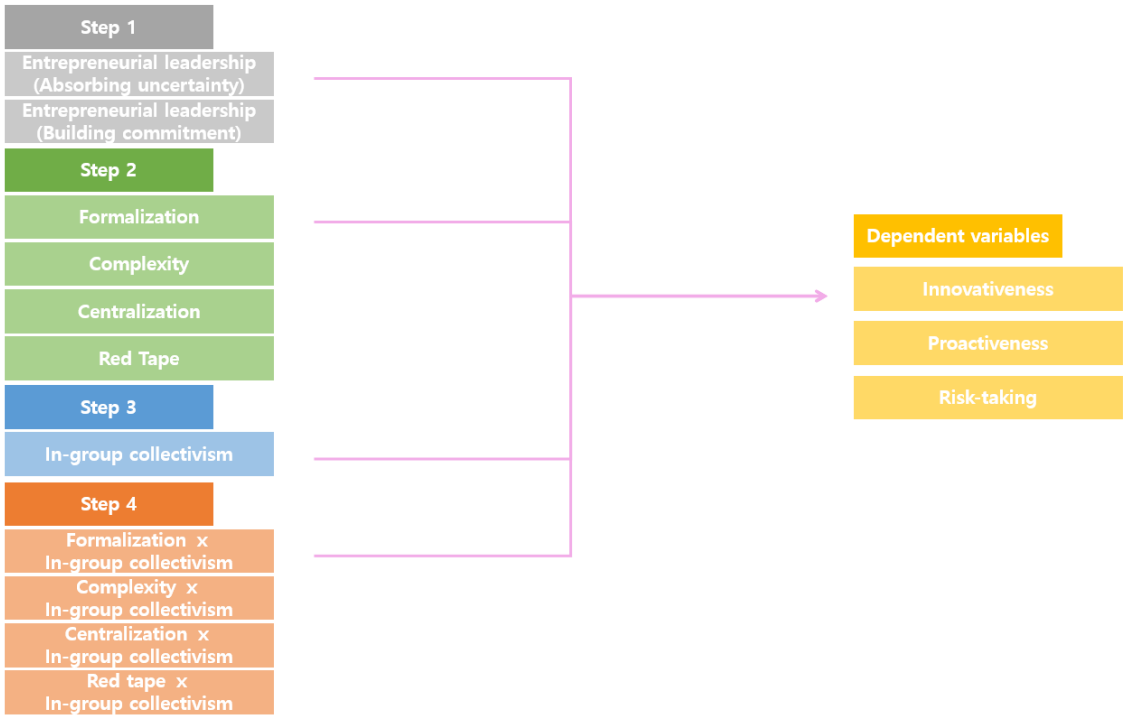

Table 1. Main Characteristics of the Sample

Variables	Dimension	Frequency	%
Gender	Male	752	61.8
	Female	448	36.8
	Missing	16	1.3
Age	20s	85	7.0
	30s	533	43.8
	40s	423	34.8
	50s	161	13.2
	60s	1	0.1
	Missing	13	1.1
Job Tenure	1 Month to 3 Years	195	16.0
	3–5 Years	157	12.9
	5–10 Years	281	23.1
	10–15 Years	201	16.5
	More than 15 Years	362	29.8
	Missing	20	1.6
Agency Type	Government Agency	517	42.5
	Executive Agency	218	17.9
	Public Agency	418	34.4
	Quasi-public Agency	37	3.0
	Other Public Agency	25	2.1
	Missing	1	0.1

Total	1,216	100.0

Table 2. Measurement of Research Variables

Variables	Items
Absorbing Uncertainty	1. Our agency's leaders present a vision for the future. 2. Our agency's leaders anticipate possible future events.
Building Commitment	1. Our agency's leaders demonstrate and impart strong positive emotions toward work. 2. Our agency's leaders are able to induce group members to work together.
Formalization	1. In our agency, employees are constantly being checked on for rule violations. 2. In our agency, employees feel as though they are constantly being watched to see that they obey all the rules.
Complexity	1. Our agency has more tasks and projects compared to others. 2. In our agency, tasks are specialized in each department.
Centralization	1. In our agency, there can be little action taken until a supervisor approves a decision. 2. In general, a person who wants to make his own decisions would be quickly discouraged in this agency. 3. In our agency, even small matters should be reported to the supervisor.
Red Tape	1. In our agency, due to rules, pay raises for managers are based more on longevity than on performance. 2. In our agency, the rules governing promotion make it hard for a

	good manager to move up faster than a poor one.
In-group Collectivism	1. In our agency, employees take pride in the accomplishments of their leader. 2. In our agency, leaders take pride in the accomplishments of their employees.
Innovativeness	1. Our agency in its entirety is open to innovations. 2. Our agency in its entirety is creative. 3. Our agency in its entirety is innovative. 4. Our agency in its entirety often implements new approaches to meet its responsibilities.
Proactiveness	1. Our agency in its entirety often reaches out to external organizations to initiate new projects. 2. Our agency in its entirety responds more actively to administrative environmental changes.
Risk-taking	1. Our agency in its entirety also implements promising, but risky projects. 2. Our agency in its entirety also implements projects with no direct effect on organizational performance. 3. Our agency in its entirety often ventures on projects that promote public interest.

Table 3. Exploratory Factor Analysis and Reliability Analysis

Variables	Items	Loadings	Communalities	Eigenvalues	Cronbach's Alpha
Absorbing	1	.879	.918	1.836	.909
Uncertainty	2	.871	.915		
Building	1	.881	.927	1.849	.920
Commitment	2	.879	.926		
Formalization	1	.859	.845	1.702	.815
	2	.892	.854		
Complexity	1	.842	.758	1.810	.710
	2	.838	.774		
Centralization	1	.700	.650	1.854	.697
	2	.772	.709		
	3	.815	.720		
Red Tape	1	.839	.751	1.551	.681
	2	.870	.776		
In-group	1	.912	.861	1.854	.844
Collectivism	2	.898	.857		
Innovativeness	1	.846	.873	3.350	.945
	2	.890	.909		
	3	.897	.927		
	4	.694	.751		
Proactiveness	1	.857	.886	1.910	.843

	2	.757	.839		
Risk-taking	1	.677	.712	2.219	.820
	2	.891	.813		
	3	.787	.769		

Table 4. Correlation Analysis

	A	B	C	D	E	F	G	H	I	J
A	1									
B	.739**	1								
C	.289**	.275**	1							
D	.336**	.255**	.442**	1						
E	.023	-.075**	.291**	.275**	1					
F	-.214**	-.241**	.008	.003	.308**	1				
G	.581**	.566**	.291**	.281**	-.026	-.213**	1			
H	.582**	.517**	.273**	.299**	-.087**	-.243**	.570**	1		
I	.509**	.442**	.349**	.371**	-.005	-.222**	.515**	.732**	1	
J	.370**	.321**	.236**	.271**	-.039	-.160**	.392**	.591**	.582**	1

A: Absorbing Uncertainty, B: Building Commitment, C: Formalization,

D: Complexity, E: Centralization, F: Red Tape, G: In-group Collectivism,

H: Innovativeness, I: Proactiveness, J: Risk-taking

*: p<.05, **: p<.01

Table 5. Hierarchical Multiple Regression Analysis (Innovativeness)

	Standardized Coefficient β	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**
A	.441***	12.828	.396***	11.532	.303***	8.910	.305***	8.988
B	.192***	5.579	.135***	3.946	.056**	1.672	.052	1.557
C			.105***	4.016	.074***	2.935	.066**	2.575
D			.118***	4.500	.097***	3.844	.094***	3.714
E			-.122***	-4.809	-.109***	-4.495	-.106***	-4.374
F			-.087***	-3.572	-.067***	-2.868	-.061***	-2.598
G					.296***	10.707	.306***	10.988
H							.025	1.026
I							-.004	-.182
J							-.047*	-1.903
K							-.032	-1.355
R^2	.356		.396		.449		.453	

A: Absorbing Uncertainty, B: Building Commitment, C: Formalization,

D: Complexity, E: Centralization, F: Red Tape, G: In-group Collectivism,

H: Formalization * In-group Collectivism, I: Complexity * In-group Collectivism,

J: Centralization * In-group Collectivism, K: Red Tape * In-group Collectivism

***: p<.10, **: p<.05, ***: p<.01

Durbin-Watson: 1.859

Table 6. Hierarchical Multiple Regression Analysis (Proactiveness)

	Standardized Coefficient β	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**
A	.399***	10.900	.309***	8.670	.227***	6.345	.227***	6.353
B	.147***	4.003	.084**	2.377	.015	.418	.013	.360
C			.173***	6.351	.145***	5.475	.141***	5.247
D			.189***	6.940	.170***	6.432	.168***	6.312
E			-.075***	-2.833	-.063**	-2.477	-.061**	-2.389
F			-.112***	-4.446	-.095***	-3.858	-.092***	-3.735
G					.261***	8.980	.267***	9.093
H							.015	.583
I							-.022	-.845
J							-.008	-.292
K							-.031	-1.254
R^2	.267		.349		.390		.392	

A: Absorbing Uncertainty, B: Building Commitment, C: Formalization,

D: Complexity, E: Centralization, F: Red Tape, G: In-group Collectivism,

H: Formalization * In-group Collectivism, I: Complexity * In-group Collectivism,

J: Centralization * In-group Collectivism, K: Red Tape * In-group Collectivism

***: p<.10, **: p<.05, ***: p<.01

Durbin-Watson: 1.843

Table 7. Hierarchical Multiple Regression Analysis (Risk-taking)

	Standardized Coefficient β	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**	**Standardized Coefficient β**	**t**
A	.293***	7.381	.232***	5.820	.163***	4.023	.163***	4.028
B	.105***	2.644	.055	1.401	-.003	-.066	-.003	-.069
C			.111***	3.654	.088***	2.928	.083***	2.747
D			.155***	5.089	.139***	4.638	.134***	4.451
E			-.095***	-3.213	-.085***	-2.938	-.083***	-2.866
F			-.067**	-2.371	-.052*	-1.876	-.050*	-1.774
G					.219***	6.623	.229***	6.892
H							.047	1.574
I							-.077***	-2.665
J							-.048**	-1.649
K							-.004	-.138
R^2	.142		.186		.215		.223	

A: Absorbing Uncertainty, B: Building Commitment, C: Formalization,

D: Complexity, E: Centralization, F: Red Tape, G: In-group Collectivism,

H: Formalization * In-group Collectivism, I: Complexity * In-group Collectivism,

J: Centralization * In-group Collectivism, K: Red Tape * In-group Collectivism

***: p<.10, **: p<.05, ***: p<.01

Durbin-Watson: 1.779