



Article

Impact of agent's information advantage on the efficiency and quality of Contracting out: Focus on goal conflict and task characteristics

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Received:

Revised:

Accepted:

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Competing interests

No potential conflict of interest relevant to this article was reported.

Funding sources

Not applicable.

Acknowledgements

Not applicable.

Availability of data and material

Abstract

We analyze the impact of the information advantage of the agent on the performance of contracting out. Unlike in the general principal-agent theory, an agent's information advantage varies by the level of goal conflict and the type of delegated task in a bureaucratic setting. Our empirical analysis shows that agents facing high levels of goal conflict and possessing limited information advantages exhibit lower performance. Additionally, vague and complex tasks reduce agents' information advantage. To increase agents' information advantage and reduce related transaction costs, it is necessary to delegate the right type of task to the right type of agent. The goal of contracting out should also be set appropriately.

Keywords: contracting out, information advantage, information asymmetry, goal conflict, task complexity

Introduction

In April 2014, more than 300 students who were on their field trip to Jeju Island died as the Sewol ferry sank in the middle of the Southern Sea of Korea. Through subsequent investigations, it was revealed that the government had outsourced functions that should have been performed in-house because of their criticality and importance in protecting the safety and lives of citizens. The Sewol Ferry incident raised questions about whether it would be appropriate for the government to delegate to private contractors—who pursue economic efficiency—tasks that the government may understand better and be more committed to carrying out.

Existing studies on contracting out have long emphasized the principal-agent problem, especially information asymmetry, monitoring difficulties, and goal incongruence between government and contractors (Brown et al., 2006; Finkle, 2005; Johnston & Romzek, 1999; Larbi, 2006). Much of this literature, however, tends to treat information asymmetry as relatively fixed or exogenously given. As

Upon reasonable request, the datasets of this study can be available from the corresponding author.

Waterman & Meier (1998) argued, the degree of information asymmetry between the principal and the agent is not fixed or absolute in a bureaucratic setting. Rather, the degree of information asymmetry can vary depending on the characteristics of the principal and agent and the nature of the contracted task formed between them. Differences in goals between public and private organizations (Jørgensen & Bozeman, 2002; Rainey & Bozeman, 2000) and the complexity of delegated tasks can lead private contractors to lack sufficient information about what they are expected to do. Unlike in general principal-agent theory, the contractor's information advantage may not necessarily be greater than that of the principal.

In this study, we analyze the impacts of goal conflict and task characteristics that cause different degrees of information advantage on the quality and efficiency of contracting out using 2-year complete enumeration panel data collected through a survey of public officials in charge of contracting out in the Korean central government. If a contractor is a private organization whose primary goals are profit and cost efficiency (Jørgensen & Bozeman, 2002; Rainey & Bozeman, 2000), the efficiency of contracting out will increase because goal conflict and the information asymmetry between principal and agent are low. Task complexity, specificity, and the measurability of the performance goal also affect the level of information advantage of the agent and the performance of contracting out (Brown et al., 2018; Casady et al., 2023; Piatak & Jensen, 2024). Beyond traditional principal-agent theory, this study extends the theory by applying it to a bureaucratic setting.

This study also provides practical implications by stressing the importance of selecting proper agents and delegating appropriate tasks via contracting out. Delegating the right task to the right agent is important for ensuring efficiency and quality. First, it can reduce monitoring and management costs in contracting out. If public practitioners are aware of the potential information asymmetry at an early stage of contracting out and match tasks and agents properly, they may reduce additional costs associated with monitoring and incentive systems. Also, we can avoid tragic tragedies such as the Sewol ferry disaster by delegating the right task to the right agent who understands and acknowledges the value of public interest and service quality.

The Korean government's contracting out system differs from more conventional models in that both the range of contractors and the types of delegated tasks are highly diverse. This diversity makes the Korean case a useful empirical setting for examining how contractor type and task characteristics jointly shape contracting-out performance. Unlike in systems where outsourcing is concentrated in routine or clearly commercial activities, the Korean government has delegated not only simple service delivery but also more complex and value-laden tasks. This variation provides an important opportunity to examine which kinds of work are more appropriately delegated to which types of agents. Given that contracting out can affect service quality, efficiency, and ultimately citizens' well-being, it is important to consider not only whether governments delegate tasks, but also how they match specific tasks to appropriate contractors.

New Public Management (NPM) Movement and Contracting Out in Korea

The New Public Management (NPM) movement, which emerged in the United Kingdom (U.K.)

and the United States (U.S.) in the late 1970s, emphasizes market mechanisms to improve efficiency in public service delivery (Brunjes, 2020; Gruening, 2001). To reform public sector organizations and improve efficiency, the U.K. and U.S. governments adopted various types of policy tools such as budget cuts, vouchers, performance emphasis, performance auditing, and privatization (Gruening, 2001). The U.S. government focused on contracting out because they saw privatization as one of the most effective tools for increasing efficiency (Chi & Jasper, 1998).

Contracting out refers to the provision of public services by contractors such as for-profit companies, non-profit organizations, and public organizations on behalf of the government based on a contract (Brudney et al., 2005). The contractor provides the service instead of the government, but the government remains responsible for service delivery (Savas, 2001). Since many public services have natural monopolistic characteristics (Domberger & Jensen, 1997), there is little interest in efficiency or effectiveness (DeHoog, 1984). Thus, the government can easily spend excessively and become inefficient (Buchanan & Tullock, 2003; Niskanen Jr., 1971). Conversely, the market can provide services more efficiently through competition (Pack, 1987). The government expects efficiency that reduces public expenditure and improves government performance from contracting out, especially using market-based competition (Osborne & Gaebler, 1992; Savas, 1987). Like many countries that joined the NPM movement after the NPM administrative reform, South Korea started to use contracting as a policy tool to increase the efficiency of public services. Contracting out cases in Korea have several characteristics that differentiate them from contracting out cases in other countries. Contracting out has developed to share the government's work, which has dramatically expanded through the era of development. Korea achieved rapid economic growth, which the government led from the 1960s to the 1990s. Government tasks that embed public value and interest have been outsourced not only to relieve the government's burden but also to deal with the rapid expansion of the national economy (Lee et al., 2020).

For this reason, in Korea, selecting a contractor or agent is not necessarily based on complete competition. In many cases, the government determines whether a potential contractor is a suitable organization and designates a contractor to carry out contracting out. Only 20% of cases are contracted out based on complete competition (Lee et al., 2020). Criticism continues to be raised in many cases because contractors are selected not because of job performance ability or understanding of the goal of the work but because of path dependency over a long period of contracting. In the Sewol Ferry incident, the contractor in charge of the ship's inspection was repeatedly selected because it had maintained a long-term contractual relationship with the government but was not aware of changes in inspection items according to the government's changing regulations. In addition, in order to reduce management costs, skilled employees with abundant knowledge of the job were hired at low wages or not converted to full-time employees, resulting in a very high turnover rate.

Also, the types of contractor organizations vary, ranging from public enterprises to private firms. Since the late 1990s, the South Korean government has employed various types of organizations, from public enterprises and non-profit organizations to private firms, as contractors for a variety of contracted-out projects. The degree of understanding of the 'publicness' embedded in each contractor organization varies greatly. Public organizations prioritize public value and

social outcomes, whereas private organizations are primarily driven by profit and cost efficiency (Jørgensen & Bozeman, 2002; Rainey & Bozeman, 2000).

The types of delegated tasks vary from simple service delivery to more complex internal management of the government organization. The U.S. government confirmed that the internal management of the government organization, such as “the direction and control of federal employees” and the approval of position descriptions and performance standards for federal employees, should be performed inherently (Federal Acquisition Regulation, 2024). Contrary to the U.S. case, the Korean government delegated functions of managing government employees such as qualification test management, government employee training, the appointment of public works managers, and public organization evaluation. The U.S. government also categorized functions such as ‘the determination of agency policy, such as determining the content and application of regulations, among other things’ as inherently performed government functions (Federal Acquisition Regulation, 2024), whereas the Korean government delegated evaluation and recommendations for policy control standards and designing restrictions to the agent through contracting out. Some delegated tasks are ones on which the government could have a higher level of information and which it could carry out more actively than the contractor.

Principal-Agent Model and Information Advantage in a Bureaucratic Setting

Principal-agent model and the importance of information

The fundamental premise of contracting out lies in the characteristics of the government organization as an economic actor and its relationship with contractors. As Eisenhardt (1989) noted, the principal-agent relationship and related problems arise when the principal delegates their own work to the agent so that the agent acts on behalf of the principal. Since contracting out is defined as “to hire an outside contractor to produce or do” (Collins English Dictionary, 2022), a principal-agent relationship exists between the government and the contractor in contracting out (Brown & Potoski, 2006; Johnston & Romzek, 1999; Van Slyke, 2007).

Jensen & Meckling (1976) identified several characteristics of the principal-agent relationship. First, both the principal and agent may influence the other's behavior or decisions. Second, the principal cannot closely monitor the agent, so information asymmetry occurs. Third, the principal's goal and the agent's goal are different. For instance, the principal usually wants the project to succeed as efficiently as possible, but the agent wants to be paid as much as possible for as little effort as possible. Therefore, information asymmetry and goal incongruence readily arise in this relationship, which can lead agents to engage in opportunistic behaviors such as moral hazard, shirking, and quality shading (Elkomy et al., 2019). While the traditional principal-agent model focuses on information asymmetry running from agent to principal, recent work suggests that information problems matter in both directions. More broadly, studies of collaborative governance and coproduction show that information asymmetry increases transaction costs and reduces performance when actors lack sufficient information about organizational values, expectations, and responsibilities (Jakobsen, 2013; Li, 2020). This insight is relevant to contracting out because

contractors may also face information problems when they are expected to deliver services embedded in public values and policy goals.

Information advantage in a bureaucratic setting

As Waterman & Meier (1998) argued, the principal-agent theory has not been sufficiently examined across diverse contexts. When applying the principal-agent theory to bureaucratic setting, we need to consider the unique characteristics of the principal-agent relationship. Waterman & Meier (1998) suggested that the assumptions of the traditional principal-agent model may not always hold in contracting out and that there can be different types of principal-agent relationships, especially when applied to bureaucratic settings. Goal conflict and information asymmetry are the two key elements we should consider when we apply the principal-agent model in a bureaucratic setting (Waterman & Meier, 1998). Building on this, this study argues that the agent's information advantage in contracting out should be understood as conditional rather than fixed. More recent formal models of bureaucracy have further developed the role of information asymmetry, delegation, and expertise in principal-agent relationships. Gailmard & Patty (2012) show that research on bureaucracy has increasingly examined how institutional structures shape the development, transmission, and use of expertise. However, much of this literature remains centered on politician-bureaucrat relationships within government. This study extends this discussion to government-contractor relationships, where organizational value orientations may shape the information problems faced by agents.

First, goal conflict may arise from differences between the principal's and the agent's objectives. As Mitnick (1992, p. 4) pointed out, politicians (principals) and bureaucrats (agents) "have potentially differing preferences..." and "do not necessarily share similar goals" (Waterman & Meier, 1998, p. 176). Even when principals and agents share broad goals, subtle divergences in priorities or preferred means can create latent goal conflict that exacerbates information asymmetry (Mitnick, 1975; Waterman & Meier, 1998).

Second, the agent's information advantage may vary by the type of delegated task. In bureaucratic settings, agents may hold informational and expertise-based advantages when they possess specialized knowledge (Waterman & Meier, 1998). However, this logic does not imply that agents always have greater information than principals. In contracting out, contractors may have an informational advantage for technical, routine, or clearly specified tasks. By contrast, when tasks are complex, value-embedded, or difficult to measure, government agencies may retain greater knowledge of the task's public purpose, legal responsibilities, and performance standards. Under such conditions, contractors may face informational disadvantages in understanding what the principal expects them to achieve.

Third, goal conflict and task characteristics jointly shape the principal-agent relationship and the agent's level of information advantage. When the agent's goals differ from those of the principal, additional resources may be needed to monitor, guide, and align the agent (Mitnick, 1992). When goals are more closely aligned, the need for policing and monitoring may decrease (Mitnick, 1991). Similarly, when the delegated task is simple and measurable, information problems may be less severe; when the task is complex and ambiguous, both monitoring problems and contractor

misunderstanding may increase. Thus, the level of information advantage in contracting out depends not only on who possesses more technical expertise, but also on the fit between the agent, the task, and the performance goal.

Goal Conflict, Task Characteristic, and The Distinct Information Advantage

Goal conflict and the level of information advantage

The agent's level of information advantage can vary depending on the degree of goal conflict in contracting out. Waterman & Meier (1998) argued that an increase in goal difference leads to an increase in information asymmetry between the principal and the agent. Goal differences increase communication costs and create communication problems (Amirkhanyan et al., 2007), increasing information asymmetry when goals diverge (Amirkhanyan et al., 2007; Moe, 1984).

Importantly, goal conflict may increase information problems not only because principals face monitoring difficulties, but also because agents may have difficulty understanding and prioritizing the public goals embedded in delegated tasks.

Therefore, it is important to select agents whose goals align well with those of the principal or to develop goal consensus and reduce goal differences by having shared norms and similar experiences (Van Slyke, 2007; Witesman & Fernandez, 2013). Brunjes (2020) argued that the relationship between the principal and the agent affects performance in contracting out. Specifically, if the principal and the agent share experiences and build a strong relationship, it may reduce the goal difference between them (Brunjes, 2020). Other studies have also clarified that shared professional norms and values are significant in realizing goal consensus and goal agreement in contracting out (Johnston & Romzek, 1999; Meier, 1997; Meyers et al., 2001). Frequent communication and similar professional training can effectively create goal consensus (Wilmot et al., 2004).

Since agents can be either public or private organizations, the information available to agents may vary according to organizational characteristics. As Rainey (2015) and Bozeman (1989) argued, private-sector goals differ from those of public organizations. Private organizations may be less directly oriented toward public values and public interest, which may create difficulties in understanding public organizational goals (Bozeman, 2007; Johansen & Zhu, 2014; Rainey, 2014; Struk, 2018). Generally, under principal-agent theory, the goal difference between the principal and the agent originates in both the principal and agent being economic actors that make decisions based on what they deem rational (Jensen & Meckling, 1976; Roth & O'Donnell, 1996), but under contracting out in the public sector, the goal difference between the principal and the agent can originate from the inherent characteristics of the organizations. Thus, goal conflict may stem not only from rational self-interest, as emphasized in traditional principal-agent theory, but also from structural differences in organizational value orientations embedded in the contractor's organizational identity.

Setting specific performance goals is helpful in reducing goal differences. If the goal of the project that is contracted out is clear and specific, it is easier to create goal consensus because a clear goal is easy to understand for both the principal and the agent (Amirkhanyan et al., 2007). Conversely,

vague, unmeasurable goals increase communication costs between the principal and the agent. If the goal is vague, it is difficult for the agent to determine what the principal wants (Eisenhardt, 1989). Previous studies on contracting out found that measurable, specific goals are much more accessible to contractors and easily achieved (Casady et al., 2023). For example, Hart (2003) pointed out that the contractor tends to focus more on cost-saving than on improving service quality because the former is visible and easy to measure, whereas the latter is invisible and hard to measure. Moreover, contractors have strong incentives to maximize their profit by reducing inputs into quality improvement, which is unobservable and hard to measure (Elkomy et al., 2019).

Characteristics of the task and the level of information advantage

Waterman & Meier (1998) pointed out that an agent's level of information advantage can vary by the characteristics of the delegated task. In some tasks, especially those involving specialized technical expertise, agents may possess more relevant information than principals. However, this is not always the case. Since the principal may have originally performed the delegated task, the principal may retain relevant experience, institutional knowledge, and access to task-specific information. Thus, agents may also face limited information and be affected by information asymmetry, which complicates the conventional principal-agent assumption that agents necessarily hold informational advantages over principals.

The Korean government delegates various tasks, from simple service delivery to more complex value-laden internal management and planning. Tasks involving internal management, such as training public employees and evaluating public organizations, require a higher level of understanding of public values and how public organizations operate. The level of complexity, which can limit the agent's understanding, varies by the characteristics of the tasks. When the agent fails to understand the task, high performance is difficult to achieve. Also, the level of task complexity affects the principal. When the task complexity is high, it becomes more difficult for the principal to specify what it wants and how the task should be performed (Brown et al., 2018). In addition, complex tasks are often harder to measure (Brown et al., 2006; Domberger & Jensen, 1997).

Task characteristics affect performance in contracting out. The complexity of work increases the transaction and communication costs between the principal and the agent, ultimately leading to performance problems for several reasons. First, when the work is complex, additional resources such as specialized contract management personnel and knowledge are required (Anderson & Dekker, 2005; Brown & Potoski, 2003; Brown et al., 2013; Brunjes, 2020; Girth, 2014; Van Slyke, 2003; Williamson, 1979), so the transaction cost between the principal and the agent increases. Task complexity also requires "specialized knowledge [and increases the] costs of the production process" (Amagoh, 2009, p. 8) and requires "new sophisticated process[es]" (Amagoh, 2009, p. 9).

Further, when a task or work is complex, miscommunication and misunderstandings between the principal and the agent increase, so the potential transaction cost and the communication cost inevitably increase (Brunjes, 2020) because the information asymmetry is also higher than it is for simple tasks (Lindberg & Nordin, 2008). Petersen et al. (2018) conducted a systematic review of contracting out, and found that the effect of contracting out on cost savings varies depending on the type of contracted-out service. Compared to social services (e.g., health and policing), cost

savings are larger and better documented in technical services (e.g., garbage collection and ground maintenance). Overall, the complexity of a task or work increases transaction and communication costs that cause information asymmetry in the principal-agent relationship, making contracting out more challenging.

Research Design

Data collection and variable measurement

We constructed 2-year panel data of contracting out to analyze the hypotheses based on survey data. This study relies on a unique dataset from a complete enumeration survey administered by the Korean central government in 2016 and 2020. Unlike prior research that has largely relied on case studies, small samples, or secondary administrative data, our dataset covers all public officials across ministries who were directly responsible for managing contracting out projects,¹ yielding approximately 1,808 project-level responses.² The survey instrument included several blocks of questions: (1) general characteristics of contracting out projects (e.g., type of contractor, task category, competition level), (2) oversight and management arrangements (e.g., audit, monitoring, dedicated department, performance feedback), and (3) perceived outcomes of efficiency and quality. Most items were measured as dichotomous variables (e.g., presence/absence), consistent with the government's official reporting practices and ensuring comparability across ministries and years. While the scope of available variables is limited and the reliance on binary measures constrains the granularity of the constructs, this design reflects the institutional realities of government survey practices and secures consistency in responses.³ More importantly, despite these limitations, our dataset constitutes one of the few nationally representative, multi-year surveys of contracting out

¹ The Ministry of the Interior and Safety (MOIS) of Korea exercises overall oversight of outsourcing projects implemented by central government ministries. In 2016 and again in 2020, the MOIS conducted comprehensive surveys on the status of the operation and management of these outsourcing projects. The survey respondents were public officials from each ministry responsible for the management and supervision of outsourcing projects, and each official responded with reference to the specific project under his or her charge. Accordingly, while the data used in this study cannot be entirely free from the limitations inherent in self-reported information, the responses were provided not by the project operators themselves but by the officials tasked with managing those projects. This feature indirectly mitigates, at least to some extent, the methodological shortcomings commonly associated with self-report data. Furthermore, the surveys were carried out in the aftermath of the 2014 Sewol Ferry Disaster, with the explicit purpose of identifying and overcoming the structural problems associated with outsourcing arrangements. At the time of data collection, a broad consensus had already been established within the public sector regarding the necessity of diagnosing objective problems and devising appropriate remedies. On this basis, it can be reasonably inferred that the officials responded to the survey with the intention of providing assessments grounded in objective perspectives on the projects under their responsibility. Notably, the survey identified as many as 22 outsourcing projects that were judged by their managing officials to be so poorly operated and administered that their termination and recovery were deemed necessary.

² Specifically, the dataset is constructed as an unbalanced panel by linking project-level responses from the 2016 and 2020 waves. We tracked individual projects across years using unique project identifiers and organizational metadata. While some projects were initiated or terminated between the two survey periods, a substantial number of projects persisted, allowing for the analysis of within-project variations. In the final analytical model, the dataset includes 1,139 observations across 771 unique project groups, indicating that 368 projects were observed in both waves. By utilizing panel logistic regression, we effectively controlled for time-invariant unobserved heterogeneity across these project groups.

³ While it is true that efficiency and quality perceptions were measured in a binary form, this approach was a deliberate choice under the constraints of survey administration in the public sector. A binary indicator reduces respondent burden and increases reliability by minimizing ambiguous answers. Moreover, in bureaucratic contexts, perceptions of efficiency and quality often manifest in clear-cut evaluations (positive vs. negative), making binary measures substantively meaningful. We acknowledge that this limits the granularity of measurement, and future research should employ multi-category or continuous scales. Nevertheless, the binary operationalization ensures conservative and interpretable results that provide a robust basis for further investigation.

in the public sector. Its breadth and comprehensiveness, covering all ministries and their project-level practices, provide a rare empirical basis for analyzing how government officials perceive and evaluate the performance of contracting out at a systemic level. Descriptions of the survey questions are shown in Table 1.

As shown in Table 1, the key independent variable is a dummy variable that represents whether the contractor organization is a private firm. If the vendor organization is a private sector organization, we coded it as 1; if the vendor organization is a public sector organizations, such as public enterprise, we coded it as 0. For the two dependent variables, quality and efficiency, we relied on the perceptions of the public officials overseeing each contracted-out project. We asked the survey respondents whether the contracting out they oversaw could be evaluated as efficient (cost saving) and whether the quality (effectiveness) of public service delivered via contracting out was adequate.⁴ If the responsible official perceived that the contracting out they oversaw achieved good quality or efficiency, we coded it as 1; if not, we coded it as 0. The two moderating variables capture

Table 1. Variables, question descriptions, and measurements

Variable	Description	Measurement
Cost saving/efficiency (1)	Whether service is perceived as efficient	0=no 1=yes
Quality/effectiveness (2)	Whether service is perceived as effective	0=no 1=yes
Private (3)	Private sector contractor	0=other 1=private contractor
Complex task (4)	Whether type of service is management	0=other 1=complex task
Simple task (5)	Whether type of service is service delivery	0=other 1=simple task
Competition (6)	Degree of competition	0=complete monopoly 1=duopoly 2=limited competition 3=complete competition
Audit (7)	Whether external monitoring system exists	0=no 1=yes
Monitoring (8)	Whether internal monitoring system exists	0=no 1=yes
Dedicated department (9)	Whether a dedicated ministry department to manage contracted-out services exists	0=no 1=yes
Performance feedback (10)	Whether performance feedback system exists	0=no 1=yes

⁴ Although we acknowledge the limitations of perceptual measures for performance, given the context and available data, it was the most feasible and appropriate way to measure performance. Also, several contracting out literature measured performance by perception (See Krachler et al, 2022; Isaksson et al., 2018; Witesman & Fernandez, 2013). Krachler et al. (2022) measured the effects of healthcare marketization on costs and quality by collecting perceptions through interviews, and they urged a qualitative approach by measuring perceptions. Also used perception to measure their variables based on providers' perceptions. By using perceptual data, at least in part, they can reflect the reality of their respondents' experiences. All of our respondents are government officials who are responsible for each contracted-out service, implying that they have sufficient knowledge and experience to provide us with reliable results. Moreover, as we asked the respondents to consider all possible factors that can affect performance, such as transaction cost and monitoring cost that significantly impact performance, we might be able to capture unobservable costs that may not be measurable in numbers. Even if the observable cost is down due to contracting out, it is hard to say complete efficiency if the unobservable cost increases. Also, it is hard to measure quality improvement with hard data. Isaksson et al. (2018) show that most quality requirements in contracting out are non-quantifiable. Thus, using quantitative measures for quality may not be appropriate and feasible. Measuring the quality with quantitative measures also can bring a lack of consideration of unobservable costs. As Boyne (1998) and Petersen et al. (2018) criticized, there is only a little research on the quality aspects of contracting out, and most of them did not consider the unobservable costs, such as transaction costs. Under this constraint, the perceived quality of contracted-out services from public officers can be a possible alternative to measure the quality of the services, including

the type of task that had been contracted out. We distinguish between simple service delivery and complex, value-embedded tasks such as management and public policy planning. This distinction reflects differences not only in technical complexity but also in the extent to which they embed public values and accountability. To justify this distinction, we draw on international practices, particularly the U.S. federal government's contracting out framework, and existing literature. Under Office of Management and Budget (OMB) Circular A-76 and the Federal Acquisition Regulation, inherently governmental functions (e.g., determining regulatory content) must remain in-house, whereas commercial activities (e.g., facility maintenance, waste collection) may be outsourced to private vendors. Korea does not apply such a rigid boundary, which makes it even more important to differentiate management from service delivery in our study. Existing studies classify tasks such as simple services ("hard" services) and complex services ("soft" services) based on their complexity and measurability (Amirkhanyan, 2009; Piatak & Jensen, 2024; Piatak & Pettijohn, 2021). Routine and easily specified services such as trash collection or street maintenance are commonly categorized as simple services (Brown & Potoski, 2003). In contrast, value-laden and difficult-to-measure activities such as child welfare, elder care, or workforce development are categorized as complex services (Piatak & Jensen, 2024; Piatak & Pettijohn, 2021). Similarly, we categorize management tasks as complex, involving legitimacy concerns and higher risks of information asymmetry and goal conflict, while service delivery tasks are simple and more akin to commercial activities where efficiency gains from competition are plausible. Additionally, we included several variables found in the existing literature to be significant to efficiency and quality to control for the effects of variables other than the independent and moderating variables. The first control variable is competition. In the selection process, the Korean government chose four types of mechanisms: complete monopoly, duopoly, limited competition, and complete competition. We coded the data as 1 for complete monopoly, 2 for duopoly, 3 for limited competition, and 4 for complete competition. The model further includes dummy variables that represent whether audit or monitoring processes exist. Moreover, some ministries have dedicated departments that deal with contracting out. If contracting out is managed by a dedicated department, we coded it as 1, and if not, we coded it as 0. Lastly, the central government conducts annual performance evaluations of contracts. If the performance evaluation result affected the next contract, a performance feedback process exists; we coded this as 1.

We utilized fixed effects (FE) panel logit analysis (conditional logit) to account for all time-invariant unobserved heterogeneity at the project level. The choice of the FE model was supported by the Hausman test, which rejected the null hypothesis ($p < 0.01$), suggesting that the random effects estimates would be biased. By focusing on within-project variation, the FE model provides more rigorous control over potential confounding factors that are constant over time. It should be noted that FE logit models exclude observations from groups that do not change their outcome status across waves, which may result in relatively large coefficients when the observed within-group relationship is particularly strong. Specifically, the large interaction coefficient in Table 2 (9.697) indicates that the matching of private agents with simple tasks has an exceptionally high probability

transaction costs. Therefore, we propose that measuring the outcomes of contracting out by perception can be a plausible alternative to capture the unobservable costs that have significant impacts on performance but have been neglected.

of achieving efficiency within the analyzed projects.

Research hypothesis

The main goal of this study is to examine the effects of the different levels of an agent's information advantage on quality and efficiency in contracting out. We further analyze the effects of goal differences between the principal and the agent and the characteristics of delegated tasks on efficiency and quality of contracting out. Our predictions parallel those of the incomplete contract framework developed by Hart et al. (1997), who show that private contractors typically reduce costs more than public providers but may also reduce quality when cost-cutting damages noncontractible quality dimensions. Hart et al. (1997) emphasize incentive distortions: private contractors may underweight quality damage when pursuing cost reduction. By contrast, our framework highlights a complementary information-based mechanism: private contractors may struggle to interpret value-laden quality expectations embedded in public tasks. These mechanisms can operate jointly, but they suggest different remedies. Incomplete contract theory points to sharper contracts and competition, whereas our framework emphasizes shared norms, organizational learning, and better alignment among contractor type, task characteristics, and performance goals.

In the first research hypothesis, we investigated how goal conflict between the principal and the agent affects the performance of the contracting out. Researchers have been arguing about the differences between public and private organizations for several decades. According to Struk (2018), the clear difference between the private and the public sector lies in the characteristics of their goals. The obvious goal of the private sector is making a profit, whereas the public sector pursues the

Table 2. Panel results of panel B with service delivery as a moderating variable

	Panel B (Dependent variable: cost saving/efficiency)			
	Model 1	Model 2	Model 3	Model 4
	Coefficient (SE)			
Private	4.460*** (0.955)	3.453*** (0.648)	7.412*** (1.575)	-2.366 (5.606)
Simple task		4.699*** (0.540)	0.414 (1.591)	-0.230 (4.473)
Simple task×private				9.697** (5.788)
Competition			2.380*** (0.628)	2.240*** (0.552)
Audit			5.673*** (1.588)	3.805*** (1.820)
Monitoring			-1.640 (2.288)	-5.441** (3.222)
Dedicated department			-0.916 (1.275)	-3.949*** (1.365)
Performance feedback			0.275 (1.301)	1.919 (1.688)
Constant	-4.645 (0.290)	-6.143 (0.553)	-10.253 (2.649)	-1.120 (4.449)
No. of observations	1,139	1,139	1,139	1,139
No. of groups	771	771	771	771

p<0.05, *p<0.01.

welfare of the people and the public interest as its primary goal, “although generating at least some profit is still welcome” (Struk, 2018, p. 152). Witesman & Fernandez (2013) also pointed out that “the common interests (improving public welfare) that are shared between public and non-profit organizations should increase the likelihood that they will forgo short-term advantages in favor of mutual, long-term gains.”

Also, the specificity of the goal will affect the level of information asymmetry of the agent. Efficiency is a more specific and clearer concept than value-based concepts such as public interest or quality (Isaksson et al., 2018; Petersen et al., 2018). If the private sector organization is the contractor, the efficiency of the contracting out will increase because goal conflict and information asymmetry are low. The first hypothesis is as follows:

- Hypothesis 1: If a private sector organization is an agent, efficiency will increase.

Unlike efficiency, the quality of contracting out will decrease if a private sector organization is an agent. There is a possibility that a private sector contractor may not understand the norms and values of the government organization. Although service quality is an important goal that government expects contractors to achieve, private sector agents may have a limited understanding of this goal due to their inherent organizational limitations. If the goal is guaranteeing the quality of contracting out, private sector organizations might not be appropriate agents because they typically struggle to understand what quality of public services they should pursue (Brogaard & Helby Petersen, 2022). In the case of health services, for example, recent evidence from England shows that outsourcing to private providers was associated with higher treatable mortality and reduced quality of care (Goodair & Reeves, 2022). Also, if the goal is vague and unfamiliar to the private sector organization, the goal conflict between the principal and the agent is more significant because the private sector organization struggles to fully understand the goal (Amirkhanyan et al., 2007). If the private sector organization is the contractor, the quality of the contracting out will decrease because goal conflict and information asymmetry are high. The second hypothesis is as follows:

- Hypothesis 2: If a private sector organization is an agent, quality will decrease.

The characteristics of the task also affect the level of information advantage of the agent. Prior studies classify contracted-out tasks into simple and complex ones based on measurability and technical difficulty, with routine, easily specified services such as trash collection categorized as simple, and value-laden, harder-to-measure services such as child welfare or elder care categorized as complex (Amirkhanyan, 2009; Brown & Potoski, 2003; Piatak & Pettijohn, 2021; Piatak & Jensen, 2024). If the delegated task is complex, private sector agents are more likely to struggle with understanding public values and organizational norms, which in turn amplifies information asymmetry (Brown et al., 2018; Frey & Osborne, 2018; Petersen et al., 2018). In this sense, complex tasks are more likely to exacerbate goal conflict and worsen the negative relationship between private sector contracting and service quality.

- Hypothesis 3: Complex tasks will negatively moderate the relationship between the private sector agent and quality achievement.

Unlike complex tasks, simple service delivery tasks are routine, clearly specified, and easier to measure, thereby reducing opportunities for goal conflict and information asymmetry. The simplicity of service delivery can affect the level of goal achievement. Especially if the goal of contracted-out service is efficiency, since all the information asymmetries inherent to the private sector organization and those caused by the complexity of the task and the vagueness and immeasurability of the goal are low, the level of goal achievement might be high. Prior studies emphasize that simple tasks, such as trash collection or street maintenance, are more straightforward to monitor and evaluate, making them more suitable for contracting out (Amirkhanyan, 2009; Brown & Potoski, 2003). Because performance expectations and evaluations are clear, and transaction and monitoring costs are lower, private contractors face fewer obstacles in aligning with efficiency goals (Hart, 2003; Petersen et al., 2018). Therefore, we set the fourth research hypothesis as follows:

- Hypothesis 4: Simple tasks will positively moderate the relationship between the private sector agent and the achievement of efficiency.

Estimation method and empirical models

To analyze the impact of the type of contractor and type of work on efficiency and project quality, we created 2-year contracting out panel data using complete enumeration. Based on this panel data, we ran panel logit analysis with dummy variables that represent whether the contracting out is efficient and whether service quality is adequate as two dependent variables.

Equations 1 and 2 are the basic equations for estimation and illustrate the original models, where a dummy variable that represents whether the contractor is a private sector organization is included as an independent variable to analyze the effect of the information advantage of the agent on performance in contracting out. To set two types of dependent variables, we attempted to show that the type of goal also affects the level of information asymmetry of the agent.

$$Efficiency_{it} = \alpha + \beta_1 Private_{it} + \beta_2 \varnothing_{it} + \theta_{it} \quad (1)$$

$$Quality_{it} = \alpha + \beta_1 Private_{it} + \beta_2 \varnothing_{it} + \theta_{it} \quad (2)$$

Furthermore, we developed equations to show the moderating effect of the type of delegated work. We added an interaction term between the independent variable and the two moderating variables dealing with task type: complex and simple tasks. In Equations 3 and 4, we included the interaction term between the private sector organization dummy variable and the type of task in the empirical model to analyze the effects of the characteristics of the task on the two types of dependent variables.

$$Efficiency_{it} = \alpha + \beta_1 Private_{it} + \beta_2 Simple_{it} + \beta_3 Private_{it} \times Simple_{it} + \beta_4 \varnothing_{it} + \theta_{it} \quad (3)$$

$$Quality_{it} = \alpha + \beta_1 Private_{it} + \beta_2 Complex_{it} + \beta_3 Private \times Complex_{it} + \beta_4 \emptyset_{it} + \theta_{it} \quad (4)$$

Empirical Analysis

Descriptive statistics of independent and control variables

Before we conducted the panel logit analysis, we analyzed the descriptive statistics of the 2-year panel data. Table 3 shows the descriptive statistics of independent and control variables.

First, the frequency of the private dummy variable, coded as 1, is 144, which means that 144 projects were delegated to private sector organizations. In contrast, 1,196 contracts were awarded to public sector organization such as a public enterprise. The moderating variables are the complex and simple task dummy variables. The frequency of contracting out related to complex tasks is 1,115, whereas 693 of 1,808 contracts are related to simple tasks.

The control variables are competition, audit, monitoring, dedicated department, and performance feedback. Regarding the competition variable, only 47 contracts were awarded through a complete or limited competition selection process. In the case of an audit, 41.11% of projects had an e-audit system, whereas most (91.74%) had a monitoring system. 334 contracts were managed by dedicated government departments (25.81%). Performance feedback systems were in place for 351 contracts (26.61%).

Descriptive statistics main variables

We created bar graphs to visualize the descriptive relationship between the dependent and independent variables based on the descriptive statistics of the dependent, independent, and moderating variables. In Fig. 1, we visualize the percentage of reasons for contracting out by type of contractor organization. Among private sector contractors, almost 50% of contractors were selected

Table 3. Descriptive statistics of the independent and control variables

Variable	Value	Frequency	Percentage
Private	0	1,196	89.25
	1	144	10.75
Complex task	0	1,189	65.76
	1	619	34.24
Simple task	0	1,115	61.67
	1	693	38.33
Competition	0	304	82.83
	1	7	1.91
	2	30	8.17
	3	26	7.08
Audit	0	775	58.89
	1	541	41.11
Monitoring	0	107	8.26
	1	1,188	91.74
Dedicated department	0	960	74.19
	1	334	25.81
Performance feedback	0	968	73.39
	1	351	26.61

Counts vary across variables because of item nonresponse. For example, the 'private' indicator has 1,340 non-missing observations (144 private, 1,196 public) out of 1,808 projects.

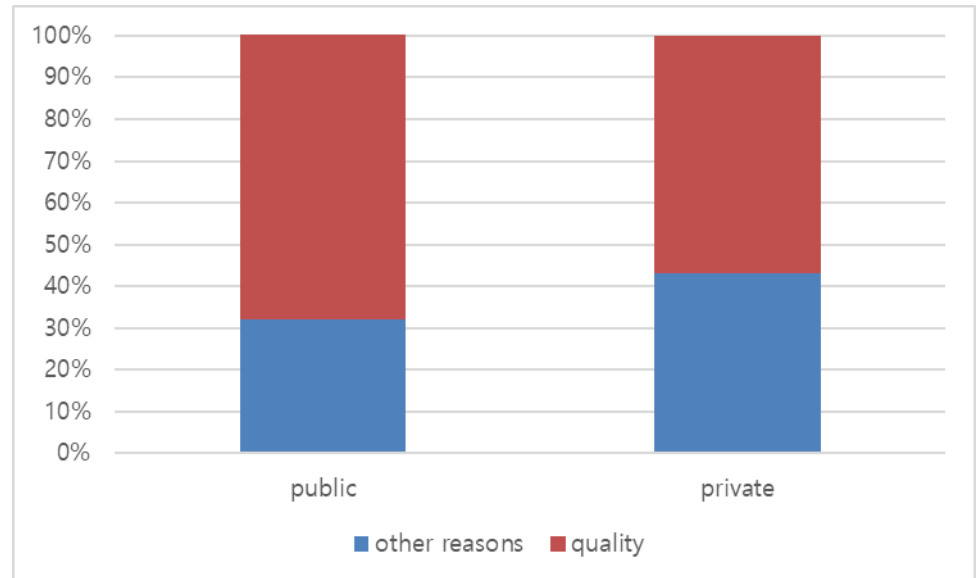


Fig. 1. Descriptive relationship between the contractor organization and quality.

to ensure project quality, but in the case of public sector contractors, the proportion is significantly higher: almost 70% of public sector contractors were chosen to guarantee project quality.

Conversely, as shown in Fig. 2, the relationship between efficiency and type of organization is inverted when compared to quality.

More than 50% of contracting out performed by private sector contractors was evaluated as ensuring efficiency. Most public sector contractors cannot guarantee efficiency. Almost 80% of the survey respondents who oversaw contracts indicated that only 20% of projects awarded to public sector were efficient.

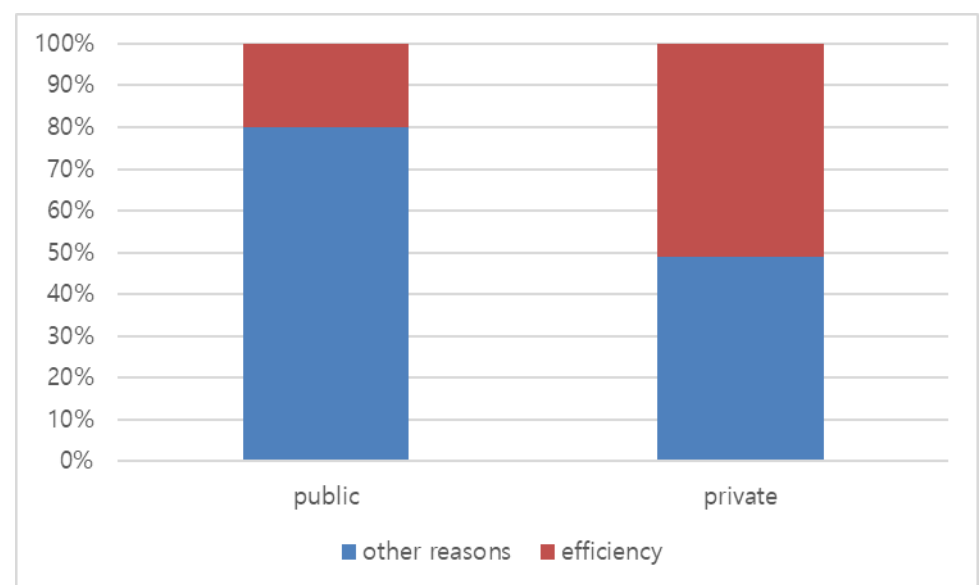


Fig. 2. Descriptive relationship between the contractor organization and efficiency.

Empirical analysis

To test and analyze our hypotheses, we constructed two types of 2-year panel data based on 1,808 contracting out projects undertaken by all ministries of the central government of Korea and ran a panel logistic analysis. Panel A features the quality of public services delivered by contractors as the dependent variable, whereas Panel B features the efficiency of contracting out as the dependent variable. We ran several types of panel logistic regression analyses using these two-year panel data sets.

Table 4 shows the empirical results of Panel A when the dummy variable indicating whether the task is a complex task.

In Models 1 and 2, the private and complex dummy variables are not significant. After adding the control variables to the model, the private variable becomes significant and negative (see Model 3), which implies that if a contractor is a private sector organization, the quality of public services can deteriorate. In Model 4, the private dummy variable is strongly significant and remains negative. The interaction term between the complex variable and the private variable is also strongly significant and negative.

Among the control variables, the competition and performance feedback variables are statistically significant. First, the competition variable is negative. When contractors are chosen through a complete or limited competition system, this might decrease service quality. Competition is a key element of the market mechanism and is considered an essential factor that affects the outcomes of contracted-out services (Pack, 1987; Savas, 1987, 2001). As competition intensifies, market players decrease service prices and increase service quality to win the competition (Domberger & Jensen, 1997; Hirsch, 1995). Yet competition also decreases service quality by motivating competitors to

Table 4. Panel results of Panel A with management as a moderating variable

	Panel A (Dependent variable: quality/effectiveness)			
	Model 1	Model 2	Model 3	Model 4
	Coefficient (SE)			
Private	−0.652 (0.792)	−0.615 (0.807)	−3.673*** (1.460)	−3.483*** (1.906)
Complex task		−0.174 (0.480)	−2.152 (1.863)	0.043 (2.660)
Complex task×private				−6.914** (4.059)
Competition			−2.780*** (0.602)	−3.077*** (0.621)
Audit			−2.682 (1.965)	−2.534 (2.116)
Monitoring			−2.772 (2.461)	−3.173 (3.280)
Dedicated department			0.650 (1.339)	0.420 (1.475)
Performance feedback			3.110*** (1.422)	3.553*** (1.481)
Constant	2.276 (0.288)	2.850 (0.379)	14.144 (2.905)	14.855 (3.143)
No. of observations	1,139	1,139	1,132	1,132
No. of groups	771	771	766	766

p<0.05, *p<0.01.

focus only on efficiency rather than to pursue efficiency and quality simultaneously, which results in quality shading (Elkomy et al., 2019; Hart, 2003; Hart et al., 1997).

Second, the performance feedback variable is positive. Thus, the quality of public services can be improved if a performance feedback system exists. Since the principal-agent problem is inherent to contracting out, appropriate monitoring and management systems are required. A performance feedback system can improve service quality by reducing agency problems such as moral hazard.

We also analyzed the moderating effect of the simple task variable using Panels A and B. Table 5 shows the results of Panel A with the simple task variable as a moderating variable.

The private dummy variable is not statistically significant in Models 1 and 2 but is in Model 3. The private dummy variable is negative in Models 3 and 4. Like the empirical results shown in Table 4, these results indicate that if the contractor is a private sector organization, service quality might not improve. Additionally, the interaction term between the simple task variable and the private variable is not significant in Panel A.

In terms of control variables, the competition and performance feedback variables show statistical significance. First, the competition variable is strongly significant in Models 3 and 4 and is negative. Intense competition can be helpful in improving efficiency, but it can also inhibit improvements in service quality by motivating contractors to focus on efficiency. Moreover, the performance feedback dummy variable effectively increases service quality, as can be seen in Models 3 and 4. As was the case in the preceding analysis, appropriate performance feedback systems seem effective in reducing principal-agent problems.

The second panel dataset, Panel B, was constructed to analyze the effects of the independent and moderating variables on the efficiency of contracting out services. As shown in Table 6, the private sector organization dummy variable is consistently significant from Model 1 to Model 4, and its sign

Table 5. Panel results of panel A with service delivery as a moderating variable

	Panel A (Dependent variable: quality/effectiveness)			
	Model 1	Model 2	Model 3	Model 4
	Coefficient (SE)			
Private	-0.652 (0.792)	-0.445 (0.869)	-3.790*** (1.736)	-3.852* (2.726)
Simple task		0.060 (0.490)	1.202 (1.767)	1.055 (1.883)
Simple task×private				0.047 (3.328)
Competition			-2.623*** (0.748)	-2.607*** (0.656)
Audit			-2.557 (1.953)	-2.554 (1.886)
Monitoring			-2.835 (2.669)	-2.449 (2.462)
Dedicated department			0.578 (1.457)	0.507 (1.342)
Performance feedback			2.976*** (1.499)	2.903*** (1.417)
Constant		2.979 (0.344)	12.301 (2.969)	12.070 (3.017)
No. of observations	1,132	1,132	1,132	1,132
No. of groups	766	766	766	766

*p<0.10, ***p<0.01.

Table 6. Panel results of panel B with management as a moderating variable

	Panel B (Dependent variable: cost saving/efficiency)			
	Model 1	Model 2	Model 3	Model 4
	Coefficient (SE)			
Private	4.460*** (0.955)	3.320*** (0.638)	5.922*** (2.258)	5.871*** (2.098)
Complex task		-4.592*** (0.546)	1.058 (2.098)	0.986 (4.820)
Complex task×private				0.262 (5.505)
Competition			2.129*** (0.783)	2.337*** (0.741)
Audit			3.716 (2.404)	4.812** (2.529)
Monitoring			-1.048 (2.336)	-1.219 (2.385)
Dedicated department			-0.869 (1.490)	-0.667 (1.568)
Performance feedback			0.468 (1.365)	0.411 (1.357)
Constant	-4.645 (0.290)	-1.576 (0.299)	-8.046 (3.169)	-9.230 (4.502)
No. of observations	1,139	1,139	1,139	1,139
No. of groups	771	771	771	771

p<0.05, *p<0.01.

is positive.

If the contractor is a private sector organization, service efficiency can be improved, but the interaction term of the private and management dummy variables is not significant, as shown in Model 4.

Among the control variables, the competition and audit variables are significant. As Domberger & Jensen (1997) noted, because of competition, the service provider tries to improve efficiency and effectiveness to win or sustain the contract. Internal monitoring and external audit systems are also helpful in increasing efficiency by reducing moral hazard and information asymmetry problems that usually occur in principal-agent relationships.

Table 2 shows the results of Panel B, with service delivery as a moderating variable.

The independent variable, the private sector organization dummy variable, is strongly significant in Models 1, 2, and 3, and its sign is positive, which implies that when a private sector organization is awarded a contract, the efficiency of simple tasks increases. The interaction term between the private and service delivery variables is strongly significant, as shown in Model 4.

The competition and audit variables are strongly significant in Model 4. As indicated by the results of the preceding analyses, as competition intensifies, service efficiency increases. Additionally, the existence of an audit system is helpful in guaranteeing service efficiency. Unlike the competition and audit variables, monitoring and the existence of a dedicated department show a negative effect on efficiency. Audits are more cost-effective because a monitoring system is always in operation even when there is no problem, which requires a considerable budget. Thus, efficiency can be reduced when there is excessive monitoring. Moreover, although a dedicated department can

be helpful in managing the quality of simple task, efficiency can easily be improved when left in the invisible hands of the private sector. Operating an additional department to manage contracting out is a budgetary waste that inhibits efficiency.

Moderating effects of type of organization

Based on the empirical results from the panel logit analysis, we created two moderating-effect graphs to visualize the effect of the moderating variables on the relationship between the dependent and independent variables. Fig. 3 shows the moderating effect of complex task on the relationship between the private dummy variable (independent variable) and the quality of the service (dependent variable).

As shown in Fig. 3, the graphs slope downward. The more private sector organizations are awarded contracts, the lower the quality of public services. However, the slope of the line varies by the type of task.

In Fig. 3, the red line represents the relationship between the private and quality variables when contracting out is related to the complex task such as internal management of the ministries of the Korean central government. The blue line shows the relationship between the dependent and independent variables when contracting out deals with work other than complex ones. Although both the blue and red lines slope downward, the slope of the red line is steeper than that of the blue line. The negative impact of selecting private sector organizations as contractors worsens when projects are related to the complex task of ministries.

In the panel logit analysis, we also found that the service delivery variable has a moderating effect when efficiency is the dependent variable. Fig. 4 graphs the dependent and independent variables by

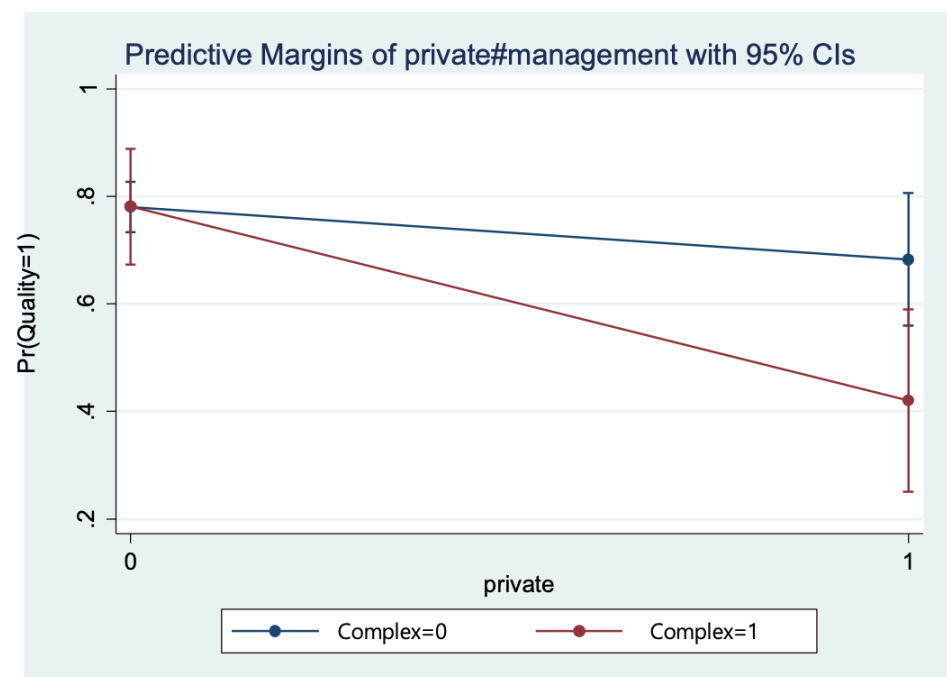


Fig. 3. Moderating effect of complex task.

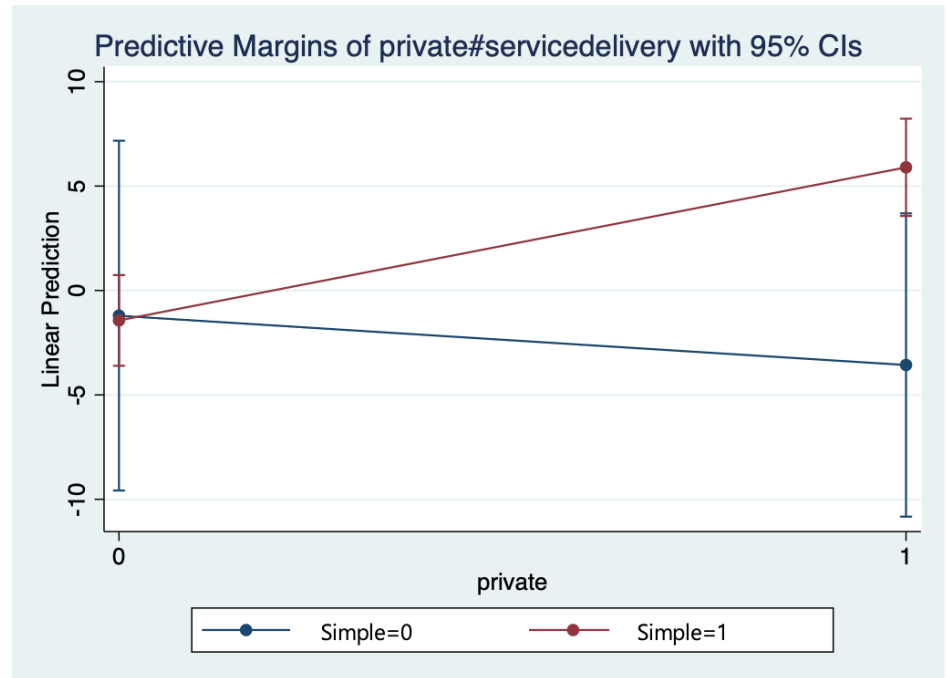


Fig. 4. Moderating effect of simple task.

the simple task dummy variable.

The red line shows the relationship between the private variable and efficiency when the type of project is related to simple task. The red line slopes upward, whereas the blue line, which illustrates projects unrelated to simple task, slopes downward. When contracts are related to simple task, efficiency can be guaranteed when the contractor is a private organization. On the other hand, for other projects, appointing organizations outside the private sector appears to be more advantageous in securing efficiency.

Conclusion

Summary of findings from the empirical analysis

In this study, we analyzed how goal conflict and task characteristics shape contracting-out performance by affecting information problems between principals and agents. Using 2-year complete enumeration panel data of the Korean central government, this study shows that goal conflict between the principal and the agent is negatively associated with contracting out performance. The panel logistic regression results indicate that private contractors perform better in terms of efficiency but worse in terms of service quality compared to public sector organizations. This pattern suggests that private contractors may be better aligned with efficiency-oriented goals, while they may face greater difficulties in understanding and achieving quality-oriented goals embedded in public values.

Furthermore, task complexity increases information problems between principals and agents, thereby lowering contracting-out performance. Task complexity negatively moderates

the relationship between private sector contractors and service quality, suggesting that complex tasks intensify information asymmetry and increase the likelihood that private contractors will misunderstand public goals and performance expectations. Conversely, simple service delivery tasks positively moderate the relationship between private sector contractors and efficiency. This finding suggests that private contractors are more likely to improve efficiency when tasks are routine, clearly specified, and easier to measure.

Principal-agent model in contracting out

The theoretical implications of this study lie in clarifying the distinctive characteristics of principal-agent relationships under contracting out. Traditional principal-agent theory generally assumes that the principal faces limited information about the agent (Jensen & Meckling, 1976). This study extends that view by showing that agents may also face information problems, especially when they are expected to perform tasks embedded in public values, legal responsibilities, and difficult-to-measure quality goals. In this sense, information asymmetry in contracting out should not be understood only as a monitoring problem for principals, but also as an understanding problem for agents. These findings support the view that the agent's information advantage in contracting out is conditional rather than fixed, varying with the structural alignment between contractor characteristics, task type, and performance goal.

The findings indicate that information problems vary according to contractor type, performance goal, and task characteristics. Private contractors may be well suited for simple and efficiency-oriented tasks because such tasks are more clearly specified, measurable, and aligned with cost-saving incentives. However, when tasks are complex, value-laden, and difficult to measure, private contractors may face greater difficulty interpreting what government principals expect them to achieve. These conditions can weaken service quality and increase the transaction and communication costs of contracting out. Contracting-out performance depends on matching the right type of agent to the right task and performance goal. Governments should not treat contracting out as a uniform policy tool that produces the same results across all services. Rather, they should assess whether the contractor's organizational characteristics align with the goals, accountability requirements, and information demands of the delegated service.

However, the policy prescriptions derived from this study should be interpreted with caution, as they are situated within the specific institutional context of the South Korean bureaucracy. Unlike many Organization for Economic Cooperation and Development (OECD) countries with more mature and competitive contracting markets, the Korean environment is characterized by a high degree of path dependency and a prevalent designation system, where nearly 80% of contracts are awarded without full competition. These features may amplify the information problems and goal conflicts associated with complex tasks, as the lack of competitive pressure reduces the incentive for private agents to align with public values. Consequently, while our findings suggest that complex tasks are more effectively managed within the public sector in Korea, this recommendation may not hold the same degree of generality in settings where robust market competition can mitigate agency costs. Future research should explore how varying levels of market competition and different institutional selection mechanisms influence the relationship between task complexity and

contracting performance across various national contexts.

Limitations and future research

Despite the empirical contributions of this study, several limitations provide directions for future research. First, the outcome variables rely on perceptions reported by public officials in charge of each project rather than on objective performance indicators. While these officials possess detailed operational knowledge, perceptual data inevitably carry risks of subjective and common-source bias (CSB). Given the dichotomous nature of the variables, which limits the applicability of standard post-hoc factor analyses such as Harman's single-factor test, these findings should be interpreted with caution. Future research could benefit from combining survey responses with objective administrative or financial records to triangulate findings and mitigate common-method variance.

Second, the analysis is situated within the specific institutional context of the South Korean central government, where the contracting-out system is shaped by particular features such as limited competition and a prevalent designation system. This institutional environment may influence the generalizability of the results to other administrative contexts. Consequently, cross-national comparative research is necessary to assess how the relationships identified here generalize to OECD nations with different market structures and competitive settings.

Third, the primary independent variable in this study distinguishes only between private contractors and other organizations. The latter category aggregates diverse organizational forms, including public enterprises, nonprofit organizations, and government affiliates, which differ significantly in their goal structures and relationships with public values. Future studies should disaggregate these categories to examine whether the information dynamics and performance outcomes identified here vary across different types of non-private contractors. Finally, while this study treats contractor type and task characteristics as relatively stable predictors of information problems, information advantage may evolve through repeated interaction, learning, and relationship-building (Gailmard & Patty, 2012). Future research should examine whether sustained contracting relationships can reduce private contractors' information disadvantages in value-laden tasks by increasing their familiarity with public values, accountability requirements, and performance expectations.

Despite these limitations, the dataset used in this study makes a distinct empirical contribution. To our knowledge, this is one of the first complete-enumeration panel datasets on contracting out of the Korean central government, covering both routine service delivery and complex management functions delegated to a wide range of contractor types. Existing research on contracting-out has largely been developed in Western contexts, where outsourcing tends to concentrate on commercial or routine activities. By examining a setting in which governments delegate not only simple services but also value-laden management and policy-related tasks to a varied mix of public and private contractors, this study extends the empirical scope of contracting-out research beyond its traditional Western context. The Korean case thus offers a particularly informative environment for examining how goal conflict and task characteristics jointly shape the agent's information advantage, a question that may be difficult to assess in settings where contractor type and task type are less varied.

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