

Outsourcing and Organizational Performance: The Employee Perspective

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Gyeo Reh Lee¹ , Shinwoo Lee² , Deanna Malatesta¹,
and Sergio Fernandez^{1,3,4}

Abstract

We develop a conceptual framework that integrates and extends existing explanations of outsourcing's effects on the government workforce and organizational performance. We then test our logic using 5 years of panel data (2010–2014) from U.S. federal agencies. The evidence presents modest negative effects of outsourcing on organizational performance as perceived by employees. The analysis also reveals that outsourcing affects perceived performance through its influence on job satisfaction.

Keywords

outsourcing, government contracting, organizational performance, job satisfaction

Since the advent of the New Public Management (NPM) Reforms in the 1980s, governments have relied extensively on the private sector for the production and delivery of public services (Pollitt & Bouckaert, 2011). Outsourcing is an important policy tool employed in the name of greater efficiency and a decided preference for business-like practices. Yet, we have made only limited progress in understanding the broader consequences of outsourcing (Heinrich, Lynn, & Milward, 2009). Most of the research focus has been outward on the efficiency and effectiveness of public functions and services (Williamson, 1985, 1991), while government personnel's perspective on the effects of outsourcing on organizational performance has been rarely evaluated. This renders fractional explanations of outsourcing outcomes (Lindholm, Hansen, Randrup, Persson, & Kristoffersson, 2018).

This research provides an exploration of the impact of outsourcing on organizational performance from the perspective of public employees. As one of the key public sector constituents, government employees have different interests, thoughts, and values that set them apart from other constituents. In particular, public employees have witnessed the continued expansion of government outsourcing for the several decades as an alternative tool for delivering public services and, therefore, hold certain expectations about the consequences of outsourcing—both good and bad—for themselves and their organizations. A huge literature on work-related attitudes indicates that what employees think and how they feel about their organization, its policies, and its leaders influence their motivation, behavior, and, ultimately, their performance (Ostroff, 1992; Riketta, 2008). Thus, analyzing how government outsourcing influences employee perceptions and attitudes can foster a

broader understanding of how this practice affects public organizations.

To explore how government outsourcing influences employee perceptions of organizational performance, we bring together disparate literatures on public–private partnerships, transaction cost economics (TCE), principal-agent problem, public service motivation (PSM), psychological contract, and job satisfaction to propose a logical explanation of *why* and *how* outsourcing may affect perceived organizational performance among federal employees. While the traditional approach in developing theoretical grounds has predominantly relied on a unidimensional, either positive or negative, outcome of government outsourcing, we take a comprehensive approach considering both dimensions. Empirically, we use panel data (2010–2014) associated with U.S. federal agencies. Findings explain some of the variation in job satisfaction and perceived performance that appears in the Federal Employee Viewpoint Survey (FEVS) results reported by U.S. Office of Personnel Management (OPM). Our theoretical and empirical approaches contribute to offering the evidence on federal employees' evaluation on outsourcing outcomes in terms of organizational performance.

¹Indiana University, Bloomington, USA

²University of South Florida, Tampa, USA

³University of Pretoria, South Africa

⁴University of Johannesburg, South Africa

Corresponding Author:

Gyeo Reh Lee, School of Public and Environmental Affairs, Indiana University, 1315 E. 10th Street, Bloomington, IN 47405, USA.

Email: gyeolee@iu.edu

The next section provides a theoretical framework that connects outsourcing, employee job satisfaction, and perceived organizational performance. The “Method” section explains the sampling strategy, data sources, variables, and measures. We then present our findings, and conclude with a discussion of implications for theory and practice, limitations, and research extensions.

Theoretical Framework

This section lays out our theoretical framework to account for how outsourcing affects organizational performance as perceived by employees, both directly and indirectly through its influence on job satisfaction.

Employee Perceptions of Organizational Performance

The conceptual domain of organizational performance, one of the central concepts in the field of management, is incredibly broad, with a wide range of approaches developed by experts to describe and measure organizational performance (Amirkhanyan, Kim, & Lambright, 2014; Andersen, Boesen, & Pedersen, 2016; R. E. Quinn & Rohrbaugh, 1981; Rainey, 2014). The perceptions of stakeholders—internal as well as external figures—have been prominently operated in major approaches to organizational performance, including the Competing Values Approach (R. E. Quinn & Rohrbaugh, 1981) and the Balanced Scorecard (Kaplan & Norton, 1996). Reviews of research on organizational performance attest to the importance of employee perceptions of organizational performance as one of key facets of this concept and a critical source of performance information (Andersen et al., 2016; Andrews, Boyne, & Walker, 2006; Boyne, 2002).

Employee perceptions of organizational performance further our understanding of organizational performance in two ways. First, knowledge of how employees perceive organizational performance can be used to infer how well the organization is actually performing. A growing body of evidence reveals moderate to strong correlations between perceptual or subjective measures of performance and more objective or archival measures of performance, indicating that both types of measures converge on the underlying concept of organizational performance. To be sure, some researchers like Meier and O’Toole (2013a, 2013b) warn against the use of perceptual measures of performance in public management research. Their analysis reveals weak correlations between perceptual and objective measures of performance, with the former found to be inflated and prone to producing spurious results. In a similar vein, Heneman’s (1986) meta-analysis reports a relatively weak correlation of .27 between perceptual and objective performance measures. A wide range of studies, however, reveals stronger correlations between these two types of performance measures (Bommer, Johnson, Rich, Podsakoff, & MacKenzie, 1995; Dawes, 1999; Dess &

Robinson, 1984; Ketokivi & Schroeder, 2004; Singh, Darwish, & Potočnik, 2016; Vij & Bedi, 2016; Wall et al., 2004). These studies report correlations between perceptual and more objective measures of performance between .50 (Walker & Boyne, 2006) and .60 (Dawes, 1999; Dess & Robinson, 1984; Wall et al., 2004); Nathan and Alexander’s (1988) meta-analysis reports correlations as high as .90. Bommer et al.’s (1995) meta-analysis also finds a correlation between the two types of measures ($r = .30$) that becomes much stronger ($r = .71$) when perceptual and objective measures of performance tap the same dimension of performance (e.g., effectiveness or efficiency). Furthermore, Wall et al. (2004), Ketokivi and Schroeder (2004), and Singh et al. (2016) find sufficiently high correlations between perceptual and objective measures of performance to warrant treating the former as reliable and valid measures of performance. In short, while not interchangeable, employee perceptions of performance are sufficiently correlated with more objective measures to allow one to make reasonable inferences about how well an organization performs.

In addition, employee perceptions of organizational performance are valuable because they are correlated with various antecedents of organizational performance. Research on employees’ perceived image of their organization, including its values, mission, capacities, and performance, indicates that more positive images lead employees to identify more strongly with their organization (Dutton, Dukerich, & Harquail, 1994; Rho, Yun, & Lee, 2015). Organizational identification, in turn, has been found to be related to a range of antecedents of performance, including cooperation (Dukerich, Golden, & Shortell, 2002), extra-role behavior (Rho et al., 2015; van Dick, van Knippenberg, Kerschreiter, Hertel, & Wieseke, 2008), job satisfaction (van Dick et al., 2004; van Dick et al., 2008), motivation (Pratt, 1998), and organizational commitment (Dutton et al., 1994). Thus, knowledge of employee perceptions of performance can be used to infer something about employee behavior and attitudes that influence organizational performance.

The Direct Link Between Outsourcing and Performance

Public organizations have undergone significant reforms over the last few decades, including the growing use of market-based practices, such as outsourcing that are associated with the NPM (Hodge, 2000).¹ Proponents of NPM-oriented reforms postulate that these reform efforts will improve public organizations’ performance through increasing administrative efficiency and effectiveness (e.g., Osborne & Gabler, 1992). Anticipated gains from government outsourcing are grounded on the proposition that governmental organizations lack competition and private ownership (Petersen, Hjelmar, & Vrangbæk, 2018). Governmental organizations rarely experience competitive pressures and can avoid bankruptcy conditions that undermine efficiency

(Petersen et al., 2018). Private organizations, on the contrary, face competition and ownership constraints in their business. Provision of public services by private or non-profit organizations, therefore, is expected to produce high quality services more efficiently.

The literature on public–private partnerships also emphasizes the expertise both private and nonprofit organizations hold. Public agencies can utilize their expertise and experience in providing public services through outsourcing with these organizations (Berrios, 2006). Particularly, nonprofit organizations are treated as a good alternative to public agencies due to their proximity to the communities and lower labor costs (Denhardt, Denhardt, & Blanc, 2014). Furthermore, the network management literature implies that when managers have expertise in contract management and the ability to handle issues of control and accountability, outsourcing can be a means of improving organization performance (Agranoff, 2006). Outsourcing can also enable agencies to focus on core activities and competencies (J. B. Quinn & Hilmer, 1994), and help them respond more rapidly to changes in demand.

Notwithstanding, other streams of research posit negative consequences of government outsourcing in terms of organizational performance. TCE is perhaps the predominant theoretical approach to evaluating the outsourcing decision (Williamson, 1985, 1991).² According to TCE, the optimal choice between direct public provision (hierarchical governance) and outsourcing (market-based governance) is that which is comparatively most efficient, considering the sum of transaction costs. The efficiency calculation is altered by the characteristics of the exchange. For a simple example, consider a government contract for technology to process applications for drivers' licenses. Technology changes rapidly so the value of the product and services are not easily knowable. In such an uncertain environment, TCE predicts an in-house solution. In general, the theory predicts that market-based solutions are more efficient for simple exchanges, but in-house solutions are more efficient for complex exchanges. A relatively small body of TCE focuses on performance results, and the body of evidence yields mixed results. For example, Leiblein, Reuer, and Dalsace (2002) find that neither outsourcing nor internalizing resulted in better technological performance. In contrast, Silverman, Nickerson, and Freeman (1997), Masten, Meehan, and Snyder (1991), and Nickerson and Silverman (1999) point to negative effects, including lower organizational survival rates and lower earnings.

In any case, agency costs negatively affect performance. Jensen and Meckling (1976) succinctly summarize the link between agency costs and performance when they assert, “. . . divergent interests lead to a reduction in welfare experienced by the principal” (p. 308). In the context of outsourcing, agency cost arises when the agent (supplier) is given discretion to make decisions that affect the principal (government).³ The root of the problem is information

asymmetry. If it were costless for the principal to observe the agent's behavior, the agent would behave no differently than the principal, which is to say all actions would be in the principal's best interest. However, professional services have an elusive quality and the principal cannot always determine if poor results are a function of the agent's behavior or of other circumstances. For example, government can never be sure it obtained the “best work” of an engineer or an attorney. Suppliers are inclined to take advantage of the situation by shirking or self-dealing. Hart, Shleifer, and Vishny (HSV; 1997) expose this problem using the example of outsourcing prison services. Formally modeling the outsourcing decision, HSV show the private provider's motive to cut costs and compromise on quality can be too strong to overcome. The problem is most acute when service quality cannot be fully specified, and therefore, contracts are incomplete, the typical case when government outsources professional services (e.g., Alonso & Andrews, 2016; Walker, Boyne, & Brewer, 2010).

There is no scenario where agency costs disappear. Government can take steps to mitigate abuses associated with the principal-agent problem, for example, by hiring independent third-party monitors, placing contractual limits on the supplier's decision authority, or adding bonding requirements to the contract. The government can also attempt to align the parties' interests by including incentives and penalties in the contract. All of these actions increase overall transaction costs. Moreover, government cannot entirely correct the problem; the infinite number of potential contingencies will always leave room for supplier opportunism. This is the very nature of incomplete contracting—a world where contingencies can never be fully known and quality can never be fully specified.

The various theoretical perspectives we advanced point to both positive and negative associations between outsourcing and organizational performance. We, therefore, present competing hypotheses:

Hypothesis 1a: Outsourcing has a positive relationship with organizational performance.

Hypothesis 1b: Outsourcing has a negative relationship with organizational performance.

Outsourcing's Indirect Impact on Performance

Reformers contend that market-oriented reforms will lead to improvements in productivity and performance, even though this assertion often fails to garner empirical support in research (Feeney & DeHart-Davis, 2009; Meier & O'Toole, 2009). On the contrary, the literature on organizational change indicates that organizational changes or reforms can engender conditions that adversely affect work motivation and other attitudes toward work (Isabella, 1993). As such, outsourcing can affect organization performance through its

influence on employees not displaced by outsourcing (Mone, 1997), particularly their job satisfaction.

Outsourcing's effect on job satisfaction. Research on reinvention suggests a number of possible advantages of outsourcing that employees may experience. First, government outsourcing may bring less red tape for employees to follow (Vrangbæk, Petersen, & Hjelmar, 2015). Evidence shows that reinvention reforms lead to lower levels of red tape (Moynihan & Pandey, 2007; Naff & Crum, 1999), and if employees view the reforms as reducing red tape, implementation of reforms can positively affect PSM (Davis & Stazyk, 2014). The NPM movement highlights deregulating internal administrative and streamlining procurement processes in fostering efficiency and effectiveness while leaving more discretion (or empowerment) for employees in managing partnerships with contractors to agencies (Thompson & Riccucci, 1998). Hence, lower levels of red tape and higher levels of PSM as consequences of outsourcing can result in higher job satisfaction among employees.

Also, scholars have emphasized the benefit of expertise and creativity that employees and government agencies can gain through outsourcing with external actors (Lindholst et al., 2018; Van Slyke, 2009). Government outsourcing may provide governmental officials with “learning opportunities in which the knowledge of or ideas for improved routines, methods, processes and/or how to undertake specialized tasks were transferred from private contractors to public clients or became available through contractual relations” (Lindholst et al., 2018, p. 1058). Given certain autonomy in managing the partnership with contractors, government officials may be able to improve their productivity with new ideas and methods that facilitate better work process and innovation in their organization.

Another potential positive outcome of government outsourcing in terms of employee job satisfaction is higher responsiveness to external constituencies (Thompson & Riccucci, 1998). Private sector contractors typically put a priority on customer satisfaction, and nonprofit contractors often maintain close relationships with service recipients and local communities. As agencies outsource their services and programs, their employees can witness increasing responsiveness of those services and programs, and those who possess a strong public service orientation will experience higher job satisfaction (Vrangbæk et al., 2015).

Meanwhile, there are reasons to believe outsourcing may negatively affect job satisfaction. Research on organization reform and work stress suggests that government outsourcing can trigger events that harm employee work attitudes (Isabella, 1993). Psychological contract theory predicts the situations where employees withdraw themselves from their workplace both psychologically (i.e., lower job satisfaction) and physically (i.e., quit). The psychological contract is unique to each individual and multidimensional, including relational and transactional dimensions (Freese & Schalk,

2008). The relational dimension is associated with intrinsic expectations (e.g., how people are treated). The transactional dimension is associated with tangible expectations (e.g., pay and job security). If the organization does not live up to an employee's expectations, the psychological contract is violated. Government outsourcing seems to negatively affect both transactional and relational dimensions of psychological contract established in employer–employee relationships.

First, research on work motivation among public employees suggests that government outsourcing can hurt public employees' intrinsic motivation. In particular, PSM scholars make a case for the unique characteristics of those who choose to work for government, pointing out that government employees have a predisposition to respond to intrinsic motivations that are grounded primarily or uniquely in public institutions, more so than their private sector counterparts (e.g., Perry & Wise, 1990).⁴ According to the literature, individuals with a high sense of public purpose are more likely to choose government jobs (Houston, 2000). Empirical studies support these general points. In addition, public employees appear to value different types of rewards compared with their counterparts in business, placing more value on public service work than monetary rewards (Rainey, 2014; Wittmer, 1991).

The literature does not imply that all public employees accept a job with government for reasons other than public service motives. Some employees may have preferred the convenience of the location, the pay structure, opportunities for advancement, or perceived job security. However, we posit that, even in the absence of PSM, government employees expect the policies and practices of the organization to emphasize public values. A public organization signals its values in various ways, but perhaps most importantly through its mission statement. Mission statements of public organizations almost invariably claim lofty public service values, such as equity, protection from harm, fairness, transparency, and equal opportunity. For example, the Department of Labor (DOL, 2018) vows to promote the welfare of wage earners. Government employees will be aware of the organization's outward commitment to values rooted in public service, either because they perceive an alignment between the organization's values and their own PSMs or because the organization's mission is a consistently visible signal of those values. This awareness becomes part of what the employee comes to expect from the organization. Therefore, if an agency continues outsourcing services and programs with a strong motive on imposing market-oriented values (i.e., efficiency), employees may perceive a breach with what they value and expect public organizations to pursue, or simply a breach of the psychological contract. Agency, then, may experience reduced work motivation and job satisfaction among employees who no longer embrace the values being promoted through outsourcing (Dahler-Larsen & Foged, 2018).

Second, government officials and scholars alike have expressed concern with the downsizing and displacement of public employees (Hodge, 2000; Savas, 2000). Research indicates that employees react to changes in job security as if the organization broke an important promise and violated its psychological contract (Robinson & Rousseau, 1994; Rousseau, 1990). This may happen to public sector employees. While the public sector is known for providing job security to employees (Vrangbæk et al., 2015), government outsourcing often involves eliminating units, positions, or programs, as well as reducing full-time employment (Fernandez, Smith, & Wenger, 2007; Morrison & Robinson, 1997). Public employees not displaced by outsourcing may come feel that their job security is threatened, thereby reducing their job satisfaction (Spector, 1997).

In sum, we present two contrasting hypotheses regarding how outsourcing affects employees' job satisfaction:

Hypothesis 2a: Outsourcing has a positive relationship with employee job satisfaction.

Hypothesis 2b: Outsourcing has a negative relationship with employee job satisfaction.

Job satisfaction and performance. Early human relations theorists proposed that satisfied workers would be more productive. The most comprehensive meta-analysis of empirical studies on the link between performance and job satisfaction shows the two concepts to be correlated at about the .30 level, with higher correlations for more complex jobs (see Judge, Thoresen, Bono, & Patton, 2001). An earlier meta-analysis indicated that the strength of the job satisfaction–performance relationship varies by aspect of job, with much lower correlations for satisfaction with pay and higher correlations with intrinsic features of the job (Iaffaldano & Muchinsky, 1985). Job satisfaction can positively affect performance by improving levels of energy, activity, and creativity, as well as by improving memory and analytical abilities (Brief & Weiss, 2002; Judge et al., 2001). Job satisfaction can also influence performance by increasing organizational commitment and organizational citizenship behavior and reducing turnover and absenteeism (Cooper-Hakim & Viswesvaran, 2005; Harrison, Newman, & Roth, 2006; Judge et al., 2001; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). We, therefore, propose the following hypothesis:

Hypothesis 3: Employee job satisfaction has a positive relationship with organizational performance.

Linking outsourcing, job satisfaction, and performance. To this point, we have hypothesized direct links between outsourcing and performance, outsourcing and job satisfaction, and job satisfaction and performance. The causal path we have described implies a possible indirect link between outsourcing and performance, that is, outsourcing may influence

performance through its effect on one's attitude toward the job. From this perspective, job (dis)satisfaction is a link in the causal chain that explains observed effects between outsourcing and performance.

Previous studies support the causal structure proposed. For example, Harrison et al. (2006) show job satisfaction impacts commitment, which in turn affects performance. However, the extent of mediation is important to our claims. Specifically, if job satisfaction fully mediates the relationship between outsourcing and performance, research focusing solely on outsourcing may tell us little about its effect on performance. However, if job satisfaction only partially mediates relationships, outsourcing explains some variance in organizational performance that job dissatisfaction cannot explain. Thus, testing mediation effects is essential for understanding why outsourcing might impact organizational performance. Accordingly, we propose a fourth set of hypotheses relevant to causal structure.

Hypothesis 4a: Job satisfaction fully mediates the relationship between outsourcing and organizational performance.

Hypothesis 4b: Job satisfaction partially mediates the relationship between outsourcing and organizational performance.

Method

Data

Our sample consists of data from three sources: the U.S. OPM's FEVS, OPM's Fedscope, and the U.S. Office of Federal Procurement Policy's (OFPP) Federal Procurement Data System (FPDS). The FPDS includes federal agency–level information on contracts, such as the number of contract actions, award amounts, and contract types. The FPDS offers information on outsourcing for cabinet-level departments and independent agencies, and this hinders us from obtaining data for subunit agencies within cabinet-level departments. Therefore, our unit of analysis is the federal agency, including cabinet-level departments and independent agencies. Our sampling strategy involves merging data from each source to obtain information for different federal agencies across time. The result is an (unbalanced) panel data structure with 132 observations, inclusive of years 2010 through 2014. The FEVS survey is administered yearly by the OPM and obtains scores from over 400,000 employees in about 80 agencies related to satisfaction, engagement, and perceptions of the workplace environment and human resource management practices. OPM's Fedscope is a searchable database that provides yearly information on the composition of the federal civilian workforce. Individual survey responses are obtained from all levels, including nonsupervisors, supervisors, managers, and senior leaders in an agency, and they are aggregated and measured as proportions of all responses.⁵

Dependent Variable

The dependent variable, *organizational performance*, is a perceptual measure of performance derived from responses to the FEVS survey item: “My agency is successful at accomplishing its mission.” The item is Likert-type with five response categories anchored at *strongly agree* and *strongly disagree*. The value is calculated as the proportion of all respondent employees who expressed some level of agreement (*strongly agree* or *agree*). As aforementioned, perceptual measures of performance are moderately to strongly correlated with archival measures (Bommer et al., 1995; Dawes, 1999; Dess & Robinson, 1984; Ketokivi & Schroeder, 2004; Singh et al., 2016; Vij & Bedi, 2016; Wall et al., 2004). In addition, employee perceptions of performance influence organizational identification, an antecedent of various attitudes and behavior that influence organizational performance (Dukerich et al., 2002; Dutton et al., 1994; Pratt, 1998; Rho et al., 2015; van Dick et al., 2008).

Independent Variables

We focus on two main predictors. Data for the first predictor, *outsourcing activity*, come from the FPDS. The variable is measured as the total number of contract actions per employees in each federal agency, including new and modified contracts with external organizations. Amendments are considered inefficient to the organization because they entail wasteful ex post haggling (Williamson, 1985). Extant research suggests nearly 70% of contracts are amended, many of which are not simple changes in language but rather substantive changes to work scope or implementation processes (Susarla, Barua, & Whinston, 2009). We allow a time-difference (1 year) between the outsourcing measure and dependent variable. We executed the diagnostic test suggested by Bellemare, Masaki, and Pepinsky (2017), and the result indicates that the use of a lagged explanatory variable (*outsourcing activity*) is appropriate in addressing potential reverse causality between *outsourcing activity* and *organizational performance*.⁶

The second main predictor, *job satisfaction*, is an indicator from the FEVS: “Considering everything, how satisfied are you with your job?” The measure is a global score accounting for an employees’ overall level of satisfaction with the job. The value is the proportion of respondents who are satisfied with their job, calculated from five response categories and anchored at *strongly agree* and *strongly disagree*.

Control Variables

The extensive literature on organizational performance reveals other factors that may affect performance as well as outsourcing and job satisfaction, including working conditions, workplace climate, the composition of the workforce, organizational

resources, and supervisory practices (Fernandez & Moldogaziev, 2011; Peters & O’Connor, 1980; Pfeffer, 1997; Quigley, Tesluk, Locke, & Bartol, 2007; Rainey, 2014; Spector, Dwyer, & Jex, 1988). Accordingly, we control for a range of factors using data from the FEVS. The relevant survey indicators tap into respondents’ perceptions and are measured with a Likert-type response set, anchored at *strongly agree* and *strongly disagree*. Control measures are computed from individual respondents by agency and then aggregated to the agency level at each yearly interval. They include *physical conditions*, *resource sufficiency*, *skill opportunities*, and *knowledge sharing*. In addition, human resource capacity is reflected in the demographic makeup of an organization. Accordingly, we compute yearly agency averages for the proportion of the total agency workforce who are female (*gender*), supervisors (*supervisory status*), and minorities (*minorities*). We also control for average age of the workforce (*worker age*) and total number of employees (*agency employees*).

Modeling

Panel data methods offer several advantages over cross-sectional data by increasing variability, reducing omitted variable bias, and enabling the study of dynamic phenomena. The panel data structure allows for testing aggregated information from individual’s respondents at the agency level and estimating relationships among variables over time (2010-2014).

Our dependent variable is a ratio with values between 0 and 1. Given the unbalanced panel data structure, we use a generalized estimation equation (GEE) model (Papke & Wooldridge, 2008). We also use an organizational fixed-effects estimator to control for time-invariant unobserved heterogeneity and reduce omitted variable bias (Wooldridge, 2010). Finally, year dummy variables are included to control for unobserved organizational characteristics that may vary over time.⁷

Our baseline panel regression model for agency i in year t is

Organizational

$$Performance_{it} = a_i + b_1 Outsourcing Activity_{it-1} + b_2 Job Satisfaction_{it} + g_1 YR_t + X_{it}b + e_{it},$$

where *Organizational Performance* is agency i ’s performance in year t as the proportion of employees reporting positive perception on their agency’s mission achievement; a_i stands for agency fixed characteristics; *Outsourcing Activity* _{$it-1$} represents the number of actions that agencies take relating to outsourcing per employee in year $t - 1$, *Job Satisfaction* _{it} represents the proportion of employees who were at least satisfied with their job in agency i in year t , YR_t is a vector of year dummy variables (with 2010 as the reference year), and X_{it} is a vector of the control variables mentioned above.

Results

Table 1 presents descriptive statistics, reporting the mean, standard deviation, and median values for each variable. Focusing on the median for the dependent variable, *organizational performance*, values range from a low of 75.90% (2011 and 2013) to a high of 78.03% (2010). The values presented are the percentages of positive responses aggregated at the organizational (agency) level. With respect to the variable *job satisfaction*, we consider even minor year to year fluctuations as meaningful given that satisfaction is considered a fairly stable characteristic (Staw, Bell, & Clausen, 1986). The values in our sample range from a low of 64.52% (2014) to a high of 69.71% (2011). *Outsourcing activity* measured as total contract actions per employee vary from year to year in our sample. Focusing on the median values because of the skewed distribution, the table reveals a value of 0.78 total actions per employee in 2010 decreasing to 0.76 in 2011, peaking at 0.84 in 2013, and then decreasing to 0.79 in 2014.

Table 2 presents results for GEE models, each with 132 observations, all of which are statistically significant overall (Wald chi-square < 0.001). For a more intuitive interpretation of results, Table 3 presents estimated marginal effects of key independent variables from Models 1 to 6.

As shown in Table 2, we regress *organizational performance* on *outsourcing activity* and other covariates, excluding *job satisfaction*, in Model 1 (and Model 4). In Model 2 (and Model 5), we regress *organizational performance* on both *outsourcing activity* and *job satisfaction* as a mediator, along with other covariates. In Model 3 (and Model 6), we regress *job satisfaction* on *outsourcing activity* and other covariates. While the first three models (Models 1-3) measure outsourcing activity as total actions per employee, the latter three models (Models 4-6) measure it as total actions. Explanatory variables in all models are standardized to allow for a comparison of effects across variables. We discuss findings from the former models (Models 1-3) for a more intuitive interpretation.

Hypotheses 1a and 1b predict *outsourcing activity* is associated with *organizational performance*. We observe a direct negative relationship between these two variables. Even when controlling for the potential effect of *job satisfaction* on *organizational performance* in Model 2, the results indicate an increase in *outsourcing activity* leads to a decrease in *organizational performance*. The estimated marginal effect, -0.008 ($p < .01$), of total actions per employee in Model 2 implies that performance decreases by about 0.8 percentage points for every 9.40 (1 standard deviation) increase in outsourcing actions per employee. Thus, Hypothesis 1b indicating the negative relationship between outsourcing and organizational performance is supported.

Hypotheses 2a and 2b predict outsourcing is associated with job satisfaction. We find *outsourcing activity* has a negative impact. The estimated marginal effect of -0.003 ($p <$

.05) implies that a 1 standard deviation increase in total actions per employee (about 9.40 per year) reduces the proportion of employees satisfied with their job by 0.3 percentage points. Thus, Hypothesis 2b is supported. This result is consistent with the findings from research on the negative effects of organizational changes and reforms on employees' well-being (Korunga, Scharitzer, Carayon, & Sainfoft, 2003; Mikkelsen, Osgard, & Lovrich, 2000; Moynihan & Pandey, 2007; Noblet, Rodwell, & McWilliams, 2006; Yang & Kassekert, 2010). The reduction in agency personnel, functions, and budgets associated with outsourcing may generate discomfort for federal employees who perceive outsourcing as a threat to their job security (Hobföll, 1998).

Hypothesis 3 predicts a relationship between *job satisfaction* and *organizational performance*. An estimated marginal effect of *job satisfaction* in Model 2 of 0.025 ($p < .01$) implies that a 1 standard deviation increase (about 6 percentage points) in the proportion of employees who are satisfied with their jobs will lead to an increase of about 2.5 percentage points in the proportion of employees who perceive their agency as effective in accomplishing its mission. Thus, results lend support to the positive association between *job satisfaction* and *organizational performance*. As job satisfaction research indicates, federal agencies can expect better performance when employees are more satisfied with their job (Brief & Weiss, 2002; Harrison et al., 2006).

Hypothesis 4 predicts two possibilities with respect to the causal structure. Specifically, Hypothesis 4a predicts job satisfaction fully mediates the relationship between outsourcing and organizational performance. Alternatively, Hypothesis 4b predicts job satisfaction partially mediates the relationship between outsourcing and organizational performance. To test the mediation hypothesis, we followed the approach of Kenny, Kashy, and Bolger (1998). When using multivariate regression models, a mediating effect is confirmed when the following conditions in our model are met: (a) a statistically significant relationship between *outsourcing* and *job satisfaction*; (b) a statistically significant relationship between *outsourcing* and *organizational performance* and between *job satisfaction* and *organizational performance*; and (c) an absolute value of the estimated coefficient of *outsourcing* that becomes lower or becomes statistically insignificant once *job satisfaction* is included in the regression model. For a full mediation, the independent variable, *outsourcing*, must not relate with the dependent variable, *organizational performance*, when the mediation variable is added to the equation.

The absolute value of an estimated marginal effect of outsourcing decreases from 0.8% in Model 1 to 0.7% in Model 2. That is, the magnitude of a negative effect of *outsourcing activity* on *organizational performance* is partially reduced by including *job satisfaction*. This finding refutes Hypothesis 4a but supports Hypothesis 4b. That is, *job satisfaction* partially mediates the relationship between *outsourcing activity* and *organizational performance*.

Table I. Descriptive Statistics.

Year	2010	2011	2012	2013	2014	Total
Organizational performance						
<i>M</i>	0.775	0.766	0.763	0.766	0.752	0.765
<i>Mdn</i>	0.780	0.759	0.772	0.759	0.763	0.769
<i>SD</i>	0.10	0.08	0.07	0.08	0.09	0.09
Outsourcing activity (total actions)						
<i>M</i>	68,813	88,399	121,472	87,489	101,424	92,152
<i>Mdn</i>	8,244	10,314	14,293	8,801	14,228	10,434
<i>SD</i>	178,567	263,193	370,418	332,605	344,652	297,680
Outsourcing activity (total actions per employee)						
<i>M</i>	3.636	3.166	3.243	1.818	1.945	2.787
<i>Mdn</i>	0.824	0.821	0.789	0.858	0.885	0.835
<i>SD</i>	12.690	10.337	9.764	2.977	3.109	8.809
Job satisfaction						
<i>M</i>	0.697	0.648	0.658	0.648	0.645	0.660
<i>Mdn</i>	0.698	0.645	0.661	0.645	0.645	0.657
<i>SD</i>	0.05	0.06	0.05	0.06	0.07	0.06
Resource sufficiency						
<i>M</i>	0.525	0.456	0.487	0.456	0.463	0.478
<i>Mdn</i>	0.523	0.449	0.485	0.449	0.467	0.474
<i>SD</i>	0.09	0.10	0.09	0.10	0.09	0.10
Knowledge sharing						
<i>M</i>	0.730	0.735	0.735	0.735	0.756	0.738
<i>Mdn</i>	0.727	0.729	0.736	0.729	0.746	0.733
<i>SD</i>	0.06	0.06	0.04	0.06	0.06	0.06
Physical conditions						
<i>M</i>	0.728	0.722	0.703	0.722	0.724	0.720
<i>Mdn</i>	0.707	0.714	0.707	0.714	0.707	0.710
<i>SD</i>	0.09	0.08	0.06	0.08	0.08	0.08
Skill opportunities						
<i>M</i>	0.670	0.630	0.650	0.630	0.639	0.644
<i>Mdn</i>	0.679	0.629	0.642	0.629	0.620	0.640
<i>SD</i>	0.09	0.07	0.07	0.07	0.09	0.08
Supervisor						
<i>M</i>	0.244	0.194	0.196	0.194	0.205	0.207
<i>Mdn</i>	0.213	0.177	0.183	0.177	0.185	0.184
<i>SD</i>	0.11	0.06	0.06	0.06	0.07	0.07
Minority						
<i>M</i>	0.401	0.379	0.381	0.379	0.339	0.377
<i>Mdn</i>	0.349	0.346	0.351	0.346	0.337	0.346
<i>SD</i>	0.16	0.14	0.12	0.14	0.07	0.13
Gender (Male)						
<i>M</i>	0.491	0.478	0.478	0.478	0.501	0.489
<i>Mdn</i>	0.497	0.479	0.490	0.479	0.512	0.497
<i>SD</i>	0.12	0.11	0.11	0.11	0.10	0.11
Age						
<i>M</i>	46.53	46.66	46.81	47.06	46.70	46.75
<i>Mdn</i>	47.02	47.08	47.08	47.24	47.31	47.31
<i>SD</i>	2.90	2.76	2.26	2.76	2.22	2.59
Total employees						
<i>M</i>	39,474	40,367	46,273	40,025	48,782	42,643
<i>Mdn</i>	9,818	11,023	14,284	10,137	15,350	12,588
<i>SD</i>	67,009	68,363	72,757	70,711	77,228	70,127
Sample size	34	33	28	33	27	135

Table 2. Results of Panel Generalized Estimating Equation Regression Model.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Job satisfaction	Performance	Performance	Job satisfaction	Performance	Performance
Outsourcing activity (total actions per employee)	-.013** (.032)	-.043*** (.010)	-.039*** (.011)			
Outsourcing activity (total actions)				-.018*** (.009)	-.052*** (.018)	-.045*** (.016)
Job satisfaction			0.138*** (0.052)			.130*** (.043)
Resource sufficiency	.027 (.034)	.254*** (.057)	.244*** (.049)	.033 (.027)	.266*** (.039)	.254*** (.037)
Knowledge sharing	.111*** (.027)	.110* (.063)	.052 (.058)	.101*** (.020)	.077* (.039)	.028 (.039)
Physical conditions	-.003 (.035)	.164** (.066)	.164*** (.063)	-.006 (.026)	.153*** (.032)	.155*** (.038)
Skill opportunities	.127*** (.025)	.023 (.046)	-.046 (.053)	.131*** (.016)	.038 (.032)	-.030 (.042)
Supervisor	-.010 (.016)	.065*** (.018)	.070*** (.020)	-.012 (.010)	.052*** (.014)	.057*** (.015)
Gender	.033 (.038)	-.001 (.043)	-.020 (.034)	.031 (.024)	-.006 (.028)	-.024 (.024)
Minority	.026 (.019)	-.001 (.037)	-.014 (.038)	.020* (.011)	-.020 (.026)	-.029 (.026)
Age	.078*** (.040)	.061 (.084)	.019 (.081)	.084*** (.023)	.076 (.049)	.034 (.046)
Total employees	-.006 (.028)	.011 (.049)	.015 (.045)	.006 (.015)	.052* (.029)	.050* (.025)
Constant	1.092*** (0.088)	.749*** (.040)	1.132*** (.093)	.738*** (.031)	1.099*** (.066)	1.067*** (.053)
Agency fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
N	132	132	132	132	132	132
Wald chi-square	667.08***	894.58***	929.76***	960.38***	1455.13***	921.2***

Note. Bootstrapping standard errors are in parentheses.

* $p < .1$. ** $p < .05$. *** $p < .01$.

Table 3. Estimated Marginal Effects of Outsourcing Activity and Job Satisfaction on Organizational Performance.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Job Satisfaction	Performance	Performance	Job Satisfaction	Performance	Performance
Outsourcing activity (total actions per employee)	-0.003*** (0.002)	-0.008*** (0.003)	-0.007*** (0.003)			
Outsourcing activity (total actions)				-0.004*** (0.002)	-0.010*** (0.003)	-0.008*** (0.003)
Job satisfaction			0.025** (0.010)			0.023* (0.010)

* $p < .1$. ** $p < .05$. *** $p < .01$.

In regard to the control variables, we find that knowledge sharing among employees, opportunities to improve employee skills, total employees, proportion of employees who are minorities and male, and average employee age do not explain variation in *organizational performance* (see Table 2, Model

3). On the contrary, employee perception of resources, physical conditions in the workplace, and the proportion of supervisors are positively associated with *organizational performance*.

As a robustness check, we tested additional models. First, given the potential risk of common method bias due to our

current data structure, we performed both Harman's single factor test and Brewer's split sample method test. The results indicate that using a single survey instrument in measuring both *job satisfaction* and *organizational performance* does not result in common method bias.⁸ Next, we considered alternative measures of outsourcing, including total spending and net changes in total actions. We also tested a two-way fixed effects (FE) regression models. In all of these cases, the results are consistent with those reported.⁹

Discussion and Conclusion

Government outsourcing has been a long-standing interest to both scholars and practitioners. The literature on outsourcing outcomes has focused on certain evaluation criteria—mostly market-oriented values—emphasized by external constituencies. Although the literature points to potential changes in working conditions and management practices resulting from outsourcing, and alludes to how these changes can affect employee attitudes, a firm understanding of outsourcing from the perspective of government employees remained elusive. This study hypothesized that government outsourcing affects—either positively or negatively—employees' perceptions of how well their organization performs, directly but also indirectly through outsourcing's influence on employees' attitudes toward their job.

Our findings do not support the traditional narrative that market-oriented practices improve organizational performance in the public sector. We rather report evidence of the negative impact of outsourcing on perceived performance and a viable causal mechanism linking outsourcing to organizational performance. Specifically, as government outsourcing activity increases, employees report lower agency performance. Furthermore, an increase in outsourcing lowers job satisfaction, precipitating a further decrease in perceived performance. These findings raise doubts on the potential benefits of outsourcing predicted by proponents of the NPM.

A main claim in this research is that comparing direct production with outsourcing, or with any other governance mode for that matter, requires a more complete picture of comparative governance costs, including those that relate to human resources, such as job satisfaction and turnover. The finding from this study on the direct negative relationship between outsourcing and perceived organizational performance indicates that transaction costs, including agency costs, may be greater than anticipated and may outweigh the benefits of outsourcing. Public managers should seek ways to reduce agency costs that federal agencies may experience, while strengthening monitoring and evaluation of contractors frequently to mitigate abuses associated with the principal-agent problem.

Our findings also show that an increase in outsourcing can harm public employees' job satisfaction, and thus organizational performance (see Judge et al., 2001). These findings highlight critical roles of managers in designing and

implementing internal managerial practices to instill positive outcomes of government outsourcing in employees' job satisfaction. For example, given the critical role of organizational innovativeness in improving organizational performance (Han, Kim, & Srivastava, 1998), agencies can benefit from creating work environments which allow their employees to gain new expertise and methods from contractors. In addition, as recent studies have emphasized (e.g., Christensen, Paarlberg, & Perry, 2017), the managerial strategy to allow employees to interact with service beneficiaries will positively stimulate employees' intrinsic motivation. Therefore, agencies need to provide their employees with various opportunities to observe the quality of outsourced services and to interact with the beneficiaries of those services. More importantly, leaders should frequently and openly communicate with employees to determine if they perceive government outsourcing as fulfilling its promises.

In addition, this research presents theoretical implications. This research underscores an aspect of transaction cost theory that is understudied. Although the focus of TCE is on transaction costs, there is more to Oliver Williamson's argument. Specifically, "... economizing takes place with reference to the sum of production costs and transaction costs, whence tradeoffs in this respect must be recognized" (Williamson, 1985, p. 22). Internal production costs arguably include effects on the workforce. To overlook these effects, good or bad, is to ignore the "human value of the enterprise" and to naively assume organizations can achieve their missions without attention to what employees expect in return for their efforts (Mayo, 2001).

This research also offers a path for future work on the psychological contract. Although the literature on the psychological contract is well-established, the research is still considered nascent. As a result, research findings are mixed and questions remain regarding the links between different dimension of the psychological contract and a range of outcomes. The literature describes the psychological contract as a construct comprised of a socio-emotional dimension that is relational and subjective in nature, as well as a transactional, more short-term dimension based on extrinsic rewards such as pay. The distinctiveness of public sector employees may be explained by conceiving of a third "public value" dimension to the psychological contract. Specifically, those who work for government are likely to be motivated by public values. In addition, the mission statement of the organization signals a set of values uniquely associated with public institutions. The combination of values, either inherent in the individual or communicated in the organization's mission statement, or both, form the basis of employee expectations, the psychological contract. The increasing trend of outsourcing changes the nature of the job and value priorities. The resulting modified organizational value system can be conceived as a violation of psychological contract. Work by Freese and Schalk (2008) on how to measure psychological contracts is a good starting point.

Some limitations to this study should be mentioned. To begin with, the results should be interpreted with caution as our main objective was to test a plausible explanation for the underlying causal mechanism with respect to the link between outsourcing and organizational performance. Although the logic we advance bears out in tests, the causal path is likely to be more complex and nuanced. For example, levels of job satisfaction may in part depend on individual attributes we have not considered, and other factors such as commitment may mediate the relationship between job satisfaction and performance. Additional tests for moderation and mediation would further reveal the mechanisms at work. In addition, the aggregated data structure in our approach may result in loss of information among individual responses. In particular, interpreting the results of organizational level analyses calls for care to avoid making unsubstantiated inferences about how individual employees feel about work. While an individual-level analysis would test the robustness of our results, replication of this study with individual-level data is not feasible as FEVS does not offer any information to identify individual respondents across time. A future study could try to determine how outsourcing influences perceived performance at the individual level with a multilevel analysis of cross-sectional data.

Finally, unobserved contextual variables at the agency level may affect the relationship between outsourcing and organizational performance. For example, agencies may vary in their use of strategies for planning and managing outsourcing initiatives. Each agency may differ by its inherent relationships with agents. Due to the data limitations, this research was not able to include these factors in the empirical models. Yet, these agency characteristics are in general time-invariant within a short-period of time, and therefore, our approach to include agency fixed-effects estimator in the regression models should assuage concerns about omitted variable bias.

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Notes

1. We define government outsourcing consistent with Hodge (2000) as the delivery of public services by agents other than government employees. In contrast, privatization is accompanied by a change in ownership.
2. For an elaboration of transaction cost economics (TCE) theory, see Williamson (1985, 1991) and Gibbons (2010).
3. The agency cost problem has been extensively addressed in legal and economic literature (see Jensen & Meckling, 1976).
4. The literature on public service motivation (PSM) is thoroughly reviewed elsewhere (see Perry, 2000; Perry, Mesch, & Paarlberg, 2006).

5. We also analyzed our empirical models for two separate employee groups: supervisors and non-supervisors. The results were consistent across two different groups, and are available upon request.
6. The result is available upon request.
7. While cluster robust standard errors are recommended to address the potential risk of serial correlation and heteroscedasticity in panel data methods, they may not be optimal when the number of clusters are small: bootstrapping standard errors can mitigate this problem (Bertrand, Duflo, & Mullainathan, 2004).
8. The Harman test indicates that a single factor explains about 38% of entire variance in the survey items, a result not considered problematic (Fuller et al., 2016). The Brewer split sample method presents consistent results in both the level of fit-statistics (Wald chi-square values) and magnitude of estimated coefficients of key explanatory variables.
9. The results are available upon request.

ORCID iDs

Gyeo Reh Lee  <https://orcid.org/0000-0002-6327-4936>
Shinwoo Lee  <https://orcid.org/0000-0003-4713-7445>

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Author Biography

Gyeo Reh Lee is a Ph.D candidate in the School of Public and Environmental Affairs at Indiana University. Her research interests include public management and public finance often with a specific application to collaborative governance and government contracting.

Shinwoo Lee is an assistant professor in the School of Public Affairs at University of South Florida. His research focuses on organizational behavior and human resource management in the public sector, as well as financial management for public and non-profit organizations.

Deanna Malatesta is an associate professor in the School of Public and Environmental Affairs at Indiana University. Her research focuses on contracting, public management and governance, and public policy.

Sergio Fernandez is an associate professor in the School of Public and Environmental Affairs at Indiana University. His research focuses on organizational behavior in the public sector, government contracting and outsourcing, and representative bureaucracy.