

# **Innovating the Public Sector Leadership: Entrepreneurial Leadership and Employee Outcomes in Public Sector Organizations**

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*The increasing popularity of public entrepreneurship and the incessant call for innovative and creative public organizations necessitate an entrepreneurial leadership (EL) approach that is distinct from traditional leadership models. While there have been significant advancements in public management theories of leadership, scant scholarly attention has been drawn to EL and its impact on public sector organizations. This article fills the gap by using the theoretical frameworks of path-goal, social learning, and social exchange to examine the influence of EL on public service motivation (PSM), affective commitment (AC), and organizational performance (OP). Specifically, this article investigates the mediating role of PSM through which EL influences AC and OP. The study uses data from the 2015 Public Sector Entrepreneurship Survey collected from Korean public sector employees working within government, executive, and public institution agencies. Results reveal that EL strongly affects outcome variables, particularly those related to OP. In addition, the impact and extent of EL is higher in public institutions than in executive and government agencies.*

**Keywords:** *entrepreneurial leadership, public service motivation, affective commitment, organizational performance*

Public sector organizations today have to confront a steady stream of challenges, push against the status quo, and be innovative and creative in capturing opportunities to serve the public effectively and efficiently. The government must be bold in developing proactive and innovative measures to better serve the public. The growing popularity of infusing entrepreneurship into the public sector is aimed at enhancing public service delivery and performance. However, this requires organizational innovation, whereby the government generates, develops, and adopts innovative ideas to improve the way things are done. The government's reinvention and reform efforts have focused on leadership issues, recognizing the role leaders play in creating and advancing high performance (Osborne & Gaebler, 1992). Adopting New Public Management (NPM) entrepreneurial values may necessitate motivating public managers to

lead like private sector chief executive officers (CEOs), instilling entrepreneurial behaviors (Bernier & Hafsi, 2007), and adopting an entrepreneurial mindset to manage public organizations (McGrath & MacMillan, 2000). Narrowing the focus on the concept of *entrepreneurial leadership*, among other traditional leadership models,<sup>1</sup> is a key step in this direction. Entrepreneurial leadership encompasses the vision and charisma of a dynamic transformational leadership behavior and embodies the entrepreneurial behavior of innovativeness, proactiveness, and risk-taking (Currie, Boyett, & Suhomlinova, 2005).

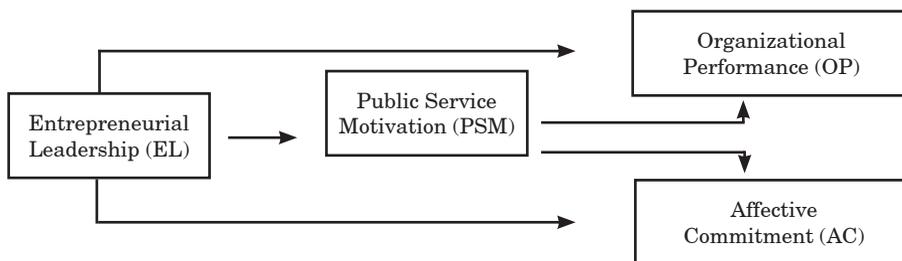
While there have been significant developments in the field of public management, research and scholarly discussion on entrepreneurial leadership and its impact on motivation and performance in public organizations have been limited. Prior studies on entrepreneurial leadership focus on identifying individual and structural issues that influence its enactment in public organizations (see Doig & Hargrove, 1987). Individual behavior and motivation are prone to environmental or organizational stimuli and supervisor influence (Park & Rainey, 2008). Consequently, determining the impact of entrepreneurial leadership on motivation, commitment, and performance may provide a clear understanding of the mechanism and effects of behavioral shifts and leadership focus. This study examines the salient mechanism through which entrepreneurial leadership might influence affective commitment and perceived organizational performance, specifically, public service motivation (PSM). It focuses on developing a theoretical model relating entrepreneurial leadership, PSM, and employee outcomes. The model was tested using the survey data collected from employees in the Korean public sector within government, executive, and public institution agencies.

In the theoretical model, this study drew inspiration mainly from path-goal and social learning theories to explain the direct relationship between entrepreneurial leadership and PSM, and how the latter may act as a mediator. The path-goal theory of leadership traces its roots from the expectancy theory of motivations and indicates that leaders enhance motivation, satisfaction, and performance among employees when they help them pursue important goals (House, 1971). House (1996) states, “path-goal theory is a dyadic theory of supervision. It is concerned with how formally appointed superiors affect the motivation and satisfaction of subordinates” (p. 325). The general idea of the path-goal model is that leaders must endeavor to let subordinates see the goal and understand how to effectively follow the path through their superior’s coaching and direction (Rainey, 2014). In this study, entrepreneurial leadership has specific leadership styles and behaviors—framing the challenge, absorbing uncertainty, path clearing, building commitment, and specifying limits (Gupta, MacMillan, & Surie, 2004)—in line with the path-goal concept. The study expects the implementation of entrepreneurial leadership to enhance PSM, affective commitment, and perceived organizational performance in public organizations.

This study also builds upon the social exchange and social learning theories (Bandura, 1978). Social exchange includes a series of interactions that may generate obligations (Cropanzano & Mitchell, 2005) on either party in the interactive relationship. Social behavior during interactions can be viewed as “an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons” (Homans, 1961, p. 13). Social exchange is not limited to individuals (e.g., employee and employer) but extends to formal organizations (Molm, 2003). In public sector organizations, this could be social exchange in the employee-organization relationship. In the exchange process, resources may include material goods, as well as non-material ones, such as the symbols of approval or prestige (Bottom et al., 2006). Exchanges are based on organizational inducements or on initiating actions that trigger reciprocal or equivalent contributions or rewarding reactions from employees (Mostafa, Gould-Williams, & Bottomley, 2015).

Social learning theory explains the relationship between organizational environments, motivation, and commitment (Paarlberg, Perry, & Hondeghem, 2008; Perry, 2000; Rainey, 2014) to capture the relationship between entrepreneurial leadership, PSM, affective commitment, and perceived organizational performance. The general view of process theories, among them the social learning theory, posits that organizational or managerial inducements influence individual motivation, commitment, and performance. Social learning theory “blends ideas from operant conditioning theory with greater recognition of internal cognitive processes such as goals and a sense of self-efficacy, or personal effectiveness” (Rainey, 2014, p. 286). Through social learning theory, the study anticipates that entrepreneurial leadership behavior, which builds commitment and frames challenges, not only boosts individuals’ morale but also reinforces their sense of belonging and importance. Thus, the study expects entrepreneurial leadership to directly influence employee outcomes and PSM to mediate the entrepreneurial leadership-employee relationship outcome, according to the theoretical lenses of path-goal, social exchange, and social learning theories. Figure 1 depicts the conceptual model of the study.

**Figure 1. Conceptual Model**



Control variables: *gender, educational attainment, and job tenure*

Accordingly, this study poses two questions. First, how is entrepreneurial leadership associated with PSM and employee outcomes (affective commitment and perceived organizational performance)? Second, does PSM mediate the relationship between EL and employee outcomes? To answer these questions, a review of related literature was undertaken to explain the relationship of the variables in the conceptual model. Path-goal and social learning theories are employed to explain the mediating role of PSM. Second, research methods and measures were detailed to describe the data items used to measure the variables. Third, research findings and results of the structural equation modeling (SEM) were presented. Lastly, implications for theory and practice and directions for future research were provided to conclude the article.

## **Theoretical Framework**

### **Entrepreneurial Leadership and Path-Goal Theory**

The concept of entrepreneurship is not new in the field of Public Administration; it was largely viewed as a part of the principles of strategic management and leadership (Currie et al., 2008). Public sector entrepreneurship is often characterized as a mechanism through which organizations and/or individuals take proactive, innovative, and risk-taking steps to pursue opportunities and obtain competitive advantage for their organizations (Covin & Slevin, 1991; Morris & Jones, 1999). The term innovativeness is defined as the “inventive process by which new things, ideas, and practices are created; it can mean the new thing, idea, or practice itself” (Goldsmith & Foxall, 2003, p. 322). Risk taking is engaging in various activities and programs, which may require incurring big debts and the allocation of huge quantities of resources (Baird & Thomas, 1985). Proactiveness is anticipating problems or issues and ensuring solutions are in place. It is flexible and adaptable to circumstance, being determined, and takes responsibility for failure (Currie et al., 2008). For the public sector, maintaining competitive advantage requires a proactive or opportunistic adoption of the best strategies to shape the environment to one’s advantage and to embrace change (Lumpkin & Dess, 2001).

Consistent with the notion of public sector entrepreneurship, in order to display entrepreneurial leadership behaviors, public managers must adopt innovative, proactive, and risk-taking behaviors (Currie et al., 2003) and be capable of influencing others to find and exploit opportunities with the scarce resources available (Ireland, Hitt, & Sirmon, 2003). In the US National Performance Review of 1993, Al Gore (1993) outlined the principles of managerial entrepreneurship that are critical for entrepreneurial leaders, emphasizing organizational reforms (reduction of red tape, employee empowerment, and cost-efficient performance) and citizen or customer satisfaction. Entrepreneurial leaders are expected to set clear organizational goals, identify opportunities,

empower subordinates, promote strong organizational bonds, and develop an effective and efficient human resource system (Cunningham & Lischeron, 1991). Entrepreneurial leadership requires passion, vision, the ability to inspire others, and the capability of sustaining innovation in a continuously changing environment (Surie & Ashley, 2008). Entrepreneurial leaders stimulate and implement change, not as a mere adaptive response to alter existing organizational norms or practices, but to expand beyond status quo and build proactive and creative organizations. Entrepreneurial efforts must address organizational issues that hinder the capacity of individuals and/or organizations to identify opportunities to better serve citizens innovatively and creatively. Gupta et al., (2004) also suggests that the components of transformational, team-oriented, and value-based leadership are compatible with entrepreneurial leadership to face the challenges of implementing entrepreneurship. Entrepreneurial challenges can only be confronted when leaders can: “(1) extract exceptional commitment and effort from organizational stakeholders, (2) convince them that they can accomplish goals, (3) articulate a compelling organizational vision, (4) promise their effort will lead to extraordinary outcomes, and (5) persevere in the face of environmental change” (Gupta et al., 2004, p. 246).

Entrepreneurial leadership recognizes the critical role of individuals in the entrepreneurial process and emphasizes leadership in action, rather than characteristics or personality (Renko et al., 2015). Since most organizational innovation and changes are formed by the interaction between entrepreneurial leaders and subordinates, leadership style can affect the entrepreneurial process in several ways. Essentially, when leaders embark on establishing entrepreneurship, they confront two interrelated challenges in their attempt to communicate organizational goals and vision, and convey the ability of subordinates to achieve it: (1) scenario enactment, which requires framing a challenge, absorbing uncertainty, and path clearing; and (2) cast enactment, which includes building commitment and specifying limits (Gupta et al., 2004; Ireland & Hitt, 1999).

Path-goal theory (House, 1971) has been used as a model to ascertain what employees need and want to perform their jobs. It represents a dyadic relationship between leaders and subordinates wherein leaders demonstrate directive path-goal clarifying behavior, supportive behavior, participative leader behavior, and achievement-oriented behavior (House & Mitchell, 1974). The reformulated path-goal theory broadens the scope to include the effects of leaders' path-goal behaviors on subordinates' ability to perform better, as well as their influence on individual performance (House, 1996). According to House (1996), the essence of the reformulated theory is the “meta proposition that leaders, to be effective, engage in behaviors that complement subordinate's environments and abilities in a manner that compensates for deficiencies and is instrumental to subordinate satisfaction and individual and work unit performance” (p. 348).

When leaders enact entrepreneurial leadership behavior, they are expected to portray charismatic role modeling of transformational leadership—inspire, address emotional needs, and intellectually stimulate subordinates—to engage with creativity and demonstrate entrepreneurial behaviors in the organization. In this instance, leaders demonstrate clarifying, supportive, and achievement-oriented behaviors that may draw subordinates' commitment to leadership and organizational entrepreneurial goals (Gupta et al., 2004; Renko et al., 2015). The path-goal theory encompasses leadership behavioral antecedents that are necessary and important in achieving success in entrepreneurial leadership. For example, in value-based leader behavior (House & Aditya, 1997), leaders specify a captivating organizational goal or mission, display confidence in achieving them, and act as models of commitment to the mission. Besides acting as role models, entrepreneurial leaders facilitate interaction and communication, expedite work, elicit team effort and active participation from subordinates, and encourage subordinates to work toward entrepreneurial goals (Ireland et al., 2003).

### **Influence of Entrepreneurial Leadership on Employee Outcomes**

According to path-goal theory, employees are likely to respond with positive attitudes—for example, affective commitment—and higher organizational performance when leaders display entrepreneurial leadership. Prior studies found that there is a positive relationship between entrepreneurial leadership and employee and organization outcomes. However, these studies are mostly done in the context of the private sector (see, for example, Engelen et al., 2015; Huang, Ding, & Chen, 2014).

Affective commitment refers to the individual's "emotional attachment to the organization" (Meyer & Allen, 1991, p. 67) and their staying on in the organization because they want to, not because they are obliged to or have to (Allen & Meyer, 1990). Previous studies suggest that affective commitment portrays the bond between employee and organization (see, for example, Kehoe & Wright, 2013), closely associated with organizational commitment because it encompasses internalization of organizational goals and loyalty to the organization (Avolio, Bass, Walumbwa, & Zhu, 2004), and linked with organizational performance (Messersmith et al., 2011). Entrepreneurial leadership, with its charismatic/transformational leadership behavior, influences affective commitment by encouraging subordinates to be creative, involving them in the decisionmaking process, and recognizing their need to develop their individual potential (Gupta et al., 2004). Similarly, entrepreneurial leadership may influence subordinates' affective commitment from the perspective of social exchange theory. The relationship between entrepreneurial leadership and affective commitment is likely to be influenced by social exchange, which is based on mutual affection, trust, and reciprocity. Thus, when entrepreneurial leaders inspire, stimulate learning, and acknowledge subordinates' personal needs, the social exchange is

likely to yield a high-quality leader-subordinate relationship, which, in turn, is likely to influence subordinates to reciprocate with high affective commitment.

In the same vein, perceived organizational performance is a subjective and complex socially constructed phenomenon that is hard to capture in the public sector (Brewer & Selden, 2000). According to Selden and Sowa (2004), organizational performance includes two dimensions: (1) management, which refers to “organizational and management characteristics—the things which describe an organization and its capabilities and the actions of managers within it”; and (2) program, which “refers to the specific service or intervention provided by the organization” (p. 398). The former is of great interest to this study because it deals with the outcomes of management systems. Organizations of all types need leadership that is capable of encouraging organizational and individual creativity, responding quickly to environmental challenges, and enhancing organizational performance (Vardiman, Houghton, & Jinkerson, 2006). Leadership is a well-entrenched social construct that influences OP (Kuhnert, 2001). The study draws on the path-goal theory by establishing the proximity of entrepreneurial leadership and perceived organizational performance. When entrepreneurial leaders provide specific directions and expectations that are relevant to the enactments of scenario and cast, subordinates are stimulated to change their beliefs, attitudes, and/or behaviors towards better performance (Jacobsen & Andersen, 2015). Also, from the perspective of social learning theory, when leaders demonstrate and continuously interact with subordinates through entrepreneurial leadership behaviors, subordinates are most likely to learn entrepreneurial processes, mechanisms, and behaviors by modeling. This reciprocal determinism supports the claim that individual and/or organizational outcomes are products of interaction between factors (for example, entrepreneurial leadership behaviors and processes) (Bandura, 1974). Thus, this study hypothesizes the following:

*Hypothesis 1:* Entrepreneurial leadership has a positive direct effect on (1) affective commitment and (2) perceived organizational performance.

### **Indirect Effect: The Link between Entrepreneurial Leadership, Public Service Motivation, and Employee Outcomes**

PSM revived the essence of public service ethics and public duty (Perry & Wise, 1990) and is reflective of an intrinsic work motivation in the public sector (Park & Word, 2012). PSM is defined as “(an) individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” (Perry & Wise, 1990, p. 368). It is an important public administration concept because it explains an individual’s motivation to serve others (Baarspul & Wilderom, 2011). As a concept, PSM captures the beliefs, values, and attitudes that manifest greater concern for the interest of the organization and the public

(Perry, 1996). PSM is a relatively stable variable that may gradually change (Wright & Grant, 2010) depending on the individual's work experience (Mostafa et al., 2015). However, others argue that it is a changeable aspect or a trait that can be influenced by organizational and/or leadership practices (Christensen, Paarlberg, & Perry, 2017).

Linking entrepreneurial leadership and PSM, the study refers to path-goal and social exchange theories. The proximity of EL to transformational, value-based, and team-oriented leadership (Gupta et al., 2004) makes it an important antecedent of PSM. On the basis of path-goal theory, an entrepreneurial leader, exhibiting directive, supportive, achievement-oriented, and participative behaviors, may increase employee PSM. Recent works linking leadership and PSM reveal the reinforcing and augmenting capacity of organizational leaders on the influence of PSM related on values and performance goals of organizations (Park & Rainey, 2008). When leaders apply entrepreneurial actions to scenario and cast enactments, it will most likely have a positive influence on PSM because employees gain an insightful understanding of their goals and roles, experience teamwork, participate in decisionmaking, and display creativity.

Likewise, from a social exchange theory perspective, this study expects that the enactment of entrepreneurial leadership will encourage employees to reciprocate with higher pro-social behavior and be more passionate in achieving entrepreneurial goals as evidenced by strong and high levels of PSM. This means that a vibrant exercise and enactment of entrepreneurial leadership, in light of neo-charismatic, value-based, team-oriented leadership behaviors, may stimulate a positive social exchange process. In turn, positive leadership behaviors encourage positive reciprocal exchange (Gould-Williams & Davies, 2005; Ugaddan & Park, 2017).

*Hypothesis 2:* Entrepreneurial leadership has a positive direct effect on PSM.

One of the most important factors that influence organizational commitment, OP, and other organizational variables is PSM. Various studies propose that PSM has a positive influence on organizational factors such as satisfaction (Bright, 2008), commitment of public sector employees (Park & Word, 2012), job performance (Alonso & Lewis, 2001), and public sector organizational performance (Bellé, 2013; Kim, 2005). When employees have all the mechanisms to express and exercise PSM in organizations, it may encourage them to integrate organizational goals and missions as valuable personal goals. Consistent with this view, employees may awaken their own sense of identity or self-concept (Weiss & Piderit, 1999). If organizations eliminate obstacles to the active enactment of PSM and create a mechanism for effective expression of pro-social motivation, PSM may yield positive organizational and individual outcomes like commitment to better organizational performance.

This study assumes that when public sector organizations have mechanisms that encourage the expression of pro-social motivation, they reinforce individuals' self-concept or identity. Thus, employees will be more enthusiastic and passionate in serving the public, have a greater desire to fulfill organizational goals and missions, and demonstrate higher affective commitment and organizational performance. Entrepreneurial leadership is most likely to promote this kind of organizational climate, as entrepreneurial leaders instill confidence and communicate goals, missions, paths, and other organizational issues. Thus, the study expects that entrepreneurial leadership may indirectly affect affective commitment and organizational performance via PSM. Based on the foregoing, the study proposes the following hypotheses:

*Hypothesis 3:* Public service motivation has a positive direct effect on (1) affective commitment and (2) perceived organizational performance.

*Hypothesis 4:* Public service motivation partially mediates the positive relationship between entrepreneurial leadership and (1) affective commitment and (2) perceived organizational performance.

## Method

### Data and Instrumentation

The study employs the 2015 Public Sector Entrepreneurship Survey (PSES),<sup>2</sup> a government-wide survey that asks Korean employees about entrepreneurship in the public sector, social and organizational values, organizational culture, structure, leadership, and organizational performance, among other things. Specifically, the survey inquires about employees' experiences of the extent of entrepreneurial and Confucian values in their organizations, as well as organizational culture, PSM, and affective commitment. The PSES was administered in March to May 2015 to 1,500 Korean public officials from 37 different government, executive, and public agencies. The study employed a quota-sampling technique that allows the inclusion of respondents from subgroups based on demographic information, such as age, gender, length of service, and job classification. Respondents were contacted via email and the survey questionnaire was personally delivered to increase response rates. The survey was able to retrieve 1,215 valid samples rendering a response rate of 81%.

The government agencies, executive agencies, and public institutions were chosen because they potentially differ in the extent of entrepreneurship, and in employees' PSM, affective commitment, and organizational performance. In the Korean government context, government agencies refer to central administrative agencies (also known as *Bu* [ministry], *Cheo* [ministry], or *Cheong* [administration or agency]) under the Office of the President and the Prime Minister (see also

the Korean Government Organization Act). Executive agencies, also known as responsible administrative agencies, are affiliated agencies of a national agency or central administrative agency established by law through a presidential decree. Executive agencies can be classified as survey and research, education and training, culture, medical care, facility management, and other types prescribed by presidential decree. Public institutions<sup>3</sup> include market-oriented public corporations, quasi-governmental institutions, and non-classified public institutions.

Within public organizations, government and/or executive agencies are expected to initiate innovative approaches in engaging citizens and delivery of public services. Public institutions, which function as both public and private organizations, have strong entrepreneurial orientation due to the nature of their functions that include earning profits. A total of 513 respondents from government agencies successfully completed the survey, of which 61.8% were male, and 38.2% were female. Of the 217 respondents from executive agencies, 54.4% were male and 45.6% were female. In public institutions, of the 477 successfully surveyed employees, 68.1% were male, and 31.9% female. Most respondents from the three agencies have an average length of service of five to ten years.

Missing data were treated using the expectation-maximization technique, an iterative method of inputting single values that produce the most probable value of the missing data (Gold & Bentler, 2000). This approach allows the retention of a valuable number of samples that contain a significant amount of data that is relevant to the analysis. If listwise or pairwise techniques were used, these cases might have been dropped from the analysis because of missing data (Roth, 1994). See Table 1 for detailed characteristics of the sample.

**Table 1: Sample Characteristics**

Content	Dimension	Frequency (n=1215, Rate %)
Gender	Male	752 (61.9)
	Female	448 (36.9)
	<i>Missing values</i>	15 (1.2)
Age	20-29 y/o	85 (7.0)
	30-39 y/o	533 (43.8)
	40-49 y/o	423 (34.8)
	50-59 y/o	161 (13.2)
	60 y/o and above	1 (0.1)
	<i>Missing values</i>	13 (1.1)

Educational Attainment	High school or less	61 (5.0)
	College (2 to 3 years)	92 (7.6)
	Bachelor's degree	776 (63.8)
	Master's degree	233 (19.2)
	Doctorate	38 (3.1)

## Measures

The variables were all measured using seven-point Likert-type scale (1= strongly disagree to 7 = strongly agree). They were coded in reverse so that a higher rating indicates a higher level of agreement with the question (7= strongly agree to 1 = strongly disagree).

*Entrepreneurial leadership:* The measures for entrepreneurial leadership were derived from Gupta et al. (2004), which cover leadership behaviors like framing the challenge, absorbing uncertainty, path clearing, building commitment, and specifying limits. Sample items include “leader in my agency anticipates possible future” and “leader in my agency instills others with confidence by showing confidence in them.” Cronbach’s alpha for the scale was .961 with factor loadings from .694 to .953.

*Public service motivation:* Perry (1996) developed several items grouped into four dimensions to measure PSM: (1) rational PSM, (2) norm-based PSM, (3) affective (self-sacrifice) PSM, and (4) affective (compassion) PSM. The Western framework of PSM may not be suitable in the Korean context due to unsuitable wording, for instance, “Politics is a dirty word” (Kim, 2009). Thus, in this study, this item was rephrased into “I have a negative perception on politics.” Cronbach’s alpha for the three-item rational PSM scale was .79; three-item norm-based PSM scale was .83; four-item affective (self-sacrifice) PSM scale was .87; and three-item affective (compassion) PSM scale was .76. To determine the PSM of the respondents, a high-order reflective measure with the four dimensions of PSM was employed.

*Affective commitment:* The measures for organizational commitment were derived from Allen and Meyer (1990) who developed several items for affective commitment. Some items were reversed (recoded, R) during the statistical analysis. A sample item is “I do not feel ‘emotionally attached’ to this agency.” Cronbach’s alpha for the scale was .92.

*Perceived organizational performance:* The study used the items developed by Brewer and Selden (2000) to measure organizational performance. Sample items include “In the past two years, the productivity of my work unit has improved” and “The work performed by my work unit provide the public a worthwhile return on their tax.” Cronbach’s alpha for the scale was .81.

*Control variables:* To exclude alternative explanations, the study controlled for the effects of demographic characteristics of respondents and their perception on the characteristics of the leader that could be related to the outcome variables. The effects of some demographic factors, including gender, educational attainment, and length of service was controlled on affective commitment and organizational performance (Messersmith et al., 2011). Gender is recorded as “1” for male respondents and “0” for female respondents. Educational attainment is classified into high school or less, college level, bachelor’s degree, master’s degree, and doctorate. Length of service is grouped into 1 month-3 years, 3-5 years, 6-10 years, 11-15 years, and more than 15 years. The results were consistent with or without the control variables.

## **Analysis**

The study employed exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to establish the reliability and validity of the latent constructs, and structural equation modeling (SEM) to test the hypothesized model. Although they are widely used in psychological research, these techniques are relatively new to public administration research (Tummers & Knies, 2013).

EFA was employed to understand the structure of the latent variables and to bring variables that are collinear (Field, 2013). The EFA seeks to establish parsimony by obtaining clusters of variables that are highly correlated with each other and underlying dimensions that are present in a dataset (Field, 2013; Kline, 2005). The maximum-likelihood method with promax rotation technique was used to identify explanatory constructs from the data. The results extracted seven identifiable and distinct latent variables for entrepreneurial leadership, the four dimensions of PSM, affective commitment, and perceived organizational performance. The factor loadings ranged from .46 to .97 with KMO [Kaiser-Meyer-Olkin] measure of sampling adequacy equivalent to .93 (Kaiser, 1975, values in the 0.90s are marvelous) and significant at  $p < .001$ . Due to cross-loadings and very low factor loadings, several items for entrepreneurial leadership, PSM, and affective commitment were excluded in the analysis. Table 2 shows the factor structure of key constructs.

CFA was used to test and confirm the factor structure of the latent variables based on a priori measurement models (Kline, 2005). CFA is capable of assessing psychometric properties for accepting models, which may strengthen reliability and validity of factors. Results of CFA (i.e., covariance between factors, indicator loadings, indicator’s measurement error) may indicate convergent and discriminant validity of constructs (Kline, 2005).

**Table 2. Factor Structure of Key Constructs**

	Factor						
	1	2	3	4	5	6	7
EntreLead11	.965						
EntreLead13	.940						
EntreLead10	.912						
EntreLead8	.886						
EntreLead14	.851						
EntreLead6	.836						
EntreLead12	.800						
EntreLead5	.717						
EntreLead15	.712						
EntreLead3	.463						
SS_PSM2		.850					
SS_PSM4		.809					
SS_PSM3		.726					
SS_PSM1		.695					
Com_PSM2			.796				
Com_PSM3			.707				
Com_PSM1			.667				
RationalPSM1				.817			
RationalPSM3				.803			
RationalPSM2				.622			
Affective3r_1					.948		
Affective2r_1					.867		
OrgPer3						.827	
OrgPer2						.717	
OrgPer1						.589	
NormBPSM3							.931
NormBPSM2							.593
NormBPSM4							.561

Note: Extraction method: Maximum Likelihood. Rotation method: Promax with Kaiser Normalization.

The results of CFA confirm the measurement model that includes three first-order factors (EL, AC, and OP) and one second-order factor (PSM). The measurement model exhibited acceptable CMIN/Df = 3.77 (CMIN/Df > .3 is considered acceptable), excellent CFI (comparative fit index) = .96 (CFI > .95 is considered excellent), excellent SRMR (standardized root mean square residual)

= .05 (SRMR < .08 is considered excellent), excellent RMSEA (root mean square error approximation) = .05 (RMSEA < .06 is considered excellent), excellent, PClose = .88 (PClose > .05 is considered excellent) (Hu & Bentler, 1999), with all significant standardized loadings at  $p < .001$ . For latent constructs, the extracted CR (composite reliability) exceeded .70 (i.e., entrepreneurial leadership = .96, PSM = .81, affective commitment = .92, and perceived organizational performance = .82) and AVE (average variance extracted) exceeded .50 (i.e., entrepreneurial leadership = .71, PSM = .60, affective commitment = .85, and perceived organizational performance = .61) indicating high internal consistency. The discriminant validity was assessed by estimating the square root of the corresponding AVE of each construct (i.e., entrepreneurial leadership = .84, PSM = .77, affective commitment = .92, and perceived organizational performance = .78). The values exceeded the corresponding interconstruct correlations, which achieved discriminant validity of constructs (Fornell & Larcker, 1981).

SEM was performed to test the hypotheses. SEM allows an examination of causal relation among variables in a path model—or in some cases where one variable is denoted a mediating variable (functions both as an independent and dependent variable). Other empirical techniques, like regression analysis, do not allow a simultaneous testing of causal relationships identified in a hypothesized model. In the study, PSM was positioned at the center of the model, theorizing that it can be explained by entrepreneurial leadership and can serve as a motivational factor that may explain the relationship between entrepreneurial leadership and outcome variables, such as affective commitment and perceived organizational performance.

The SEM analysis was performed through AMOS (analysis of moment structures). AMOS is capable of determining whether the model fits the data well or to switch to possible optional paths that may better fit the model to the data (Kline, 2005). AMOS software allows multigroup analysis and is capable of generating bootstrap estimates of standard error and confidence intervals of direct and indirect parameter estimates. The study seeks to determine the direct and the indirect effects of independent variables on outcome variables.

## Results

### Descriptive Statistics

The mean, standard deviation, and correlations of the variables are reflected in Table 3. The respondents reported relatively high perception towards entrepreneurial leadership, organizational performance, affective commitment, and PSM. The descriptive statistics of variables shows a significant difference between the three organizational categories (i.e., government agencies, executive agencies, and public institutions). The results reveal that employees from public

institutions reported high perception of entrepreneurial leadership, PSM, affective commitment, and organizational performance compared to employees in government and executive agencies. See Table 4 for the means and standard deviations of constructs in each group in the study.

**Table 3. Means, Standard Deviations, and Correlations Among Constructs**

	M	SD	1	2	3	4	5	6	7	8
1) Entrepreneurial leadership (EL)	4.90	1.21	1							
2) Public service motivation (PSM)	4.19	.62	.32**	1						
3) Perceived organizational performance (POP)	4.67	.93	.57**	.35**	1					
4) Organizational commitment (OC)	4.38	1.18	.37**	.18**	.40**	1				
5) Gender	1.37	.48	-.08**	-0.02	-.12**	-0.02	1			
6) Education	3.08	.77	-0.01	.06*	.08**	.10**	-0.02	1		
7) Length of service	3.31	1.43	.11**	.21**	.14**	.15**	-.07**	-0.02	1	
8) Trustful leader	4.23	1.12	.68**	.27**	.52**	.33**	-.11**	-0.03	0.03	1

Note. \*Correlation is significant at the 0.001 level (1-tailed). \*\*Correlation is significant at the 0.05 level (1-tailed).

**Table 4. Means and Standard Deviation Constructs in Each Group**

Agency	EL	PSM	AC	OP
Government agency	M (SD)	M (SD)	M (SD)	M (SD)
Executive agency	4.87 (1.14)	4.11 (.61)	4.27 (1.14)	4.56 (.87)
Public institution	4.55 (1.29)	4.23 (.62)	4.37 (1.16)	4.82 (.98)
Total	4.90 (1.21)	4.19 (.62)	4.38 (1.18)	4.67 (.93)
ANOVA (F)	15.17***	6.93***	4.66**	20.05***

**SEM Results**

The results of SEM are presented in Table 5 reporting the regression estimates, standard errors, and the fit indices for the model. Overall model achieved exhibited acceptable CMIN/Df = 4.23, acceptable CFI = .94, excellent RMSEA = .05, and excellent PClose = .11. The results reveal that entrepreneurial

leadership has a direct effect on affective commitment ( $B = .19, p < .001$ ), perceived organizational performance ( $B = .30, p < .001$ ), and PSM ( $B = .47, p < .001$ ), thus supporting Hypotheses 1 and 2. The analysis also supports the direct effect of PSM on affective commitment ( $B = .23, p < .001$ ) and perceived organizational performance ( $B = .36, p < .001$ ), confirming Hypothesis 3. The results suggest that the relationship between entrepreneurial leadership and outcome variables, especially perceived organizational performance, is stronger than with the effects from PSM, although there was a relatively small difference with regard to the effect on affective commitment. The study also tested the indirect effects of entrepreneurial leadership through PSM on employee outcomes. The results of the bootstrap analysis in AMOS reveal that entrepreneurial leadership indirectly affects affective commitment ( $B = .11, p < .001$ ) and perceived organizational performance ( $B = .17, p < .001$ ) via PSM. These findings suggest partial mediation that supports Hypothesis 4.

The levels of explained variance in the overall measurement model are relatively high. For example, the model explains 50% of the variance in perceived organizational performance while 22% in affective commitment. The variance is attributable to the direct and mediated effects of entrepreneurial leadership and significant control variables (gender, education, and length of service).

The results of the additional SEM analyses that tested the model in the three categories of Korean government organizations (government agencies, executive agencies, and public institutions) reveal interesting findings. The three models achieved acceptable to excellent fit indices suggesting a robust model: government agencies (CMIN/Df = 2.90, CFI = .93, SRMR = .11, RMSEA = .03, PClose = 1.00), executive agencies (CMIN/Df = 2.07, CFI = .90, SRMR = .12, RMSEA = .07, PClose = .00), and public institutions (CMIN/Df = 2.66, CFI = .92, SRMR = .12, RMSEA = .06, PClose = .00). The paths indicated in the hypothesized model were all significant in the three government organizations. In public institutions, the effect of EL on the three outcome variables are stronger compared to executive and government agencies. For the indirect effects, the analysis suggests that the relationship between EL and AC, and OP, was partially mediated by PSM in the government and executive agencies. In the public institutions, the indirect path for OP is significant while not significant towards AC. These findings suggest a non-mediating role of PSM in the relationship between EL and AC in the public institutions.

**Table 5. Estimated Parameters for Direct and Indirect Effects Model**

				Total	Government Agency	Executive Agency	Public Institution	
				B	B	M (S.E.)	M (S.E.)	
EL	→	PSM		.47**	.53***	.23**	.56***	
EL	→	AC		.19**	.20***	.11	.25***	
EL	→	POP		.30**	.25***	.33***	.33***	
PSM	→	AC		.23**	.16*	.42***	.15*	
PSM	→	POP		.36***	.35***	.42***	.27***	
EL	→	PSM	→	AC	.36***	.06*	.10*	.08
EL	→	PSM	→	POP	.11***	.16***	.10*	.15**
Gender	→	AC		.02	-.07	.18**	.05	
Gender	→	POP		-.07**	-.05	.01	-.11**	
Education	→	AC		.09***	.07	.11	.05	
Education	→	POP		.08**	.02**	.21***	.06	
LOS	→	AC		.10***	.09*	.06	.17	
LOS	→	POP		.06**	.14**	.09	.04***	
TL	→	AC		.13***	.09	.20**	.16**	
TL	→	POP		.23***	.16***	.28***	.32***	
R <sup>2</sup> PSM				.22	.21	.05	.32	
R <sup>2</sup> AC				.22	.16	.34	.26	
R <sup>2</sup> OP				.54	.42	.64	.61	
CMIN/DF				4.23	2.90	2.07	2.66	
CFI				.94	.93	.90	.92	
SRMR				.11	.11	.12	.12	
RMSEA				.05	.03	.07	.06	
PClose				.11	1.00	.00	.00	

Notes: Statistical significance of beta values was same with and without control variables. p<0.05, \*\*p<0.01, \*\*\*p<0.001. Standardized coefficients are presented. EL = entrepreneurial leadership; PSM = public service motivation; AC = affective commitment; POP = perceived organizational performance; LOS = length of service; TL = trustful leader.

**Discussion**

The study contributes to the emerging scholarly discussion on public sector entrepreneurial leadership in two ways. First, the study developed and empirically tested a theoretical model, in the context of public sector organizations,

that provides a wide range of theoretical and practical implications. Second, it highlighted the consequences of entrepreneurial leadership and the importance of understanding the mechanisms through which entrepreneurial leadership may influence employee motivation and behavior as well as their performance in the organization. In addition, the study examined the theoretical model and the hypothesized relationships across organizational categories in the public sector (government agencies, executive agencies, and public institutions).

The results suggest that entrepreneurial leadership is a strong predictor of perceived organizational performance, PSM, and affective commitment, respectively. These are in line with the theoretical expectations that when leaders engage in path-goal work and/or undertake social learning approaches while dealing with subordinates, employees demonstrate higher motivation and performance. This may reflect the prevalence of highly motivated, committed, and performing employees in public sector organizations when leaders enact entrepreneurial leadership behaviors such as giving specific and clear organizational directions and expectations, being supportive and building commitment, laying emphasis on achievements, opening the lines of communication, and engaging subordinates in healthy discussions on the goals of the organization (Gupta et al., 2004; House & Mitchell, 1974; House, 1996). In the results, the relationship between entrepreneurial leadership and perceived organizational performance is stronger. Path-goal and social learning theories provide logical explanations to this finding. When leaders articulate goals and pave the way toward the achievement of such goals, they are already communicating specific goals that stimulate employees to prioritize and set performance expectations that allow them to focus and yield positive performance evaluations (this can also be viewed through goal-setting and control theories). Subsequently, when leaders exhibit entrepreneurial leadership behaviors, they may wittingly or unwittingly set an example for subordinates to engage in similar behaviors or conform to the behaviors depicted by the leader. The findings also show that PSM partially mediates the relationship between entrepreneurial leadership, affective commitment, and perceived organizational performance. In other words, when entrepreneurial leadership is high, PSM will also be high, which in turn will influence employee outcomes positively. There is growing literature on public entrepreneurship, the current research suggests that entrepreneurial leadership behaviors can have a positive influence on employee motivation, commitment, and organizational performance.

The findings show that the extent of direct influence and indirect effect through PSM varies in government agencies, executive agencies, and public institutions. The effect of entrepreneurial leadership on PSM, AC, and OP is higher in public institutions. We expected public institutions to score highly on each employee outcome, as their mandate as government-owned and controlled entities is to produce goods and services for profit. Thus, they are used to encouraging entrepreneurial values in the organization. This finding

would fit the descriptive statistics that public institutions display higher levels of entrepreneurial leadership than the other two agencies. Nevertheless, the results also reveal that the enactment of entrepreneurial leadership yields a positive influence on PSM, commitment, and performance of employees in government and executive agencies. In other words, behavioral shift or enactment of entrepreneurial leadership generates significant and positive impact on employee behavior across public sector organizations. When it comes to indirect effect, both in government agencies and public institutions, entrepreneurial leadership is only directly related with affective commitment and PSM does not play a mediating role. This suggests that, in government agencies and public institutions, regardless of the degree of PSM, employees display commitment in their organization that is possibly explained by entrepreneurial leadership behavior. Across agencies, PSM partially mediates the relationship between entrepreneurial leadership and perceived organizational performance. This means that the impact of entrepreneurial leadership on perceived organizational performance can be explained through PSM, which is therefore an important predictor.

### **Conclusion**

The study emphasizes the important determination of the relationship of entrepreneurial leadership, an NPM-based leadership behavior, on employee motivation and behaviors that are relevant in public sector organizations. The emerging idea of entrepreneurship is a welcome development in public management to transform public sector organizations (Pollitt & Bouckaert, 2004). Entrepreneurial behaviors in the organization allow innovativeness, risk taking, and proactiveness to flow in order to capture opportunities for public value. As Mitchell Weiss (2014) puts it, “government entrepreneur is not an oxymoron.” It is a reality and a necessity for public sector organizations to function more efficiently and deliver better services to the public. The research findings highlight the positive and strong influence of entrepreneurial leadership within organizations, and suggest the need to produce more public entrepreneurs spread across public sector organizations.

First, the implication is that public human resource managers may design effective recruitment systems and implement guidelines for the lateral entry of competent and talented public leaders from the private sector. For example, the open position system for senior civil servants may provide an opportunity for private sector CEOs that are capable of infusing entrepreneurial behavior to apply in the public service. In addition, creating and developing public entrepreneurial leaders require human resource development interventions, such as a continuous entrepreneurial leadership development program. The training and education program must focus on addressing the gap in entrepreneurial knowledge, skills, and abilities. Leadership development program objectives

could include harnessing government analysts and strategists, innovators, creators of new ideas, and strategic thinkers. The training may also be designed to enhance leadership qualities in managing people, develop skill in building innovative public organizations, handling risk-taking challenges, and managing risk. Various forms of interventions can be adopted. For instance, a leadership training exchange program between government and business may be explored to foster the development of public entrepreneurial leaders.

Second, public entrepreneurial leaders may stimulate PSM and employee outcomes within organizations by harnessing individual creativity and autonomy. The study provided some insights on entrepreneurial leadership via the path-goal model that helping employees understand organizational goals and roles, encouraging teamwork and participatory decisionmaking, and fostering creativity might enhance employee's PSM. Other studies also suggest that communicating with the employees their central role in achieving organizational goals and contribution to society can have positive effect on employee's PSM (Moynihan & Pandey, 2007).

Lastly, the results of the study may provide important implications in practice and in theory. Results must be discussed within the bounds of its methodological limitations, which provide space for future research. The study used cross-sectional data wherein speculative direction of causality is made from entrepreneurial leadership to employee outcomes. Also, the data is prone to common-method or social desirability bias, which may cause concentrated ranges, leading to over- or underestimates of effect size. Employing objective, longitudinal, and multi-source data may lessen unsubstantiated and subjective interpretation of results. Also, the data employed in the study were collected from Korean public sector organizations, limiting the generalizability of the results and findings. Nevertheless, extending the study to various cross-cultural and cross-country contexts may yield interesting findings that may find relevance and consistency in view of the results of the extant research. Lastly, the SEM analysis, employing individual-level data perceptions, may not avoid variance bias and atomistic fallacy. Future studies should employ multilevel data based on hierarchical linear models that are embedded at both the individual and organizational levels.

### **End Notes**

<sup>1</sup> Traditional leadership models include contingency, transformational, transactional, servant, and other theories of leadership. In a fast-changing organizational environment, there is a need to explore leadership models capable of exploiting opportunities (see also Harrison, 2017) and to further enhance organizational performance. NPM-driven leadership models have to be explored and analyzed to advance business-like leadership behaviors such as innovativeness, risk-taking, and proactiveness.

<sup>2</sup> The 2015 Public Sector Entrepreneurial Survey is conducted to explore the important determinants of entrepreneurial values in the Korean and Chinese public sector. The project is funded under the Global Research Network (GRN) in Korea initiated by Sungkyunkwan University, Yonsei University in Korea, and Zhejiang University in China.

<sup>3</sup> As of September 2019, Korea has 339 public institutions (36 public corporations, 93 quasi-governmental institutions, and 210 non-classified public institutions) (Korea Institute of Public Finance [KIPF], 2019). Public corporations include market-type and quasi-market public corporations. Market-type corporations are public enterprises that have assets from two trillion South Korean won (approximately Php87 million), while quasi-market-type are public corporations other than a market-type public corporation. A quasi-governmental institution, on the other hand, is either a fund-management-type or commissioned-service-type quasi-government institution. The only difference is that the management of the fund for the former (fund-management type) is commissioned under the National Finance Act of Korea, whereas a commissioned-service-type is not. Non-classified public institutions are those that do not belong to public corporations or quasi-governmental corporations. See detailed classification of public institutions in the report prepared by the KIPF on Public Institutions in Korea (September 2019, pp. 9-10).

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