

**A STUDY ON TWO-FACED PERFORMANCE APPRAISAL SYSTEMS:
LINKING PURPOSES OF PERFORMANCE APPRAISAL, PERSONAL
RESOURCES, AND ENCOURAGEMENT TO INNOVATE**

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ABSTRACT

This study aims to examine how public employees' perceptions about performance appraisal purposes in the workplace impact public employees' personal resources (i.e., organizational-based self-esteem, self-efficacy, and intrinsic motivation) and organizational encouragement to innovate. Specifically, this study focuses on public employees' personal resources as mediators in understanding the relationship between perceived performance appraisal purposes and organizational encouragement to innovate. This study uses the ability, motivation, and opportunity (AMO) theory as a theoretical framework to examine how different purposes of performance appraisal (i.e., administrative and developmental performance appraisal) are associated with public employees' personal resources and organizational encouragement to innovate. This study empirically found that perceptions of

administrative and developmental performance appraisal play an important role in enhancing public employees' personal resources (i.e., OBSE, self-efficacy, and intrinsic motivation) and organizational encouragement to innovate in the public sector. More importantly, findings show that public employees' personal resources fully mediated the relationship between purposes of performance appraisal and organizational encouragement to innovate. These findings are consistent with theoretical discussions that we specified in this study. As AMO theory suggests, the positive and constructive views on the two types of performance appraisal systems could develop employees' knowledge, skills, and abilities (KSA), enhance internal motivation, and provide more self-managing and empowerment opportunities to public employees. Thus, the research findings of this study provide new insights about underlying processes through which perceptions on performance appraisal purposes lead to employees' positive work attitudes and outcomes.

Keyword: Performance appraisal purposes, personal resources, encouragement to innovate, ability, motivation, and opportunity (AMO) theory

Introduction

One of the most challenging components of management is to identify, measure, manage, and develop the performance of human resources in an organization. For example, from the recruitment and selection process to human resource development, position management, and determination of pay scale, human resource (HR) managers will determine the performance orientation of employees in relation to organizational performance. The components of performance management provides an effective, efficient, and acceptable mechanism that ensures the use of information (e.g., performance evaluation) for improving individual productivity and the achievement of organizational goals and objectives.

Among human resource management (HRM) and performance management practices, performance appraisal systems have been widely adopted in the public sector as a way to improve employees' performance and organizational effectiveness (Esu & Inyang, 2009; Harrington & Lee, 2015; Roberts, 2003; Rubin, 2011; Scott & Einstein, 2001). The Civil Service Reform Act (CSRA) of 1978 provided a triggering event for U.S. federal agencies to design an effective performance appraisal system for all federal-level employees (Perry, 1986; U.S. Office of Personnel Management; cited in Kim, 2014). Since then, the

performance appraisal system has been repeatedly changed based on the U.S. federal government's reform paradigm (e.g., Performance Management Recognition System, Performance Appraisal Assessment Tool, Goals-Engagement-Accountability and Results) (Kim, 2014).

A great deal of current performance appraisal research has mainly focused on the performance appraisal fairness issues in the public sector (Cho & Sai, 2013; Harrington & Lee, 2015; Kim & Rubianty, 2011; Roberts, 2003) and overlooked the role of the perceived performance appraisal purpose (see Kim, 2014, for an exception in the public sector). As the existing literature has paid little attention to the relationship between performance appraisal purpose and employees' behavioral outcomes in a public context, we must turn to the perceived purposes of performance appraisal literature to get more insight. Several scholars indicate that the performance appraisal purpose affects appraisal processes and employees' behavioral outcomes (Balzer & Sulsky, 1990; Jordan & Nasis, 1992; Kim, 2014; Murphy et al., 1982; Osiroff, 1993; Park et al., forthcoming; Qawahar & Williams, 1997; Shore et al., 1998; Williams et al., 1985; Youngcourt et al., 2007). They suggest that employees' behavioral outcomes may vary depending on perceptions of how the performance appraisal is used (Balzer & Sulsky, 1990; Jordan & Nasis, 1992; Osiroff, 1993; Youngcourt et al., 2007). In sum, research on perceived purposes of performance appraisal indicates that performance appraisal purposes influence employees' work attitudes and organizational behavior in different ways. However, nearly all of these empirical studies analyzed the direct effects of perceived purposes of performance appraisal on employees' work-related attitudes independently of each other and without considering indirect or mediating effects.

An important causal mechanism of perceived purposes of performance appraisal that influences employee outcomes is through personal resources such as organizational-based self-esteem, self-efficacy, and intrinsic motivation (Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). Among the possible employees' work-related behaviors that stem from perceived purposes of performance appraisal, this study focuses on organizational encouragement to innovate in the public sector. Given the importance of New Public Management reforms, U.S. federal agencies have emphasized innovativeness as a way to improve individual and organizational performance (Bartos, 2003; Bruel & Kamensky, 2008; Gore, 1993; Kamensky, 1996; Kettl, 2005; Pollitt & Bouckaert, 2004; cited in Fernandez & Moldogaziev, 2013). As one of the antecedents of innovativeness, Walker, Damampour, and Devece (2011)

emphasized the role of organizational capacity such as a performance management activity. More importantly, Fernandez and Moldogaziev (2013) indicated that failure to encourage employees' innovative behavior can significantly undermine organizational effectiveness. Existing literature suggests that performance appraisal systems can encourage employees' creativity and innovativeness since the performance appraisal serves as a channel that considers employees' knowledge and skills (Gupta & Singhal, 1993; Jiménez-Jiménez & Sanz-Valle, 2005; Kydd & Oppenheim, 1990; Laursen & Foss, 2003; Shipton, Fay, West, Patterson & Birdi, 2005). Thus, the link between perceived purposes of performance appraisal and encouragement to innovate is significant in the public sector. In order to conceptualize and specify the concept of encouragement to innovate, this study considers it "an affective state or experience of feeling felt by public employees," which was suggested by previous research (see Locke & Latham, 2004; cited in Fernandez & Moldogaziev, 2013: 156).

The purpose of this study is to examine how public employees' perceptions about performance appraisal purposes in the workplace impact public employees' personal resources (i.e., organizational-based self-esteem, self-efficacy, and intrinsic motivation) and organizational encouragement to innovate. Specifically, this study focuses on public employees' personal resources as mediators in understanding the relationship between perceived performance appraisal purposes and encouragement to innovate because personal resources are closely associated with attaining organizational goals and performance (Schaufeli & Taris, 2014). The next section provides a review of literature on the purposes of performance appraisal systems. The discussion then develops and tests a causal model that estimates the direct as well as the indirect effects of purposes of performance appraisal on encouragement to innovate in the public sector. This allows for exploring the role of three mediating variables—organizational-based self-esteem (OBSE), self-efficacy, and intrinsic motivation—by which performance appraisal purposes lead to encouragement to innovate.

Conceptualizing the Performance Appraisal Purposes

Although scholars have made significant headway in understanding the construct of performance appraisal purposes, they have failed to reach a consensus on what purposes of performance appraisal means (Huber, 1983; Mohrman et al., 1989; Youngcourt, Leiva,

& Jones, 2007). The majority of researchers on performance appraisal classify organizations' use of performance appraisals into two main purposes: (1) developmental approaches that focus on improving employee performance through organizational support and (2) administrative (or summative or evaluative) approaches that are explicitly associated with extrinsic rewards for employees, including promotions and increased pay (Beer, 1982; Boswell & Boudreau, 2000; Cardy & Dobbins, 1994; Cleveland, Mohammed, Skattebo, & Sin, 2003; Cleveland, Murphy, & Williams, 1989; Daley, 1992; DeNish & Gonzalez, 2000; Gabris & Ihrke, 2001; Kim, 2014; Krats & Brown, 2013; Longenecker & Nykodym, 1996; Latham & Wexley, 1994; Meyer, Kay, & French, 1965; Morrissey, 1983; Moussavi & Ashbuagh, 1995; Murphy & Cleveland, 1991, 1995; Oh & Lewis, 2009; Park et al., forthcoming; Zedeck & Cascio, 1982). In line with the majority of previous research, this study also classifies the use of performance appraisals into the two main purposes of administrative and developmental approaches.

Theoretical Perspectives

This study uses related theories to examine a causal model of performance appraisal purposes. As an overarching theoretical framework, this study employs the ability, motivation, and opportunity (AMO) theory, which suggests that HRM practices can satisfy employees' needs for work-related skills, motivation, and opportunities to achieve their tasks (Appelbaum et al., 2000; Messersmith et al., 2011; Paauwe, 2009; Vermeeren, Kuipers, & Steijn, 2014). Scholars argue that performance appraisal can promote employees' creative activities through their personal capacities such as knowledge and skills (Gupta & Singhal, 1993; Jiménez-Jiménez & Sanz-Valle, 2005; Kydd & Oppeneheim, 1990; Shipton et al., 2005). From this theoretical insight, this study posits that performance appraisal as an HRM practice plays a role in providing the abilities required to perform tasks for public employees through its influence on employees' personal resources. Through this motivational process, employees may have the opportunities to exhibit an affective state (i.e., perceived encouragement to innovate), which should serve the public.

In the first phase, this study analyzed the impacts of performance appraisal purposes (i.e., administrative and developmental performance appraisal) on public employees' personal resources (i.e., organizational-based self-esteem, self-efficacy, and intrinsic motivation) using

social exchange theory (SET). Then, this study investigated how the three mediators are interrelated in terms of public employees' social learning activities. Finally, drawing upon the social cognitive perspective, an employee's personal resource (i.e., self-efficacy) is hypothesized to have a direct effect on encouragement to innovate as well as indirect effects, as mediated by the employee's intrinsic motivation.

Performance Appraisal Purposes and Personal Resources

In the first phase, this study uses social exchange theory (SET) to understand the impacts of performance appraisal purposes (i.e., administrative and developmental performance appraisal) on employees' personal resources. Scholars who studied job demands and resources in the workplace emphasize the mediating role of personal resources in understanding the exchange relationship between organizational job resources and employees' work attitudes (Bowling et al., 2010; Korman, 1970; Pierce & Gardner, 2004; Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). They define personal resources as "the psychological characteristics or aspects of the self that are generally associated with resiliency and that refer to the ability to control and impact one's environment successfully" (Bowling et al., 2010; Korman, 1970; Pierce & Gardner, 2004; Xanthopoulou et al., 2007; cited in Schaufeli & Taris, 2014: 49). They specify personal resources such as self-efficacy, organizational-based self-esteem, optimism, and intrinsic motivation that are directly influenced by the work context (Bowling et al., 2010; Korman, 1970; Pierce & Gardner, 2004; Schaufeli & Taris, 2014; Xanthopoulou et al., 2007).

In terms of social exchange, human behavior results from an interaction between personal and environmental factors (Blau, 1964; Gouldner, 1960; Hibfoll, 2002; Kim & Ko, 2014; Setton, Bennett, & Liden, 1996). Specifically, Hibfoll (2002) proposes that employees working in a resourceful environment are likely to develop personal resources as feelings of self-confidence and optimism about their future at work, which, in turn, is positively related to their work attitudes and behaviors that relate to organizational goals. Judge et al. (2000) also argues that personal resources such as self-esteem and self-efficacy determine the way they perceive their job characteristics, which, in turn, impacts their work attitudes and organizational behaviors because the "work environment can signal to employees how much they are valued, respected and trusted by their organization" (Korman, 1970; Pierce

&Gardner, 2004; cited in Bowling et al., 2010: 603). From the insight of SET, this study assumes that performance appraisal systems (i.e., administrative and developmental purposes) foster employees' personal resources that are expressed as employee obligations to reciprocate positively and beneficially for the organization.

Among the possible personal resources that may influence employees' outcomes, this study focuses on an employee's organizational-based self-esteem, self-efficacy, and intrinsic motivation. As a first step, this section focuses on the role performance appraisal purposes play on organizational-based self-esteem and self-efficacy. Pierce, Gardner, Cummings, and Dunham (1989) introduced the concept of organizational-based self-esteem (OBSE), which is differentiated from general self-esteem, and refers to "an individual's belief about his or her self-worth and competence as an organizational member" (cited in Bowling et al., 2010: 601). Specifically, Pierce et al. (1989) argued that organizational-based self-esteem is differentiated from an individual's self-efficacy. They indicated that organizational-based self-esteem comes from "an individual's self-perceived competence within an organization" while self-efficacy reflects a person's belief in their personal resources that can be transformed into accomplishing specific goals and tasks (Bandura, 1986; cited in Pierce et al., 1989: 625).

As we mentioned above, performance appraisal purposes contain the two main purposes of administrative and developmental approaches. Administrative performance appraisals that emphasize compensation and rewards are one aspect of HR practices that may foster employees' positive reactions to their organization (Kim & Ko, 2014). Social exchange theory indicates that supportive organizational environments that contain tangible (i.e., compensation and reward) and intangible opportunities (i.e., symbolic values such as training and development) provide signals for positive valuations of employees' contributions to the organization (Blau, 1964; Ko & Hur, 2014; Lee & Harrington, 2015; Lee & Hong, 2011). Reciprocally, these organizational activities may help develop employees' positive perceptions about their organization, such as self-esteem, self-efficacy, and intrinsic motivation (Kim & Rubianty, 2011; Rhoades, Eisenberger, & Armeli, 2001). Existing literature demonstrates that HR practices that are related to compensation and rewards enhance employees' positive perception on their organization in terms of the exchange between an employee and the organization (Kim & Ko, 2014; Ooi, Teh, & Chong, 2009; Zarraga & Bonache, 2003). Similarly, studies suggest that HR practices that include training opportunities and career development are positively related to employees' personal resources in responding

to organizational treatment (Kim & Ko, 2014; Noe, Hollenbeck, Gerhart, & Wright, 2012; Wayne, Shore, & Liden, 1997). Based on these overviews, this study formulates the following hypotheses:

Hypothesis 1-a: Both administrative and developmental performance appraisal purposes are positively associated with public employees' organizational-based self-esteem.

Hypothesis 1-b: Both administrative and developmental performance appraisal purposes are positively associated with public employees' self-efficacy.

Organizational-Based Self-Esteem, Self-Efficacy, and Intrinsic Motivation

According to social learning theory (SLT), social learning is governed by four interrelated subcomponents: (1) attention, (2) retention, (3) behavior production, and (4) motivation. In the learning context, SLT emphasizes the process necessary for modeling, and denotes insights into the social and organizational role of procurement and mentoring (Merriam & Caffarella, 1999). Thus, social learning processes are appropriate to many organizational learning circumstances (i.e., structure, culture, systems), and to individuals who endeavor to model the behaviors of others. Thus, the role of performance appraisal systems in changing people's behaviors could also be analyzed and interpreted from the SLT viewpoint. Presumably, the act of congruence with an organization may, in turn, raise an individual's level of motivation (Lim & Chan, 2003). We propose that through performance appraisal purposes (i.e., attention), employees accept their organization's systems and structure and their congruence with the organization may thus be meaningfully influenced on the level of organizational-based self-esteem (i.e., retention), self-efficacy (i.e., behavior production), and intrinsic motivation (i.e., motivation).

As discussed above, Pierce et al. (1989) argued that organizational-based self-esteem is different from self-efficacy. Similarly, a group of scholars also indicated that organizational-based self-esteem may positively affect organizational performance through effects on self-efficacy (Bandura, 1977, 1997; Bowling et al., 2010; Judge & Bono, 2001). In addition, several scholars found that organizational-based self-esteem was the strongest predictor of intrinsic motivation and work-related attitudes and behaviors, and resignation and absence intentions (Bowling et al., 2010; Norman et al., 2015; Piece & Gardner, 2004).

Concerning the relationships among an individual's personal resources, existing literature shows the mediating role of self-efficacy in the relationship between organizational-based self-esteem and intrinsic motivation (Gardner & Pierce, 2001; Pierce et al., 1989). According to Wright (2001, 2004, 2007), self-efficacy plays a central role in explaining the causal direction of an employee's intrinsic motivation. Based on these overviews, this study tests whether a public employee's organizational-based self-esteem can be managed effectively in a way that boosts intrinsic motivation through self-efficacy.

Hypothesis 2: Public employees' organizational-based self-esteem is indirectly and positively associated with their intrinsic motivation through its influence on their self-efficacy.

Self-Efficacy, Intrinsic Motivation, Encouragement to Innovate

According to social cognitive theory, an employee's self-efficacy is hypothesized to have a direct effect on work attitudes and organizational behaviors as well as indirect effects, as mediated by intrinsic motivation (Bandura, 1986; Wright, 2004). Specifically, an organization's supportive HRM practices (i.e., constructive problem solving activity) may contribute to employees' self-efficacy, which, in turn, is positively related to their innovative work attitudes in the organization (Jung, Chow, & Wu, 2003; Redmond, Mumford, & Teach, 1993).

Concerning the relationship between employees' self-efficacy and their intrinsic motivation, a group of scholars suggest that an employee's self-efficacy is positively associated with his/her intrinsic motivation "through its effect on the direction and persistence of behavior" (Bandura, 1988; Bandura & Cervone, 1983, 1986; Early & Lituchy, 1991; cited in Wright, 2007: 57). They explain that higher levels of self-efficacy are related to better performance since "employees are more likely to expend the necessary effort and persist in the face of obstacles if they feel that their efforts will eventually be successful" (Bandura, 1988; Bandura & Cervone, 1983, 1986; Early & Lituchy, 1991; cited in Wright, 2007: 57).

This study also examines the linkage between public employees' intrinsic motivation and their perceived organizational encouragement to innovate. Huselid and Day's (1991)

research shows that employees who are intrinsically motivated and feel highly engaged in their organization are more likely to show positive outcomes. Martin and Hafer (1995) also indicate that employees are less likely to continue doing their work when they do not see their job “as an important part of their self-image” (cited in Hassan, 2013: 544). The ability, motivation, and opportunity (AMO) theory also illustrates that “when employees are motivated, they are more likely to perform better, leading to higher organizational performance,” which includes organizational innovation (Paauwe & Boselie, 2005; cited in Tan & Nasurdin, 2011: 157). A group of scholars attributes employees’ intrinsic motivation as a source of their innovative behaviors in their organization (Amabile et al., 1994; Jung & Sosik, 2002; Tierney, Farmer, & Graen, 1999; Worch, 2007; Zhou, 1998). More specifically, Worch (2007) indicates that employees are more likely to support the entrepreneurial achievement when they are intrinsically motivated in their job. Similarly, Amabile et al. (1994) and Zhou (1998) present a positive relationship between employees’ intrinsic motivation and their innovative behavior. They specify that intrinsically motivated employees tend to show more innovative attitudes to solve organizational tasks (Amabile et al., 1994; Zhou, 1998). Given these overviews, this study formulates the following hypothesis:

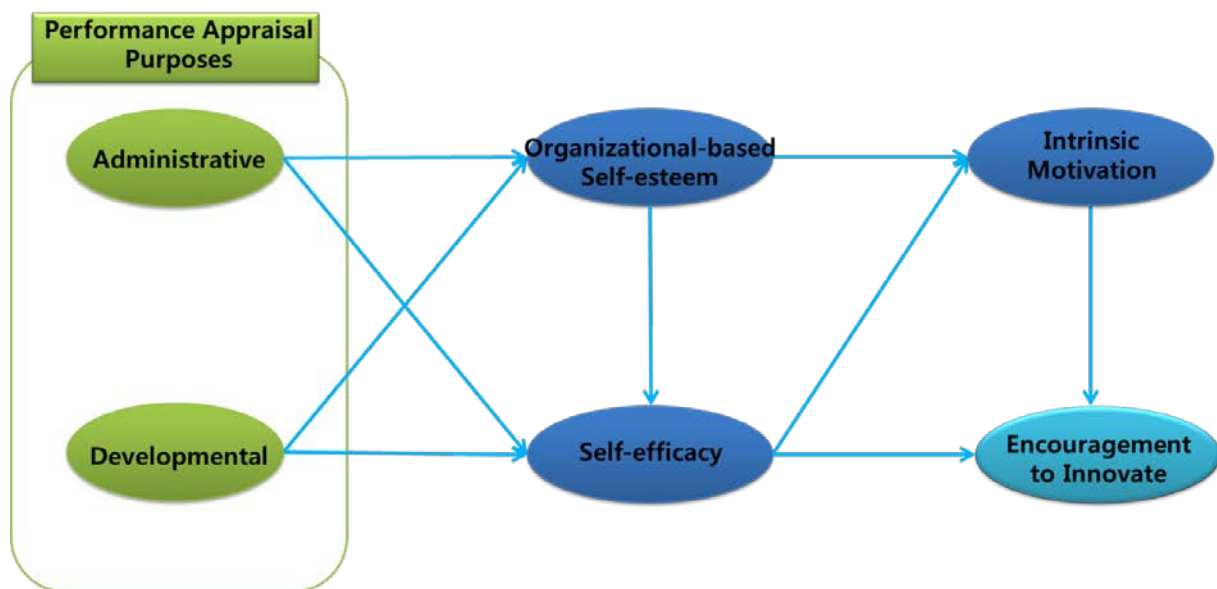
Hypothesis 3: Public employees’ self-efficacy is indirectly and positively associated with encouragement to innovate through its influence on intrinsic motivation.

Research Method

Based on the theoretical overviews, a heuristic research framework was constructed as shown in Figure 1, illustrating the relationship among antecedents, mediators, and consequences from the 2012 Federal Employee Viewpoint Survey (FEVS). Antecedent variables were comprised of performance appraisal purposes (i.e., administrative and developmental). While organizational-based self-esteem (OBSE), self-efficacy, and intrinsic motivation are designated as mediators, encouragement to innovate is designated as an outcome variable in this research. This study employed exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to operationalize variables and confirm latent constructs from the survey questions. To confirm the total direct and indirect effects, we employed full structural equation modeling (SEM) (i.e., a measurement model with a path model) using AMOS 18.0 to test interrelationships among variables and assess the relative strength of each

variable. The full SEM allows for non-recursive paths and simultaneous tests of the relationship of variables (Byrne, 2001; Jöreskog & Sörbom, 1996).

Figure 1: Research Framework



Data

This study uses data from the 2012 Federal Employee Viewpoint Survey (FEVS) to examine the roles of perceived purposes of performance appraisal. The U.S. Office of Personnel Management (OPM) has conducted the Federal Employee Viewpoint Survey every two years at federal agencies since 2002. The FEVS data contain survey items, such as federal employees' demographic characteristics, their perceived working conditions, and other related work experiences. For the 2012 FEVS, the OPM administered the online survey to approximately 1.6 million federal employees from April 4, 2012 until May 16, 2012. The response rate of the survey is 46.1% with 687,687 participants from 82 different agencies (OPM, 2012). However, this study analyzes approximately 687,688 federal employees' responses after filtering the 2012 FEVS data.

Measures

From a set of relevant survey items, main variables were developed and provided (see Table 1). Exploratory factor analysis (EFA)—that is, a principal axis factoring (PAF) and varimax rotation technique—was used to obtain factor variables (Wright, 2004) (see Appendix).ⁱ These techniques enable us to extract communalities from different variables and to combine different variables into new variables.ⁱⁱ

Table 1: Measurement of Main Variables

Variable	Items
Administrative Performance Appraisal	Q19: In my most recent performance appraisal, I understood what I had to do to be rated at different performance levels.
	Q22: Promotions in my work unit are based on merit.
	Q23: In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.
	Q24: In my work unit, differences in performance are recognized in a meaningful way.
	Q25: Awards in my work unit depend on how well employees perform their jobs.
	Q33: Pay raises depend on how well employees perform their jobs.
Developmental Performance Appraisal	Q44: Discussions with my supervisor/team leader about my performance are worthwhile.
	Q46: My supervisor/team leader provides me with constructive suggestions to improve my job performance.
	Q47: Supervisors/team leaders in my work unit support employee development.
	Q50: In the last six months, my supervisor/team leader has talked with me about my performance.

OBSE	Q26: Employees in my work unit share job knowledge with each other.
	Q27: The skill level in my work unit has improved in the past year.
	Q29: The workforce has the job-relevant knowledge and skills necessary to accomplish organizational goals.
Self-efficacy	Q20: The people I work with cooperate to get the job done.
	Q21: My work unit is able to recruit people with the right skills.
	Q30: Employees have a feeling of personal empowerment with respect to work processes.
Intrinsic Motivation	Q4: My work gives me a feeling of personal accomplishment.
	Q5: I like the kind of work I do.
	Q12: I know how my work relates to the agency's goals and priorities.
	Q13: The work I do is important.
	Q40: I recommend my organization as a good place to work.
Encouragement to Innovate	Q3: I feel encouraged to come up with new and better ways of doing things.
	Q32: Creativity and innovation are rewarded.

Test for Common Method Bias

During both the survey design and administration, a number of techniques were used to minimize common method variance (CMV) and other biases that can affect the validity of empirical studies based on survey data (Jakobsen & Jensen, 2015). To assess whether CMV was present in the data despite these precautions, Harmon's single-factor test was conducted as a post hoc test. The results of a principal component factor analysis constrained to a single factor were encouraging, as they indicated that a single factor accounted only for about 25%

of the variance between survey items, well under the 50% threshold suggested as the cutoff point. This more conservative test showed three distinct factors with eigenvalues above 1, with a total variance of only 47.951% explained by the first factor. Although these results provide evidence that CMV should not unduly bias analysis results, the use of single-source, cross-sectional data is a limitation of this study.

Analyses and Results

After employing EFA and CFA as well as adopting full SEM (with employees' personal resources, such as organizational-based self-esteem (OBSE), self-efficacy, and intrinsic motivation as the key mediator), we hypothesized that personal resources among U.S. federal employees are influenced by the effects of two types of performance appraisal purposes and lead to employees' perceived encouragement to innovate. In addition, we proposed that self-efficacy is influenced by OBSE. Moreover, to assess whether employees' personal resources mediate the effects of a set of antecedents on outcome variables, we used a Sobel Z statistic test.

Reliability and Validity Tests

In this study, in order to verify the reliability of each variable that comprised the research model, an internal consistency analysis was performed. Results of this analysis show that Cronbach's α value of all constructs was greater than 0.7, which validates the reliability of the measuring tool (see Table 2).

Table 2: Verification of Reliability

Factors	Item	Mean	Std. Deviation	Cronbach's α
Administrative Performance Appraisal	6	2.99	0.946	0.885
Developmental Performance Appraisal	4	3.71	0.997	0.908
OBSE	3	3.66	0.810	0.727

Self-efficacy	3	3.39	0.863	0.708
Intrinsic Motivation	5	4.03	0.730	0.829
Encouragement to Innovate	2	3.29	1.074	0.794

CFA Results: Two-factor Model of Performance Appraisal Purpose

We employed a first-order CFA model of administrative and developmental performance appraisal purposes that indicated that all of the two latent performance appraisal purposes constructs are significantly salient and distinct (Figure 2). The latent constructs of administrative and developmental performance appraisal purposes are positively related to each other. Results imply that two types of performance appraisal purposes can be recognized as important characteristics of performance appraisal systems in U.S. federal agencies. Regarding the fit of the two-factor measurement model, several goodness-of-fit indices (Figure 2 and Table 3) show that the fit of the entire model is within an acceptable level.

Figure 2: First-order Two-factor Model of Performance Appraisal Purpose

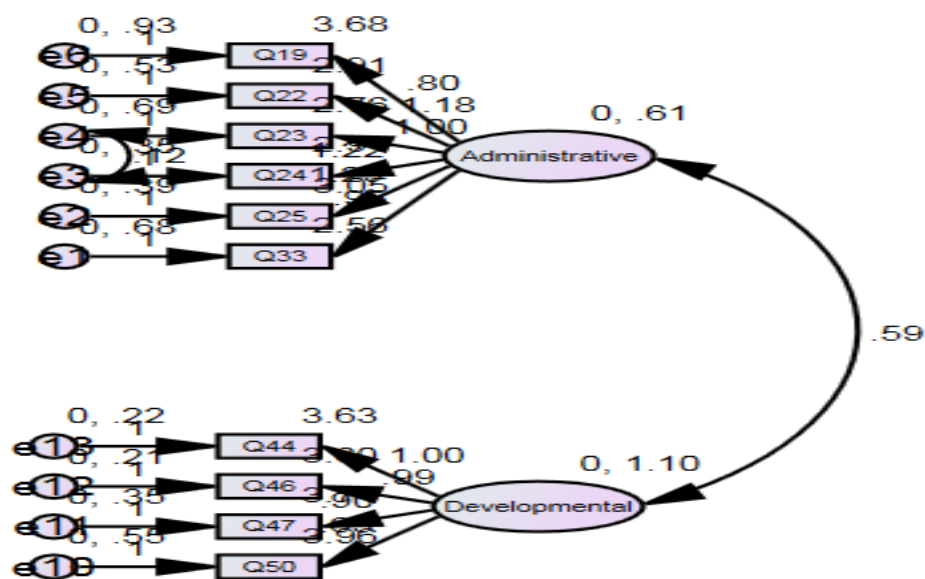


Table 3: Overall Fit Indices of the CFA Model

Model	df	X^2	X^2/df	RFI	NFI	IFI	CFI	RMSEA
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Suggested							
Cut-off	Values	<3		>0.90		>0.90	
		>0.90		>0.90		>0.90	
							<0.08
33	127565.184	3865.612	.961	.971	.971	.971	.075

All standardized factor loadings are significant at $p < .01$.

Correlations Results

We examined the correlations between the two types of performance appraisal purposes: personal resources and encouragement to innovate. As shown in Table 4, encouragement to innovate is significantly correlated with performance appraisal purposes and personal resources. Furthermore, intrinsic motivation is significantly correlated with performance appraisal purposes, OBSE, and self-efficacy. In addition, self-efficacy is significantly correlated with performance appraisal purposes and OBSE. Finally, OBSE is significantly correlated with performance appraisal purposes.

Table 4: Zero-order Correlations among Antecedents, Mediators, and Consequences

	1	2	3	4	5	6
1	1					
2	0.671**	1				
3	0.642**	0.575**	1			
4	0.700**	0.580**	0.728**	1		
5	0.551**	0.543**	0.583**	0.608**	1	
6	0.712**	0.647**	0.604**	0.688**	0.640**	1

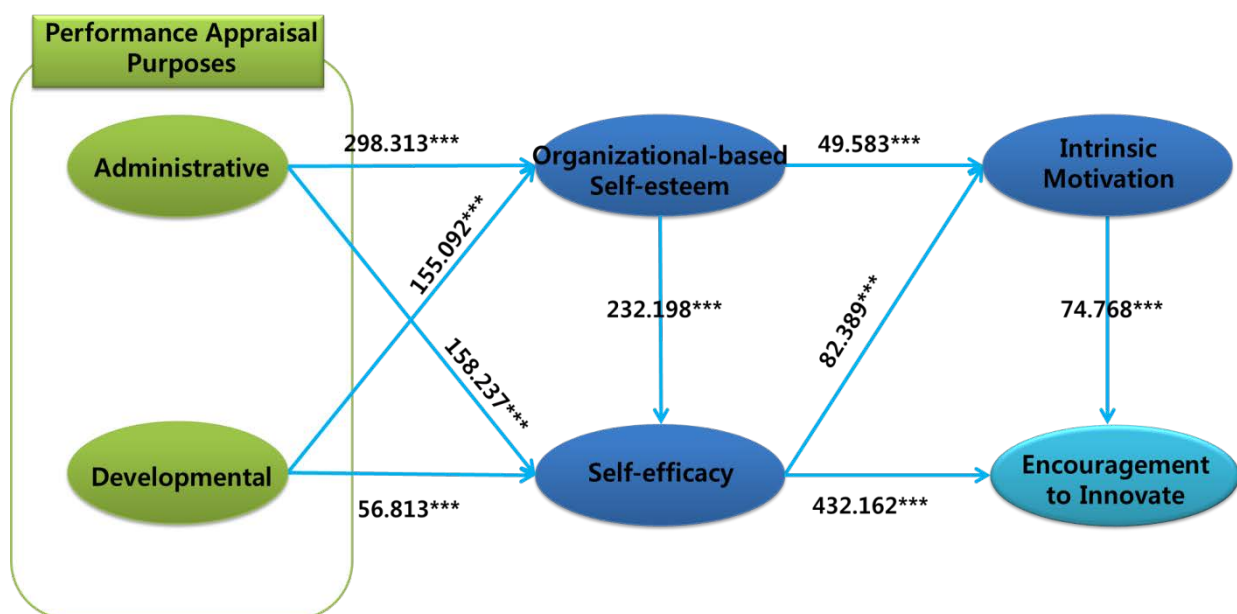
** $p < 0.01$

1: Administrative Performance Appraisal, 2: Developmental Performance Appraisal,
3: OBSE, 4: Self-efficacy, 5: Intrinsic Motivation, 6: Encouragement to Innovate

SEM Results

In the final phase of the analysis, we employed SEM, from which we observed that antecedents, mediators, and consequent variables are directly and indirectly related to one another in a meaningful way. The overall fit indices for this path analysis indicate that the hypothesized SEM achieved a good fit.ⁱⁱⁱ Figure 3, Table 5, and Table 6 outline the findings: administrative and developmental performance appraisal directly, significantly, and positively influences OBSE (administrative performance appraisal $\beta = 0.467^{***}$, developmental performance appraisal $\beta = 0.241^{***}$). Also, administrative and developmental performance appraisal directly, significantly, and positively influences self-efficacy (administrative performance appraisal $\beta = 0.368^{***}$, developmental performance appraisal $\beta = 0.105^{***}$). Second, OBSE directly, significantly, and positively influences self-efficacy ($\beta = 0.874^{***}$) and positively influences intrinsic motivation ($\beta = 0.436^{***}$). In addition, self-efficacy directly, significantly, and positively influences intrinsic motivation ($\beta = 0.493^{***}$) and positively influences encouragement to innovate ($\beta = 0.925^{***}$). Finally, intrinsic motivation is directly, significantly, and positively associated with encouragement to innovate ($\beta = 0.143^{***}$). The overall results suggest that our performance appraisal purposes, personal resources, and encouragement to innovate model confirm our hypotheses.

Figure 3: The Full Structural Equation Model



*** $p < 0.001$ **Table 5: Overall Fit Indices of the SEM**

Model	<i>df</i>	X^2	X^2/df	RFI	NFI	IFI	CFI	RMSEA
Suggested								
Cut-off			<3	>0.90	>0.90	>0.90	>0.90	<0.08
Values								
	220	864144.259	3927.928	0.887	0.910	0.910	0.910	0.076

All standardized factor loadings are significant at $p < .01$.

Table 6: Standardized Total and Direct Effects

Paths	Standardized Estimate(β)	S. E.	C. R.	p
OBSE \leftarrow Administrative Performance Appraisal	0.467	0.002	298.313	***
OBSE \leftarrow Developmental Performance Appraisal	0.241	0.002	155.092	***
Self-efficacy \leftarrow Administrative Performance Appraisal	0.368	0.002	158.237	***
Self-efficacy \leftarrow Developmental Performance Appraisal	0.105	0.002	56.813	***
Self-efficacy \leftarrow OBSE	0.874	0.004	232.198	***
Intrinsic Motivation \leftarrow OBSE	0.436	0.009	49.583	***
Intrinsic Motivation \leftarrow Self-efficacy	0.493	0.006	82.389	***
Encouragement to Innovate \leftarrow Self-efficacy	0.925	0.002	432.162	***
Encouragement to Innovate \leftarrow Intrinsic Motivation	0.143	0.002	74.568	***

*** $p < 0.001$

Indirect Effects

Path analyses were performed to observe indirect effects among latent variables presented in the structural model (see Table 7). Zooming in on the indirect effects of

administrative performance appraisal (0.802) and developmental performance appraisal (0.329) on encouragement to innovate, we found that they had a significant and positive effect on encouragement to innovate through personal resources. In a same vein, in terms of indirect effects of OBSE (0.932) on encouragement to innovate, we found that they had a significant and positive effect on encouragement to innovate through self-efficacy and intrinsic motivation. In addition, in terms of indirect effects of self-efficacy (0.070) on encouragement to innovate, we found that they had a significant and positive effect on encouragement to innovate through intrinsic motivation. Second, in terms of indirect effects of administrative performance appraisal (0.587) and developmental performance appraisal (0.261) on intrinsic motivation, we found that they had a significant and positive effect on intrinsic motivation through OBSE and self-efficacy. In addition, in terms of indirect effects of OBSE (0.431) on intrinsic motivation, we found that they had a significant and positive effect on intrinsic motivation through self-efficacy. Finally, in terms of indirect effects of administrative performance appraisal (0.408) and developmental performance appraisal (0.211) on self-efficacy, we found that they had a significant and positive effect on self-efficacy through OBSE. Results indicate that OBSE, self-efficacy, and intrinsic motivation are important mediators in bridging the conceptual gap between antecedents and consequent variables that maximize the encouragement to innovate in U.S. federal agencies.

Table 7: Indirect Effects

	1	2	3	4	5	6
3	-	-	-	-	-	-
4	0.408	0.211	-	-	-	-
5	0.587	0.261	0.431	-	-	-
6	0.802	0.329	0.932	0.070	-	-

1: Administrative Performance Appraisal, 2: Developmental Performance Appraisal,

3: OBSE, 4: Self-efficacy, 5: Intrinsic Motivation, 6: Encouragement to Innovate

To assess whether personal resources mediated the relationship between perception of

administrative and developmental performance appraisal purposes and encouragement to innovate, we used the Sobel Z statistic test method (Table 8). Each indirect path coefficient was calculated to determine whether the indirect effects (or mediating effects) were statistically significant. As shown in Table 7, a number of coefficients for the indirect path of the SEM were significant. The results of the path analyses and the Sobel test prove our research hypotheses.

Table 8: The Results of the Sobel Test

Path			Test Statistic	p-value ($p < \alpha = 0.05$)
Administrative	OBSE	Self-efficacy	159.5423	0.00
Developmental	OBSE	Self-efficacy	105.5176	0.00
OBSE	Self-efficacy	Intrinsic Motivation	76.9084	0.00
Self-efficacy	Intrinsic Motivation	Encouragement to Innovate	53.9378	0.00

Discussion and Conclusion

In recent years, perceived purposes of performance appraisal have received scholarly attention in the public sector. As public sector organizations have come to view human resources as not a mere factor of production, but important capital for the performance of its societal roles, performance management has become an important aspect of HRM. However, the question is, how is performance being more effectively managed in public organizations? How is an optimal level of interconnectivity among HRM, individual knowledge, skills and abilities (KSA), and individual and organizational outcomes obtained? To obtain valid and reliable answers for these questions, this study has focused on performance appraisal systems and examined how public employees' perceptions about the different roles of performance appraisal in the workplace influence public employees' personal resources (i.e.,

organizational-based self-esteem, self-efficacy, and intrinsic motivation) and their perceived organizational encouragement to innovate. In line with ability, motivation, and opportunity (AMO) theory, the results indicate that perceptions of administrative and developmental performance appraisal play an important role in enhancing public employees' personal resources (i.e., OBSE, self-efficacy, and intrinsic motivation) and encouragement to innovate in the public sector. These findings are consistent with theoretical discussions that we specified in this study. That is, as AMO theory suggests, the positive and constructive views on the two types of performance appraisal systems could develop employees' KSA, enhance internal motivation, and provide more self-managing and empowerment opportunities to public employees. Thus, the research findings of this study provide new insights about underlying processes through which perceptions on performance appraisal purposes lead to employees' positive work attitudes and outcomes.

Consistent with social exchange theory (Blau, 1964; Gouldner, 1960; Hibfoll, 2002; Kim & Ko, 2014; Setton, Bennett, & Liden, 1996), perceived purposes of performance appraisal (i.e., administrative and developmental performance appraisal) in this study were found to affect public employees' personal resources, such as organizational-based self-esteem (OBSE) and self-efficacy. In terms of social learning theory (SLT), the results indicate that public employees' OBSE is indirectly and positively associated with their intrinsic motivation through its influence on their self-efficacy. Corresponding with social cognitive theory, the findings suggest that public employees' self-efficacy is indirectly and positively associated with encouragement to innovate through its influence on intrinsic motivation. These results indicate that public employees' personal resources (i.e., OBSE, self-efficacy, and intrinsic motivation) are critical mediators in understanding the relationship between perceptions on performance appraisal purposes and encouragement to innovate in the public sector. The research findings suggest that, when public employees perceive performance appraisals as a way of social exchange with their current organization, the perceptions foster public employees' personal resources to become more involved in their workplace in an innovative manner. As AMO theory suggests, this study empirically found that performance appraisal can provide the abilities required to perform tasks for public employees through its influence on employees' personal resources. Through this motivational process, public employees have the opportunity to perceive encouragement to innovate, which serves the public.

The results of this study also provide practical implications about how to increase public

employees' personal resources and encourage innovative behavior in the public sector. As indicated by the findings, fostering employees' personal resources (i.e., organizational-based self-esteem, self-efficacy, and intrinsic motivation) is an effective way to increase employees' perceived organizational encouragement to innovate in public settings. Specifically, public organizations should place a considerable effort in providing performance appraisals to foster public employees' personal resources, which, in turn, increase employees' innovative activities. In this vein, future research should focus more on these theoretical and practical issues to determine an optimal combination of performance appraisals (i.e., administrative and developmental performance appraisals) to foster public employees' personal resources and innovative behaviors. According to the Best Places to Work in the Federal Government (<http://bestplacetowork.org/BPTW/index.php>), for example, NASA has been the top ranking agency in the categories of "innovation" as well as "performance-based rewards and advancement category" over the past years. These categories capture and measure the extent to which employees feel they are rewarded and promoted in a fair and timely manner for their performance and innovative contributions to their workplaces. The result may be able to inform us that how NASA fosters personal resources or conducts performance appraisals, and how these practices caused it to gain the top ranking in innovation.

This study has several possible limitations. First, although this study operationalized perceived purposes of performance appraisal into two aspects (i.e., administrative and developmental performance appraisal), these aspects may not fully represent the accurate measurements of perceptions on performance appraisal purposes (Youngcourt et al., 2007). Thus, further studies need to develop a more accurate measurement for perceived purposes of performance appraisal. Second, this study used cross-sectional data from the 2012 Federal Employee Viewpoint Survey (FEVS). Thus, this study may fail to account for causal relationships between independent and dependent variables in terms of endogeneity (Cho & Poister, 2014; Kim, 2012). In other words, this study may produce potential weaknesses to measure the real effects of federal employees' perceived performance appraisal purposes on their perceived encouragement to innovate. Thus, this study may overlook a reverse causality. Therefore, a future study needs to measure the causal relationship among the variables listed in this study using longitudinal analysis and experimental research designs. Third, the FEVS data are based on self-reported responses from the survey participants. Thus, this study may fail to account for common method bias, which overestimates the relationships among variables since "survey respondents have a tendency to maintain consistency in their

responses” (Crampton & Wagner, 1994; Podsakoff & Organ, 1986; Cho & Perry, 2012: 401). Finally, this study also has a limitation in terms of generalization of research findings because it uses secondary data from the 2012 FEVS. The secondary data used in this study can be a valuable source of information for obtaining knowledge into issues of employees’ viewpoints of their manager and organization, working conditions, and other related work experiences. However, secondary data is not collected for the same research goal as this study intended. In this sense, the secondary data is a complementary tool; it cannot be a substitute for primary data (Singleton & Straits, 2009).

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APPENDIX

The result of exploratory factor analysis (EFA)

Variable	Items	Factor Loading
Administrative Performance Appraisal	Q19	.605
	Q22	.842
	Q23	.796
	Q24	.889
	Q25	.871
	Q33	.767
Eigenvalue		3.848
% of Variation		64.135
Development Performance Appraisal	Q44	.925
	Q46	.929
	Q47	.892
	Q50	.788
Eigenvalue		3.135
% of Variation		78.377
OBSE	Q26	.811
	Q27	.838
	Q29	.763
Eigenvalue		1.941
% of Variation		64.716

Self-efficacy	Q20	.763
	Q21	.799
	Q30	.821
Eigenvalue		1.894
% of Variation		63.134
Intrinsic Motivation	Q4	.846
	Q5	.791
	Q12	.747
	Q13	.759
	Q40	.729
Eigenvalue		3.005
% of Variation		60.109
Encouragement to Innovate	Q3	.911
	Q32	.911
Eigen Value		1.659
% of Variation		82.958

ⁱ After factor scores and, subsequently, new variables were obtained, reliability was tested using Cronbach's alpha. Almost all the scales have an alpha value of .7 or above, so all new variables in this model were considered to exhibit internal consistency.

ⁱⁱ The formula for factor scores is $F_{ik} = \sum W_{ik} Z_{ik}$ (F = individual factor scores; W = weighted values; Z = the standardized variables). There are several advantages of using factor scores in regression. First, we can reduce or eliminate multicollinearity because the variables causing the multicollinearity will combine to form a factor. Second, using a factor index, we can use interval variables instead of ordinal or nominal variables because all ordinal level data can be transformed into interval data that have factor scores rather than six-point Likert scales. Third, we can reduce the number of variables by

making new variables. It is expected that this method can provide more statistical reliability and validity that can guarantee a more robust statistical model.

ⁱⁱⁱOf the seven tests, only the ML chi-square test was inconsistent with a good model fit ($\chi^2/df=3927.928$, $p < .01$). Although this result might be viewed as disconfirmatory evidence, Jöreskog (1990) and others (e.g., Maruyama & McGarvey, 1980) have warned that because the chi-square statistic is sensitive to sample size, the probability of rejecting a hypothesized model increases as N increases. Consequently, with large samples, virtually all models would be rejected as statistically untenable regardless of a good model fit (Park & Rainey, 2008).