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Environmental and Organizational Antecedents of Plural Sourcing of Public Services

Research Article

Abstract: *Organizations use multiple governance modes (make, buy, ally) to produce their services. We consider plural sourcing as a portfolio of governance mode choices that a public service organization selects to provide its services, and investigate environmental and organizational factors that stimulate plural sourcing of public services. While studies of governance mode have usually relied on insights from theories of organizational economics (transaction cost, public choice, agency), we rely on insights from theories of organization management (strategic adaptation, structural contingency, organizational capability) to construct a theoretical framework and develop propositions on the determinants of plural sourcing. Theory is tested by a four-panel dataset we constructed by merging data from three different sources within 1992–2007. The results using multilevel (hierarchical) logit identify conditions under which organizations choose to externalize, internalize, or co-produce their services. We discuss the implications of our findings for sourcing of organizational activities and suggest ideas for future research.*

Evidence for Practice

- Plural sourcing is a governance form when an organization combines the three governance choices of make, buy, and ally in producing and delivering its products or services.
- Environmental and organizational characteristics variably influence government organizations' choice of three service delivery modes – internalization, externalization, and cooperation.
- Organizations tend to choose a service delivery governance mode that is prevalent among members of their organizational population.
- The decision structure of organizations influences governance choice: when top decision-makers are elected leaders, internalization tends to be preferred; when professional administrators decide, cooperation is favored; and when elected officials and professional administrators decide jointly, cooperation is more likely and internalization is less likely.
- Choice of public service provision is driven by both economic factors (community wealth, financial resources, and fiscal pressure) and institutional factors (political leadership, trends in provision mode, and non-fiscal pressure).

Globalization of business, advancements in information and communication technologies, and spread of markets, capital, and sources of knowledge and information have made organizational boundaries more permeable, extending the management of organizations beyond the boundaries of a single organization (Burton 2013). Complex boundaries require reliance on alternative organizational forms to pursue strategies associated with boundary options (Tushman, Lakhani, and Lifshitz-Assaf 2012). Organizational forms vary in their costs and competencies, based on which Williamson (1991) offered three alternative forms: hierarchy, market, and hybrid. A match between the attributes of transactions and organizational form reduces costs and enhances organizational effectiveness (Crook et al. 2013). From the transaction

cost perspective, therefore, effective choice of organizational form is a function of the attributes of organizational transactions (Williamson 1991).

The transaction cost theory has been the primary theoretical perspective to explain selection of boundary choices in both private and public organizations (Williamson 1981). This theoretical perspective first considered firm and market as primary structural alternatives and offered a choice between two polar governance modes of make or buy (Williamson 1975). Make versus buy simply portrays that transactions with certain attributes are governed more efficiently by taking place within the firm (e.g., a product and its components are produced in-house), while transactions with other attributes are more efficient by taking place in the

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market (e.g., the production of one or more component of a product is outsourced to external suppliers). Then, a third choice was added to the polar governance options – make *and* buy. Make and buy depicts that transactions take place in between the client organization and suppliers (e.g., organization and supplier jointly produce a product or components of a product). Accordingly, in the context of public services delivery, a local government can choose among three governance options: (1) in-house production (make), (2) production by another organization (buy), and (3) joint production with another organization (ally) (Geyskens, Steenkamp, and Kumar 2006; Miranda and Lerner 1995).

The polar governance choice of “make *or* buy” has been studied widely, but fewer studies have examined the “make *and* buy” alternative. This latter choice is foggy, as the polar governance modes can be combined in different ways. Scholars have employed multiple terms to capture make *and* buy, including *concurrent* sourcing (Hefetz, Warner, and Vigoda-Gadot 2014; Heide et al. 2013; Parmigiani 2007), *mixed* sourcing (Warner and Hefetz 2008), and *plural* sourcing (Heide 2003; Krzeminska, Hoetker, and Melleggett 2013; Mols, Hansen, and Villadsen 2012). These terms have overlapping definitions and have been applied primarily at the level of transaction in different contexts (franchising, purchasing, product design and production, service delivery, value chain, etc.). We study *plural sourcing* at the level of organization and define it as a governance form where an organization combines the three governance choices of make, buy, and ally in producing and delivering its products or services. We consider decisions to select boundary modes for producing public services as strategic decisions, and we study environmental and organizational characteristics that affect plural sourcing of services in local government organizations.

This study aims to make three contributions to research on governance mode choices. First, previous studies of organizational boundary decisions in private and public sectors have mainly relied on transaction cost theory (Dyer 1997; Geyskens, Steenkamp, and Kumar 2006; Hefetz and Warner 2012; Levin and Tadelis, 2010; Mohr 2017). We control for the influence of two primary attributes of transaction costs—asset specificity and service measurability (Brown and Potoski 2003)—and apply insights from strategic adaptation to examine environmental and organizational conditions that influence boundary decisions. Strategic adaptation is rooted in systems theory (Ackoff 1999; Churchman 1968; Scott 1997), structural contingency theory (Chandler Jr. 1962; Donaldson 1995; Galbraith 2002), and organizational capability (Chakravarthy 1982; Piening 2013; Prahalad 1983). It advances that (1) a primary concern of organization is adapting to changing circumstances in the external environment, (2) organizations devise strategies to facilitate adaptation, and (3) adaptation is conditioned by the organization’s internal abilities. That is, successful adaptation is facilitated by strategies that correspond environmental (external) situations with organizational (internal) conditions.

Second, as transaction cost is the cost of conducting a transaction, empirical studies of governance choices are often conducted at the level of transaction (Geyskens, Steenkamp, and Kumar 2006). For instance, public service organizations previous studies have focused on the impact of service level factors and estimated governance

choices by transaction attributes, such as asset specificity, contract management difficulty, service sensitivity, contracting flexibility, and citizen interest (Brown and Potoski 2003; Hefetz and Warner 2012; Levin and Tadelis, 2010; Mohr 2017). The attributes of transactions are relatively static, while the attributes of organizations as human systems are relatively dynamic. So, to explain strategic decisions to select boundary choices, in addition to the effect of service attributes, the influence of organizational attributes should be accounted for. The same logic applies for including environmental attributes, in addition to organizational attributes. In this sense, our study contributes by predicting effects of organizational and environmental characteristics on service delivery strategy, while controlling for the effects of service attributes.

Third, while studies of the intermediate modes of governance between markets and hierarchies have been conducted (Crook et al. 2013; Geyskens, Steenkamp, and Kumar 2006; Parmigiani 2007), empirical studies of antecedents of plural sourcing are scarce. Using a longitudinal dataset we constructed by merging three sets of surveys within 1992–2007, we examine external and internal antecedents of “buy versus make,” “ally versus make,” and “ally versus buy.” In the context of providing public services, we refer to in-house production as *internalization*, outsourcing of production as *externalization*, and joint production as *cooperation*. Our analyses help advance the explanation of plural sourcing of public services in local government organizations.

The remainder of this paper is structured as follows. In the next section, we briefly overview the research area of modes of service provision. Next, we formulate two sets of propositions to predict governance choices—one for the external or environmental conditions, another for the internal or organizational conditions. This is followed by the study’s methodology and statistical results. Then, we discuss the implications of our study for research on governance choices, list the study’s limitations, and conclude.

Theoretical Framework

Polar Governance Modes

As noted above, the dominant theory in the studies of market versus hierarchy has been the transaction cost theory, an economic theory of organizations (Coase 1937; Williamson 1975). Transactions are transfers of parts, goods, or services across organizations along the value chain to conduct organizational activities. Transaction costs arise in part from incomplete contracts and opportunism. They are the costs of managing the transactions for efficient and effective accomplishment of those activities, and are defined as the comparative costs of planning, adapting, and monitoring an organizational activity under alternative governance structures (Williamson 1981). The transaction cost theory assumes that contracts are typically incomplete and difficult to enforce, the parties’ rationality is bounded, and they may engage in opportunistic behaviors. While more complex contracts and post-contract monitoring can amend the tendency toward contract incompleteness, the solutions generate transaction costs (Williamson 1981). Overall, the theory posits that the efficiency of market versus hierarchy governance structure depends on the dimensions of transactions; namely, asset specificity, environmental uncertainty (behavioral, technological, and volume), and transaction frequency (Geyskens, Steenkamp, and Kumar 2006).

In the context of public services, the understanding of transaction costs is enhanced in part by the public choice theory (Boyne 1998; Buchanan and Tullock 1962). This theory posits that use of market governance enables public sector organizations to engage in newly found competition with private-sector organizations in producing their services, which could lead to higher efficiency, lower cost, and smaller government (Boyne 2002). This theory also assumes that individual actors are motivated primarily by self-interest (Moe 1984; Schneider and Damanpour 2002). A first potential effect of this behavioral assumption is that senior managers/administrators of the client organization may act opportunistically in favoring self-serving goals over organizational goals (Schneider 2013). A second potential effect is that in using market governance, the client organization is subject to agency costs because the supplier may behave opportunistically. When risks of agency costs are high, pre-contract planning and post-contract monitoring can increase costs of producing public services (Brown and Potoski 2003). In general, market governance is theoretically assumed to deliver cost savings, but cost savings from privatization of local government services around the world is empirically mixed (Bel, Fageda, and Warner 2010). Given this inconclusiveness, Bel et al. (2010, 553) recommend that, to ensure efficiency of producing public services, “more attention be given to the cost characteristics of the service, the transaction costs involved, and the policy environment stimulating competition, rather than to the debate over public versus private delivery of these services.” According to Warner and Hefetz (2008, 155), public service delivery in U.S. local governments shows a “declining use of complete contracts and a dramatic rise in mixed public–private delivery (joint contracting) of city services.”

Alliance Governance Modes

Eventually, the governance mode ally was studied, along the polar modes of make or buy. In the context of public service delivery, Miranda and Lerner (1995, 194) referred to ally as the “redundant service delivery arrangement,” where more than one organization is involved in producing a service. Since some degree of cooperation between the two organizations is necessary, insights from the alliance literature were added to transaction cost to explain the hybrid governance structure (Mudambi and Tallman 2010).¹ In terms of benefits associated with its use, hybrid form is located between vertical integration and market contracting with respect to incentives, adaptability, and bureaucratic costs (Heide 2003; Williamson, 1985). Ally allows the client organization to have some degree of control over the transaction without fully internalizing it (Mudambi and Tallman 2010). However, despite lower investment cost and enhanced transfer of knowledge, difficulties in establishing performance criteria could make ally subject to opportunism and inflexibility, locking the organization into a relationship (Geyskens, Steenkamp, and Kumar 2006; Williamson 1991). In this vein, a governance structure that mixes market and hierarchy can potentially reduce transaction costs, but much depends on type and quality of the relationship between the client organization and suppliers (Dyer and Chu 2003).

More recently, both private and public scholars have termed mixed governance mode by concurrent and/or plural sourcing. In the context of manufacturing, Parmigiani (2007, 285) defined *concurrent sourcing* when organizations “simultaneously make and buy the same good,” and stated that it is a distinct choice

rather than one along the make-buy continuum. In the context of public services, Hefetz, Warner, and Vigoda-Gadot (2014) viewed concurrent sourcing as a mixed sourcing alternative when the organization makes and buys a service concurrently. Similarly, plural sourcing captures when an organization makes and buys the same component, part, product, or service (Mols, Hansen, and Villadsen 2012). Terminology aside, organizations may use a combination of different governance modes that differ in their capabilities and restrictions to build flexibility to better respond to continuous environmental change, to learn, and to perform. In this sense, Krzeminska et al. (2013, 1614) defined *plural sourcing* more broadly as “a governance form where multiple governance modes of make, buy, and ally are combined in a systematic way.”

We study plural sourcing at the organization level and consider it as a governance strategy where a multi-service organization uses a mix of make, buy, and ally to produce and deliver its services. Contrary to previous studies in both private and public sectors, we posit that the selection of an organization’s portfolio of governance modes is a strategic decision that is determined by internal and external situations and can affect the organization’s outcomes.

Strategic Adaptation

We rely on the perspective of strategic adaptation to explain the selection of internal, external, and/or joint sourcing of products or services (Chakravarthy 1982; Hrebiniak and Joyce 1985; Schindehutte and Morris 2001). Strategic adaptation is grounded on the perspectives of organization as open system, structural contingency, organizational capability, and resource dependence theory. The open system perspective is rooted in general systems theory (von Bertalanffy 1968), the application of systems approach to decision-making (Churchman 1968), and scientific methods to problem solving (Ackoff 1970). It views organization as a socio-technical system, composed of interdependent subsystems, and embedded in an environment with which it exchanges information, material, and resources (Cummings and Srivastva 1977; Scott 1997). The environment is also a system that has its own environment and subsystems. According to the system perspective, the effective operation of an organization depends on maintaining equilibrium with the environment (external congruency) and harmony among the subsystems (internal congruency).

Contingency theory and resource dependence theory are also rooted in the open system perspective. Contingency theory posits that there is no best way to organize, and different ways of organizing are not equally effective (Galbraith 2002; Lawrence and Lorsch 1969). Strategic adaptation is the function of fit between environmental contingencies (size, technology, resources, diversification, deprivation, etc.) and organizational actions (Boyne et al. 2005; Donaldson 2006). Resource dependence theory assumes resources of an organization originate in its environment, are shared by other (similar) organizations in the environment, and affect the organization’s behavior (Pfeffer and Salancik 1978). Although organizations are constrained by their context, they act to reduce external uncertainty and dependencies (Hillman, Withers, and Collins 2009). Dependency on resources, especially scarce resources, motivate organizations to adapt to environmental change in order to perform efficiently and effectively (Hillman, Withers, and Collins 2009; Pfeffer and Salancik 1978).

Environmental change can be due to competition, regulation, new technology, resource scarcity, and client/customer demand. A primary change in the environment (environmental shift or jolt) prompts a strategic change—a prerogative of top managers or strategic leaders. Strategic leaders also can introduce new strategies despite lack of environmental change. The logic behind the preempted strategic change is to gain distinctive competencies, reach higher levels of aspiration, capture new markets, and boost the reach and quality of organizational products or services to clients. Either way, a strategic choice, driven by external shift or internal choice and independent of the appropriateness of the selected action, prompts changes in organizational structure and processes to align organizational subsystems toward achieving the organization's strategic intent (Chandler Jr. 1962; Donaldson 2006; Hrebiniak and Joyce 1985). While organizations develop their governance boundary strategy primarily in response to the external environment, the execution of that strategy requires modifications in internal systems and procedures (Brown 2010). The system perspective also postulates that organizational parts (subsystems) are interdependent, and a change in one part needs changes in the other parts for effective operations of the whole (system). In this regard, the decision to select a portfolio of service delivery choices is contingent on both environmental and organizational settings.

In summary, these theories advocate the environment–strategy–structure balance, implicating that the development and implementation of strategic decisions are facilitated by external and internal congruency. Applied to boundary choices in public service organizations, strategic adaptation provides a theoretical framework to explain how managers choose among internalization (make), externalization (buy), and cooperation (ally) mode of service provision in response to environmental demands and organizational abilities.

Propositions

Environmental Characteristics

Organizations conduct activities within an environmental context. They obtain inputs from the environment, respond to its demands, and offer their services or products to it. The external environment provides both opportunities (resources, technology, market demands, etc.) and constraints (regulation, restriction on capital, inadequate information, etc.) (Daft 2001). Organizations set their strategies so they could exploit environmental opportunities, cope with constraints, respond to customers/clients demands, and perform (Ghemawat and Rivkin 1998).

Environmental characteristics reflect the market or the sector within which the organization operates, and cultural, societal, and political conditions that govern its behavior (Chattopadhyay, Glick, and Huber 2001; Huber et al. 1993). In business organizations, the structure of the market (competition, concentration), technological dynamism, capital and market growth are considered the prominent environmental factors (Eisenhardt and Schoonhoven 1990; Pe'er, Vertinsky, and Keil 2016). In public organizations, a combination of economic, institutional, and demographic factors could affect the selection of strategies (Boyne et al. 2005; Warner, Aldag, and Kim 2020). Examples of environmental factors employed in public service

organizations are urbanization, community wealth, population growth, government support, deprivation, and external technical support (Boyne et al. 2005; Brown 2001; Damanpour and Schneider 2009; Hefetz and Warner 2012).

State GDP and Community Wealth. Regarding economic conditions, we examine the effect of gross domestic product (GDP) of the state in which the organization is located. Since state governments partly support the municipalities located in their jurisdictions, the economic health of the state could play a role in the selection of governance modes, especially those whose rollout requires specific investments. In the United States, local governments' budgets heavily depend on local taxes; therefore, community wealth, or its opposite deprivation, also could influence provision choices. Within a state, municipalities are located in urban, suburban, and rural areas that differ significantly in community resources. Those in wealthier communities have greater ability to finance and enact provision modes, which tend toward investments to increase their size (Ang and Straub 1998; Jensen 1989). Size increases the organization's scope economies, reducing overall production costs of its product and services (Parmigiani 2007). In addition, citizens in wealthier communities pressure municipalities for higher service quality. In-house production allows more managerial control over the entire process of service production to ensure service quality (Damanpour, Magelssen, and Walker 2020). In deprived communities, on the other hand, inadequate financial resources requires reducing both “upfront” and “on-going” costs of service provision (Nickerson and Zenger 2002), and managers may not be as keen on service quality as those in the wealthy communities. Therefore, we propose:

Proposition 1: The greater the state GDP and community wealth where the organization is located, the greater would be the tendency toward internalization and the lesser would be the tendency toward externalization. Organizations facing an intermediate level of economic conditions would tend to co-provide.

Supplier Market. The supply of competent contractors for external sourcing of a service will influence governance choice of the provision of that service (Hefetz and Warner 2012). Since public service organizations can provide numerous services, they may encounter scarcity of external suppliers for provisions of some. Services with low supplier market, environmental uncertainty, and contract unpredictability may encounter adaptation problems, motivating managers to choose internalization (Geyskens, Steenkamp, and Kumar 2006). Also, organizations in areas with a low number of service providers tend toward selecting an arrangement that provides higher levels of protection because they will be less able to anticipate vendor contingencies, monitor the vendor's activities, and evaluate the quality of services provided (Crook et al. 2013). On the other hand, for services with sufficient supply of competent vendors, managers have more flexibility to choose externalization over in-house provision.

Proposition 2: The greater the supplier availability, the greater would be the tendency toward externalization and the lesser would be the tendency toward internalization.

Organizations faced with intermediate levels of supplier availability would tend to co-provide.

Trend in Provision. In addition to economic conditions, institutional factors also influence organizational decisions. Institutional/network pressures impel organizations toward conformity to rules and norms of their fields, and heighten the pursuit of legitimacy in organizational actions (Ang and Cummings 1997; Ashworth, Boyne, and Delbridge 2009). When organizations are uncertain about a decision, they seek direction from the behavior of other organizations in their population (Abrahamson 1991). Conformity to institutional norms ensures organizations that the decision is proper and appropriate, reduces uncertainty, and helps preserving the organization's stability in the population (Lam 2005). Trend in provision of a program or practice represents the prevalence of that program or practice in the population. As such, prior instances of the spread of a certain mode of providing services in the population (e.g., outsourcing "operation of libraries") can serve as a precedent that influences the selection of that provision in the focal organization. Considering the in-house provision as the traditional mode of service delivery, we thus propose:

Proposition 3: The greater the trend in externalization (or co-provision) of a service, the greater would be the tendency toward externalization (or co-provision) of that service and the lesser would be the tendency toward internalization.

Organizational Characteristics

The selection of organizational strategy concurs with environmental opportunities and demands. Organizational characteristics help facilitate or hinder the strategic choice. Compared with environmental characteristics, organizational characteristics are more susceptible to managerial control. However, they also are subject to the unpredictability and uncertainty of organizational actions and constraints in decision-makers' rationality and cognition (Cyert and March 1963).

Organizational Decision Structure. The selection of a service delivery is a strategic decision prerogative of organizational leaders. Strategic decisions in local government organizations can be made by elected leaders, professional leaders, or both. Research shows that local government leaders vary in their actions across the politics-to-management scale (Zhang and Feiock, 2010).

Elected leaders accommodate the political process of election and reelection, paying political debt and gaining constituents' support to fulfill political goals (Feiock, Jeong, and Kim 2003). Political ambition may encourage elected leaders to favor self-serving goals over organizational goals (Schneider 2013). A tendency toward serving political goals may affect political leaders' selection of service delivery choices (Alesina and Tabellini 2008). Hence, these leaders may transact internally rather than through markets in order to increase the size and prestige of their organizations, despite the cost to efficiency, indicating that they would be inclined toward in-house production of services.

Proposition 4a: In organizations whose elected leaders select the strategy for service provision, the tendency toward

internalization would be greater than the tendency toward externalization and co-provision of services.

On the other hand, professional leaders are not bound by electoral cycles. They can have longer tenure in organizations, which equips them with long-term pursuance of efficiency and effectiveness, rather than opportunistic intents. Instead of focusing on political goals, these leaders are attuned to performance management criteria for accomplishing organizational goals. Hence, managers/administrators may be more responsive to citizen needs and concerns (Bozeman 2002; Alesina and Tabellini 2002), and more pragmatic in responding to fiscal stress (Warner, Aldag, and Kim 2020). For these leaders, organizational advancement is expected to override political costs, making them more inclined toward externalization to increase efficiency and achieve economic performance outcomes. Therefore,

Proposition 4b: In organizations whose professional leaders select the strategy for service provision, the tendency toward externalization and co-provision of services would be greater than the tendency toward internalization.

However, the selection of a service delivery strategy could incur both economic and political risk. In this vein, where both elected and professional administrators are involved in the process of decision-making, compromise in their divergent preferences is required for joint decision-making. While the New Public Management's tenants of competition and efficiency (Hood 2002; Osborne and Gaebler 1992) have received considerable acceptance (Kettl 1997), New Public Service places more emphasis on public values and service quality (deLeon and Denhardt 2000) and engagement of citizens in the decision process (Warner and Hefetz 2008). The emphasis on values and quality, rather than efficiency and political goals, would allow elected and professional leaders to cooperate to reduce potential performance uncertainties involved in contracting out (Mols, Hansen, and Villadsen 2012). As such, local government organizations lean toward a more balanced decision, opting for co-provision of services rather than favoring elected leaders' tendency toward internalization, or professional leaders' tendency toward externalization. Therefore,

Proposition 4c: In organizations whose both elected and professional leaders are involved in selecting the strategy for service provision, the tendency toward co-provision would be greater than the tendency toward externalization and internalization.

Organizational Size. Size is considered a major contingency affecting organizations' strategy, structure, and behavior (Kimberly 1976). Major differences exist in scale advantages, resources, and access to suppliers between small and large organizations (Dobrev and Carroll 2003; Josefy et al. 2015). On one side, larger municipalities in more urban areas have more diverse and complex environments and better access to suppliers than smaller municipalities in more rural areas. This points toward selecting externalization. However, larger organizations also have higher knowledge and human resource capabilities to improve existing services and develop new services (Hitt, Hoskisson, and Ireland 1990; Nord and Tucker 1987). This points toward selecting

in-house provision. We propose that size elements associated with internalization will prevail over those associated with privatization, as they offer better opportunity to managers to control the delivery process.

Proposition 5: The greater the organization size, the greater would be the tendency toward internalization and the lesser would be the tendency toward externalization. Organizations with intermediate level of size would tend to co-provide.

Financial Resources. Organizations with greater monetary resources can take more risk in managerial decisions and better absorb the cost of failure (Damanpour and Schneider 2009; Kearney, Feldman, and Scavo 2000). They can more easily modify current strategies and/or adopt new strategies because they can more easily finance funding, afford the cost of hiring and training employees, and adjust organizational systems and mechanisms to implement strategies (Helfat 1997). These capabilities will entice organizations with higher financial resources to produce services in-house. Thus,

Proposition 6: The greater the organizational financial resources, the greater would be the tendency toward internalization, and the lesser would be the tendency toward externalization. Organizations with intermediate level of financial resources would tend to co-provide.

Fiscal and Non-fiscal Pressure. Both fiscal and non-fiscal pressures, externally or internally induced, can influence strategic decisions. For instance, public service organizations can be under pressure to decrease costs of service delivery, face restriction in increasing taxes, cope with state government mandates, or encounter citizen pressure to improve the quality of service delivery. These pressures may tilt managers toward a strategy that best responds to the nature of the pressure. Bel and Fageda's (2007) review of the empirical evidence of the drivers of local governmental privatization indicates that fiscal stress and pressure from interest groups are explanatory factors of privatization in the U.S. context. Therefore, we propose that organizations that face fiscal and non-fiscal pressures tend to lower costs and increase efficiency, prompting the decision-makers to externalize service production.

Proposition 7: The greater the fiscal and non-fiscal pressures to externalize, the greater would be the tendency toward externalization, and the lesser would be the tendency toward internalization. Organizations faced with intermediate levels of fiscal and non-fiscal pressures would tend to co-provide.

Methods

Data and Sample

We analyzed service delivery provisions using data from the ICMA's Alternative Service Delivery (ASD) surveys. ASD surveys are administered nationally to a stratified random sample of U.S. local governments. The questionnaires are sent to city managers or chief administrative officers of municipal and county governments. Respondents are asked about the different modes of provision of 64 public services. The ICMA has issued the surveys every five years since 1982. The response rate for each survey ranged from 24%

to 32%, and the number of organizations that responded to each survey ranged from 1,172 to 1,566 (ICMA website, <http://www.icma.org>). We have access to the first six surveys; however, because of differences in the questions of the 1988 survey from others panels, for consistency, we included four panels (1992, 1997, 2002, and 2007) in constructing our sample. We matched the questions for each survey to create the longitudinal dataset. A total of 3,440 unique organizations responded to at least one of the four surveys. Since we are interested in the mode of provision of each service, we chose the organization-service as the level of analysis. The 3,440 organizations in our sample account for a total of 157,757 organization-service-year observations (hereafter, observation).

We then merged our ICMA sample with two other data sources. First, we used the results of two expert surveys (Brown and Potoski 2003; Hefetz and Warner 2012) to construct measures of supplier market, asset specificity, and service measurability. The two expert surveys were conducted to ascertain experts' assessment of the characteristics of each of 64 services included in ASD surveys. Second, we used data from the U.S. Census of Governments to measure community wealth, organizational size, and financial resources. These mergers reduced the number of organizations in the sample to 1,332 organizations and 68,547 observations. The primary reason for the reduction in the number of organizations is that the U.S. Census only includes data from cities with a population of 25,000 or more, whereas the ICMA includes data from cities with a population of 10,000 or more. Missing data and lagging two of the independent variables, trend in outsource and trend in cooperation, by one period further reduced the sample to 1,091 organizations and 47,436 observations.

Measures

Dependent Variable. Our dependent variable is a categorical variable computed for each observation from the ASD surveys. The variable is given the values of 1, 2, and 3 for the *internalization*, *externalization*, and *cooperation* modes of service provision, respectively. It is set equal to 1 when the service is fully produced in-house (i.e., by the employees of the organization entirely), to 2 when the service is outsourced to an external supplier (a private company or another local government), and to 3 when the service is provided jointly by the employees of the organization and an external supplier. Figure 1 shows the percent of services provided by internalization, externalization, and cooperation over time.

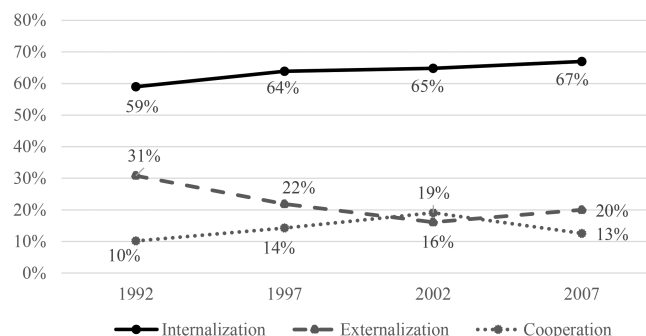


Figure 1 Service Provision Over Time, 1992–2007

Independent Variables

Environmental Characteristics. *State GDP* represents the economic conditions of the state in which the local government is located, as reported by the U.S. Bureau of Economic Analysis. It is measured as the change in the real GDP of the state from the prior period to the current period. *Community wealth* is measured as the total personal income of constituents, adjusted for inflation using the consumer price index (CPI) with 1982 as the base year, divided by the total number of constituents. *Supplier market* is operationalized by the mean ratings for each service using the data from Hefetz and Warner's (2012) expert survey. The scale is from 0 (no suppliers) to 1 (one supplier), 2 (two suppliers), 3 (three suppliers), and 4 (four or more suppliers).

Using internalization as the base, we measured popularities of externalization and cooperation in the organizational population. *Trend in externalization* was calculated by the total number of observations in the population when a service is provided by an external supplier, divided by the total number of that service's provision (via internalization, externalization, or cooperation) in the population. Similarly, *Trend in cooperation* was calculated by the total number of observations in the population when a service is produced jointly by the organization and an external supplier, divided by the total number of that service's provision in the population. Trend in externalization and trend in cooperation were lagged because last year's trend in each of these two governance modes is expected to influence this year's decision to externalize and cooperate in order to normatively align with population.

Organizational Characteristics. As noted above, the selection of a service delivery mode is a strategic decision that can be made by elected leaders, professional leaders, or both. The ASD survey includes questions as to who inside the local government is involved in evaluating the service delivery choice. We constructed three variables. *Elected leader* is a dummy variable set equal to 1 if the respondents answer that the key decision-maker is an elected official and no professional leader is involved in the decision-making, and 0 otherwise. *Professional leader* is a dummy variable set equal to 1 if the key decision-maker is the chief administrator officer (CAO) or assistant CAO and no elected official is involved in the decision-making, and 0 otherwise. *Elected and professional leader* is a dummy variable set equal to 1 if the decision-making involves both elected and professional leaders, and 0 otherwise.

Organization size was measured by the natural log of the number of people living in the jurisdiction of the local government, as reported in the U.S. Census of Governments. *Financial resources* was calculated as the natural log of the total expenditures of the organization in the current period divided by the total number of constituents as reported by the U.S. Census. Total expenditures were adjusted for inflation using the CPI (consumer price index), with 1982 as the base year.

Fiscal and non-fiscal pressures to outsource the production of services were measured from the ASD surveys. *Fiscal pressure* is calculated using a dummy variable set equal to 1 if there was an attempt to decrease costs of service delivery, and 0 otherwise. *Non-fiscal pressure* was calculated as the proportion of positive answers to whether four factors spurred the organization's decision

to outsource services: state or federal mandates, change in political climate, citizens favoring outsourcing, and unsolicited proposals by suppliers.

Control Variables

The transaction cost perspective offers that the boundary choice for each service is influenced by transaction costs associated with that service (Brown 2001; Williamson 1981). We controlled for two types of transactional costs—asset specificity and service measurability—for which data were publicly available for all 64 services (Brown and Potoski 2003). Asset specific represents the costs associated with fixed investments that are specialized to a particular asset. Service measurability represents the costs associated with monitoring supplier activities and measuring and evaluating the quality of services (Brown and Potoski 2003). *Asset specificity* and *Service measurability* were operationalized by their mean ratings for each service using the data from Brown and Potoski's (2003) expert survey. Both variables were scored on a five-point scale from low (1) to high (5).

We study provision choices for 64 public services. In the ASD surveys, these services are classified into seven types or groups: public works/transportation, public utilities, public safety, health and human services, parks and recreation, cultural and arts programs, and support functions. Since variation in the type of service may affect the selection of the service provision mode, we controlled for service groups. *Service group* was computed by the number of services provided by the organization in each of the seven service groups, divided by the total number of services provided by that organization. Furthermore, since our dataset is constructed from four panels (1992, 1997, 2002, 2007), we also controlled for temporal differences by using *yearly* fixed effects.

Analysis

Our dataset combines data from three levels: service program (level 3), local government (level 2), and state (level 1). As the sample includes repeatedly measured decisions in each local government, decisions on services nested in the same local government are more likely to function in the same way than services nested in different local governments (clusters). This means that observations may be interdependent. Given the structure of our data, we cannot run a standard logistic regression analysis, for there is violation of the assumption of independent residuals (Bressoux, 2010; Sommet and Morselli 2017). Therefore, we opted for conducting multilevel model analyses for each of the three outcomes. Multilevel (logistic) modeling notably aims to deal with observations' interdependence by allowing us to specify the number of levels (clusters) in the dataset and by calculating the intraclass correlation coefficient (ICC). In other words, the multilevel estimation allows us to determine the degree of homogeneity of the outcome within (1) local governments and (2) states (Sommet and Morselli 2017).

To confirm that the multilevel model was a better fit for our data, we ran a multilevel empty (unconditional) model—including only the outcome and the specific cluster—to calculate whether heterogeneity exists on the log-odds of the outcome across both local governments and states. We ran multilevel empty models for each of the three outcomes (internalization, externalization,

Table 1 Descriptive Statistics and Correlations

Variable	Mean	s.d.	1	2	3	4	5	6	7	8
1 Internalization	0.65	0.48								
2 Externalization	0.20	0.40	-0.68							
3 Cooperation	0.15	0.36	-0.57	-0.21						
4 State GDP	0.17	0.07	0.01	-0.02	0.01					
5 Community wealth	9.26	0.24	-0.06	0.02	0.06	-0.14				
6 Supplier market	1.65	0.78	-0.16	0.05	0.15	0.01	0.01			
7 Trend in outsource (lag)	0.21	0.21	-0.34	0.42	-0.02	-0.01	-0.04	0.02		
8 Trend in cooperation (lag)	0.12	0.10	-0.17	0.01	0.21	-0.02	0.04	0.38	-0.23	
9 Only elected leaders	0.03	0.18	0.01	0.00	-0.02	-0.03	-0.04	0.00	0.01	-0.02
10 Only professional administrators	0.37	0.48	-0.01	-0.01	0.02	0.08	0.09	0.00	0.00	0.00
11 Elected leaders & professional administrators	0.33	0.47	-0.04	0.01	0.04	0.03	-0.02	0.01	0.03	-0.03
12 Organization size (log)	10.73	1.08	-0.04	-0.04	0.10	0.13	0.11	0.00	0.03	0.05
13 Financial resources (log)	0.69	0.32	0.02	-0.05	0.03	-0.03	0.11	-0.03	0.03	0.01
14 Fiscal pressure	0.48	0.41	-0.07	0.00	0.09	0.02	0.12	0.01	0.02	-0.02
15 Non-fiscal pressure	0.10	0.17	-0.02	0.00	0.03	0.06	-0.01	0.00	0.03	-0.02
17 Asset specificity	3.00	0.63	-0.10	0.15	-0.03	0.02	-0.03	-0.51	0.35	-0.05
18 Service measurability	2.60	0.53	-0.05	0.07	0.00	0.00	0.00	-0.15	0.15	-0.07

Variable	9	10	11	12	13	14	15	16
10 Only professional administrators	-0.15							
11 Elected leaders and professional administrators	-0.13	-0.54						
12 Organization size (log)	-0.05	0.05	0.06					
13 Financial resources (log)	-0.06	0.06	-0.07	0.03				
14 Fiscal pressure	-0.02	0.29	0.31	0.17	0.02			
15 Non-fiscal pressure	-0.01	0.03	0.26	0.18	0.01	0.37		
17 Asset specificity	0.01	0.00	0.00	0.03	0.03	0.00	0.01	
18 Service measurability	0.01	-0.01	0.01	0.06	0.00	0.01	0.03	0.36

*Number of observations 47,436. Correlation coefficients greater than 0.01 or less than -0.01 are significant at $p < .05$.

Table 2 Multilevel Logit Results for Service Delivery Choices

	Model 1 Internalization	Model 2 Externalization	Model 3 Cooperation
Environmental characteristics			
State GDP	-1.08*** (0.32)	1.72*** (0.42)	-0.81* (0.41)
Community wealth	-0.65*** (0.16)	0.40* (0.19)	0.65** (0.23)
Supplier market	-0.76*** (0.02)	0.27*** (0.02)	0.40*** (0.03)
Trend in outsource (lag)	-3.11*** (0.07)	4.87*** (0.08)	
Trend in cooperation (lag)			5.27*** (0.16)
Organizational characteristics			
Only elected leaders	0.32* (0.13)	-0.30 (0.16)	-0.21 (0.17)
Only professional administrators	-0.05 (0.06)	-0.05 (0.07)	0.16* (0.08)
Elected leaders and professional administrators	-0.17** (0.05)	-0.05 (0.07)	0.36*** (0.08)
Organization size (log)	0.00 (0.04)	-0.21*** (0.04)	0.25*** (0.05)
Financial resources (log)	0.10 (0.10)	-0.39*** (0.12)	0.20 (0.13)
Fiscal pressure	-0.16** (0.06)	-0.15 (0.08)	0.47*** (0.08)
Non-fiscal pressure	-0.04 (0.11)	0.45** (0.14)	-0.43** (0.14)
Controls			
Year ^a	YES	YES	YES
Service group ^a	YES	YES	YES
Asset specificity	-0.52*** (0.03)	0.37*** (0.03)	0.21*** (0.03)
Service measurability	0.23*** (0.03)	-0.34*** (0.04)	0.00 (0.04)
Constant	9.82*** (1.54)	-4.62** (1.78)	-14.06*** (2.16)
Chi-square	5,856	6,363	2,758
Log likelihood	-24,671	-17,478	-16,402

Notes: Number of observations 47,436. All tests are one-tailed since the hypotheses are directional.

* $p < .05$; ** $p < .01$; *** $p < .001$.

cooperation) including each of the two clusters (local governments, states). Findings from the empty models report that the intraclass variance of the log-odds for both clusters is statistically significant, thus corroborating the multilevel model is more appropriate when compared with a multinomial model.

Results

Descriptive statistics and correlations for all variables included in our analyses are shown in Table 1. Means of service provision strategies indicate that internalization is the most frequent form of service provision with 65% of the observations, followed by externalization with 20%, and cooperation with 15% of the observations (Fig. 1). Multilevel logit regression models are shown in Table 2. We conducted regression models for internalization (Model 1), externalization (Model 2), and cooperation (Model 3). In all of the models, we controlled for the seven service groups and for year fixed effects (coefficients not shown for parsimony). We tested for multicollinearity by computing the variance inflation factors (VIFs) of each regression model. The VIFs ranged between 1.08 and 3.26. These values are below the suggested ceiling of 10 for confirming multicollinearity problems (Chatterjee and Price 1991).

Environmental Characteristics

Results in Table 2 show that the external factors have different levels of impact on boundary choices. Proposition 1, which stated that state GDP and community wealth motivate organizations to choose internalization rather than externalization, was rejected. Regression coefficients of state GDP in Models 1 and 3 are negative ($p < .001$, $p < .05$) and in Model 2 is positive ($p < .001$). They indicate that local governments located in the states with higher GDP tend to select externalization over internalization and cooperation. The results for community wealth portray a similar picture. Regression coefficients for Model 1 is negative ($p < .001$) and for Models 2 and

3 are positive ($p < .05$, $p < .01$). They suggest that organizations in wealthy communities rely on externalization and cooperation rather than on internalization.

Proposition 2 was partially supported. Our expectation that at high levels of supplier availability organizations tend to externalize rather than internalize was supported. Regression coefficient for externalization is positive (Model 2, $p < .001$) and for internalization is negative (Model 1, $p < .001$). However, since the coefficient for cooperation is also positive (Model 3, $p < .001$), data do not distinguish between high and medium levels of supplier availability. Hence, our expectation that organizations faced with intermediate levels of supplier availability would co-provide rather than externalize is not supported.

Proposition 3 offered that trend in an alternative provision mode (externalization, cooperation) in the population positively affects the use of that mode by organizations in that population. Negative regression coefficient for internalization (Model 1, $p < .001$) combined with positive regression coefficient for trend in externalization (Model 2, $p < .001$) and trend in cooperation (Models 3, $p < .001$) support this proposition. These findings are consistent with previous studies and confirm the role of pursuit of legitimacy in organizational decision-making (Abrahamson 1991; Staw and Epstein 2000).

Organizational Characteristics

We advanced three propositions regarding local governments' decision structure, depending whether the elected leaders (P4a), non-elected leaders (P4b), or both (P4c) are involved in selecting the service provision strategy. When the elected leader was in charge, results showed a positive and significant coefficient for internalization (Model 1, $p < .05$) and no statistically significant difference in terms of local governments' decisions to externalize or co-provide services (Model 2 and 3, $p > .05$). Hence, Proposition 4a is supported. For Proposition 4b, the results provided partial support by showing that when the decision-maker is a professional administrator, organizations are more likely to choose cooperation (Model 3, $p < .05$), relative to both internalization and externalization (Model 2 and 3, $p > .05$). This finding supports the view that in their decisions, non-elected leaders tend to decrease the weight of political concerns in the selection of boundary choices. In this vein, findings for P4a and P4b together suggest that the likelihood of selecting an alternative mode of service delivery over the traditional mode (in-house production) is higher for local governments whose decision-makers are non-elected leaders, compared with those whose decision-makers are elected leaders. But the alternative mode is not externalization as we proposed, it is cooperation. Proposition 4c, which suggested that when the decision involves both elected and non-elected leaders, local governments are more likely to choose cooperation relative to internalization and externalization, was supported. The results show that regression coefficient for internalization is negative (Model 1, $p < .01$), for externalization is nonsignificant (Model 2, $p > .05$), and for cooperation is positive (Model 3, $p < .001$).

Propositions 5 and 6 stated that, at higher levels of size and financial resources, organizations tend to choose internalization over externalization. Results are partially supportive, as both

size and resources regression coefficients for externalization are negative (Model 2, $p < .001$ and $p < .001$) and for internalization are nonsignificant (Model 1, $p > .05$, $p > .05$). At the medium level of size and resources, however, the results differ. For size, negative coefficient in Model 2 ($p < .001$) and positive coefficient in Model 3 ($p < .001$) indicate that local governments select cooperation over externalization as Proposition 5 offers. But for financial resources, contrary to Proposition 6, the coefficient for cooperation is nonsignificant (Model 3, $p > .05$), although the regression coefficient for externalization is negative (Model 2, $p < .001$).

Proposition 7, regarding the influence of fiscal and non-fiscal pressures on service provision, was supported partially. Considering fiscal pressure, the regression coefficient in Model 1 is negative ($p < .01$), in Model 2 is nonsignificant ($p > .05$), and in Model 3 is positive ($p < .001$). These results suggest a preference for cooperation over both internalization and externalization, both at high and medium levels of fiscal pressure. Considering non-fiscal pressure, the regression coefficient in Model 1 is nonsignificant ($p > .05$), in Model 2 is positive ($p < .01$), and in Model 3 is negative ($p < .01$). These results suggest that, at both high and medium levels of non-fiscal pressure, externalization is preferred over internalization and cooperation. Overall, our findings point out fiscal and non-fiscal pressures affect service delivery strategy differently.

Discussion

Studies of plural sourcing of organizational services in private or public context are scarce. The exceptions have mainly relied on the transaction cost perspective and have mainly examined effects of service attributes (e.g., environmental uncertainty, asset specificity, and contract management difficulty) on plural sourcing (Hefetz, Warner, and Vigoda-Gadot 2014; Heide et al., 2014; Mols, Hansen, and Villadsen 2012; Parmigiani 2007). This study contributes by using a different theoretical perspective that has not been applied in the studies of outsourcing in either public or business organizations. Strategic adaption perspective offers that the congruency between environmental contingencies and organizational actions governs organizational conduct and outcomes. We developed propositions on how environmental and organizational attributes affect three modes of service provision—internalization (in-house production), externalization (outsourcing production to an external provider), and cooperation (joint internal and external production). We controlled for service attributes and tested the propositions by longitudinal data from U.S. local government organizations. Results suggest that, under different external and internal conditions, organizations choose different mixes of externalization, internalization, and cooperation.

Environmental and Organizational Characteristics

Environmental antecedents of plural sourcing can be both economic and institutional. Considering economic antecedents, we investigated effects of macro (state GDP) and micro (supplier market, community wealth) factors. We found that, in states with high GDP, organizations select externalization over internalization and cooperation. Results for micro-economic indicators differed. Both community wealth and supplier market affected internalization negatively but externalization and cooperation positively. Together, these results suggest that, where any of the three economic indicators are substantial, municipalities do not

tend to produce services in-house. They either outsource service production or jointly produce them with external entities. Yet, economic factors do not distinguish between externalization and cooperation, suggesting this distinction might depend on other types of antecedents.

As to the role of institutional factors—trend in outsourcing and trend in cooperation—local government organizations tend to follow an alternative delivery mode that is prevalent among members of the organizational population. Our findings supported the propositions suggesting that public service organizations, similar to their private counterparts, also ride on the fashion wave of contracting. Overall, our analyses of environmental characteristics point out that local governments prefer outsourcing and joint production to in-house production and adopt one or the other based on its commonness in the organizational population.

However, we found that the parity in selecting externalization and cooperation does not hold for organizational characteristics. Considering organizational decision structure, for example, when top decision-makers are elected leaders, results point to a preference for internalization. But in organizations where the decision-makers are professional administrators, results point to a preference for cooperation. In organizations where elected officials and professional administrators decide jointly, the coefficient for cooperation is positive and the coefficient for internalization is negative. These results suggest the involvement of professional administrators may overshadow the involvement of elected officials. Surprisingly, none of the three forms of decision structure affected externalization positively. This finding suggests strategic managers prefer the provision modes that allow them to have some degree of control on services delivery.

When organizations are large or financial resources are abundant, results indicate externalization is not a preferred choice. Large organizations prefer cooperation over internalization; financial resources remain neutral, not having an effect on either externalization or cooperation. A possible explanation is that, first, the higher administrative knowledge of large organizations enables them to devise managerial processes for coordinating their relationships with suppliers. Second, higher financial resources may relieve organizations from seeking efficiency by outsourcing their services but cannot explain whether they would prefer cooperation over internalization or vice versa.

We found a difference in the way fiscal and non-fiscal pressures influence service delivery strategy in public service organizations. In situations where fiscal (monetary) pressure is high, organizations tend toward choosing cooperation over externalization. But in situations where non-fiscal (political, social) pressure is high, organizations choose externalization over cooperation. Together, these findings suggest that the service provision choice could be contingent on the nature of perceived external pressure; namely, whether the source of the pressure is economic (fiscal) or institutional (non-fiscal).

Implications for Theory and Research

We found both economic and institutional forces could influence sourcing of public services. These forces respectively represent

a quest for efficiency and a quest for legitimacy, two rival forces influencing managerial decision-making (Abrahamson 1991; Ashworth, Boyne, and Delbridge 2009). According to the rational explanation, managers tend to make optimal or satisficing decisions to obtain economic gains (Ashworth, Boyne, and Delbridge 2009). According to the institutional explanation, managers tend to make decisions that conform to institutional norms to ensure that the choices are proper and preserve the organization's stability in its network or population (Lam 2005). Among our independent variables, community wealth, financial resources, and fiscal pressure associate with economic factors; trends in provision, political leadership, and non-fiscal pressure relate to institutional factors. However, while results indicate that both sets of factors influence service provision choices, with the exception of fiscal and non-fiscal pressures, they do not show their effects are distinct. Due to the important role of the interplay between economic and institutional forces on managerial decision-making, we recommend further investigations of their rival or complementary roles on boundary choice decisions, and more generally on strategic decisions in public service organizations.

More specific to local governments, public choice theory posits that government monopoly results in poor service quality, and New Public Management reform movement posits that outsourcing of organizational activities in general, and service delivery in particular, help make local governments more efficient and effective. However, our findings indicate a trend from the traditional in-house production of public services to cooperation more than externalization. Hence, contrary to public choice and public management reform views that champion externalization, when organizations have the option of selecting a governance mode combining hierarchy and market (i.e., co-provision), they tend to select it over both internalization (make) and externalization (buy), especially when organizational forces are strong. Confirmation and substantiation of this finding has important implications for theory and practice.

Based on the study's findings, we offer several ideas for future research. First, we have examined influences of external and internal antecedents without scrutinizing their interdependencies. Future research can contribute by exploring how interactions between environmental and organizational characteristics affect service delivery strategy. Second, it is important to examine the moderating effect of one set of factors on the relationship between the other set of factors and boundary choices. For example, more research is needed to determine whether the environmental circumstances (market structure; political, societal and economic conditions) strengthen or weaken the influence of organizational conditions (size, financial resources, non-fiscal pressure) on governance choices. Third, we recommend further use of multilevel examinations of governance modes in local government organizations in other nations, private non-profit organizations, and even for-profit service organizations to confirm, extend, and expand our findings on service delivery strategy. Fourth, future research also can explore the mechanisms by which organizations successfully make boundary decisions, despite external pressures and internal limitations. Fifth, additional research can help further understanding of whether organizations' past experience with a particular service delivery strategy would influence their current selection of that strategy. For

example, would last year's decision to co-provide a service affect this year's decision to co-provide more? To externalize less? Such analyses can inform about extent and direction of path dependency in service delivery choices.

Previous studies have focused primarily on conditions that explain the selection of polar boundary choices of internalization and externalization. The emergence of cooperation as a prevalent provision choice in this study suggests that future studies would need to go beyond the polar choice of make *or* buy and explore environmental and organizational conditions that induce government organizations to select make, buy, and make *and* buy. Several research questions associated with the co-provision mode can be explored. For example, to what degree will selecting cooperation reduce the organization's monitoring costs of suppliers versus retaining the stock of the organization's specific assets? Why do fiscal and non-fiscal pressures differently influence choice of cooperation relative to both internalization and externalization? Is cooperation a temporary mode of governance leading to externalization to a supplier or is it a permanent mode of governance in-between internalization and externalization? What factors lead to successful versus unsuccessful cooperative service delivery? And so on.

Previous studies, as ours, have examined externalization or co-provision as events, not as processes. The sustainability of an outsourcing or a co-provision decision might be affected by the process through which that decision is made (Damanpour, Magelssen, and Walker 2020). As such, scholarly attention is needed to organizational processes that might support service delivery strategy success. For example, how can organizations effectively monitor suppliers? What activities do they undertake to monitor suppliers' behavior and evaluate the effectiveness of their contracts? How is cooperation between the organization and its supplier carried out? How do the parties share their duties? What are their responsibilities to end-users? How can learning from past experiences help strategic leaders select more effective delivery choices in the future? What are learning processes through which organizations could improve their relationships with the suppliers? Equally important, especially for public managers, are mechanisms for building trust and devising interaction processes of communication, cooperation, and problem solving between the organization and its suppliers.² Overall, examinations of such research questions are necessary to develop a more in-depth understanding of antecedents and consequences of plural sourcing of organizational activities in both goods and services and in both business and public contexts.

Limitations

Our study has several limitations that should be considered in interpreting its results. First, we have controlled for and examined the influence of some explanatory variables, yet other factors, such as institutional and regulatory arrangements and organizational contracting experience, could be taken into account as additional predictors (Fabrizio 2012). Second, our dependent variable is the type of provision chosen for each service. However, service provisions may be interrelated and a type of provision may be linked to a previous provision of that type (Argyres and Liebeskind 1999), which we have not scrutinized. Third, we did not distinguish

between types of external suppliers (e.g., for-profit versus non-profit versus another government). Future research could tease apart the effects of different types of providers and explore whether internal and external antecedents differ when the supplier is another local government or a business organization. Fourth, we have controlled for transaction costs and have examined the relationship between external and internal conditions and service provision choices. Future studies can explore moderating or mediating effects of transaction costs on the relationships we have studied. For example, research can explore whether factors, such as cost of monitoring or financial value of contracting, would strengthen or weaken the influence of community wealth, organizational resource, or institutional pressures on service delivery choices.³ Fifth, we have investigated how environmental and organizational characteristics lead to the selection of governance modes in local government organizations. We caution generalizing our results to other types of public, and especially, business organizations. For instance, business organizations in stable markets may operate under similar environmental conditions as public service organizations, but they still face competition that is absent in local government organizations.

Conclusion

This study contributes by applying strategic adaptation to predict governance mode choices in public service organizations. It extends and expands explanations of governance mode choices based on transaction cost, public choice, and New Public Management. The results also contribute to a better understanding of plural sourcing of organizational services, a research endeavor that requires more attention in both public and private contexts. We found that external and internal antecedents affect three types of service delivery choices (internalization, externalization, cooperation) differently. Our findings also depict a tendency toward co-provision over outsourcing of public services. We conclude that the nature of organizational boundaries is fluid, and pervasive pressure to improve quality of services, while reducing costs, continues to be a theme for more investigation. Given the emphasis on maximizing shareholder value in the private sector, top executives' desire to "do more with less," underfunded obligations (e.g., pension), and growing budgetary pressures in the public sector (Schneider 2005), we recommend new research on the decision-making processes for devising a mix of governance structures to produce services more efficiently and serve citizens more effectively.

Notes

1. Examples of hybrid forms are tapered vertical integration (Harrigan 1984), strategic alliances, joint ventures, partnerships, and more generally, any form of interorganizational cooperative arrangements. In a systematic review of empirical studies of transaction costs, David and Han (2004) found multiple forms of hybrid arrangements, such as franchises, relational contracting, alliances, and joint ventures. Yet, the majority of the studies had focused on the market versus hierarchy only.
2. Insights for theorizing and investigating the interaction processes can be drawn from the literature on mergers and acquisitions, strategic alliances, joint ventures, and cooperative agreements (e.g., Birkinshaw, Bresman, and Hakanson 2000; Damanpour et al. 2012; Fernández-Monroy, Martín-Santana, and Galván-Sánchez 2018; Meier et al. 2016; Spekman et al. 1998).
3. We thank an anonymous reviewer for bringing this point to our attention.

References

- Abrahamson, E. 1991. Managerial Fads and Fashion: The Diffusion and Rejection of Innovation. *Academy of Management Review* 16: 586–612.
- Ackoff, R.L. 1970. *A Concept of Corporate Planning*. New York: Wiley-Interscience.
- . 1999. *Re-Creating Corporations*. New York: Oxford University Press.
- Alesina, A., and G. Tabellini. 2008. Bureaucrats or Politicians? Part II: Multiple Policy Tasks. *Journal of Public Economics* 92: 426–47.
- Ang, S., and L.L. Cummings. 1997. Strategic Response to Institutional Influences on Information Systems Outsourcing. *Organization Science* 8(3): 235–56.
- Ang, S., and D.W. Straub. 1998. Production and Transaction Economies and IS Outsourcing: A Study of the US Banking Industry. *MIS Quarterly* 22: 535–52.
- Argyres, N.S., and J.P. Liebeskind. 1999. Contractual Commitments, Bargaining Power, and Governance Inseparability: Incorporating History into Transaction Cost Theory. *Academy of Management Review* 24(1): 49–63.
- Ashworth, R., G. Boyne, and R. Delbridge. 2009. Escape from the Iron Cage? Organizational Change and Isomorphic Pressures in the Public Sector. *Journal of Public Administration Research and Theory* 19: 165–87.
- Bel, G., and X. Fageda. 2007. Why Do Local Governments Privatise Public Services? A Survey of Empirical Studies. *Local Government Studies* 33(4): 517–34.
- Bel, G., X. Fageda, and M.E. Warner. 2010. Is Private Production of Public Services Cheaper than Public Production? A Meta-Regression Analysis of Solid Waste and Water Services. *Journal of Policy Analysis and Management* 29(3): 553–77.
- Birkinshaw, J., H. Bresman, and L. Hakanson. 2000. Managing the Post-Acquisition Integration Process: How the Human Integration and Task Integration Processes Interact to Foster Value Creation. *Journal of Management Studies* 37: 395–425.
- Bozeman, B. 2002. Public-Value Failure: When Efficient Markets May Not Do. *Public Administration Review* 62(2): 145–61.
- Boyne, G.A. 1998. Bureaucratic Theory Meets Reality: Public Choice and Service Contracting in U.S. Local Government. *Public Administration Review* 58: 474–84.
- . 2002. Public and Private Management: What's the Difference? *Journal of Management Studies* 39(1): 97–122.
- Boyne, G.A., J.S. Gould-Williams, J. Law, and R.M. Walker. 2005. Explaining the Adoption of Innovation: An Empirical Analysis of Public Management Reform. *Environment and Planning C: Government & Policy* 23(3): 419–35.
- Brown, T.L. 2001. Contracting Out by Local Governments in Transitioning Nations. The Role of Technical Assistance in Ukraine. *Administration & Society* 32(6): 728–55.
- . 2010. The Evolution of Public Sector Strategy. *Public Administration Review* 70: S212–4.
- Brown, T.L., and M. Potoski. 2003. Transaction Costs and Institutional Explanations for Government Service Production Decision. *Journal of Public Administration Research and Theory* 13(4): 441–68.
- Buchanan, J.M., and G. Tullock. 1962. *The Calculus of Consent*. Michigan: University of Michigan Press.
- Burton, R.M. 2013. The Future of Organization Design. *Journal of Organization Design* 2(1): 42–4.
- Chandler, A.D., Jr. 1962. *Strategy and Structure*. Cambridge: MIT Press.
- Chatterjee, S., and B. Price. 1991. *Regression Analysis by Example*. New York: John Wiley & Sons.
- Chattopadhyay, P., W.H. Glick, and G.P. Huber. 2001. Organizational Actions in Response to Threats and Opportunities. *Academy of Management Journal* 44(5): 937–55.
- Chakravarthy, B.J. 1982. Adaptation: A Promising Metaphor for Strategic Management. *Academy of Management Review* 7: 35–44.
- Churchman, C.W. 1968. *The Systems Approach*. New York: Delacorte Press.
- Coase, R.H. 1937. The Nature of the Firm. *Econometrica* 4(16): 386–405.
- Crook, T.R., J.G. Combs, D.J. Ketchen, and H. Aguinis. 2013. Organizing Around Transaction Costs: What We Learned and Where Do We Go From Here? *Academy of Management Perspectives* 27(1): 63–79.
- Cummings, T.G., and S. Srivastva. 1977. *Management of Work: A Socio-Technical Systems Approach*. Kent, OH: Kent State University Press.
- Cyert, R., and J. March. 1963. *A Behavioral Theory of the Firm*. Oxford: Blackwell.
- Daft, R.L. 2001. *Organization Theory and Design*. Cincinnati, OH: South-Western Publishing.
- Damanpour, F., C. Devece, C. Chen, and V. Pothukuchi. 2012. Organizational Culture and Partner Interaction in the Management of International Joint Ventures in India. *Asia Pacific Journal of Management* 29(2): 453–78.
- Damanpour, F., C. Magelssen, and R.M. Walker. 2020. Outsourcing and Insourcing of Organizational Activities: The Role of Outsourcing Process Mechanisms. *Public Management Review* 22(6): 767–90.
- Damanpour, F., and M. Schneider. 2009. Characteristics of Innovation and Innovation Adoption in Public Organizations: Assessing the Role of Management. *Journal of Public Administration Research and Theory* 19: 495–522.
- David, R.J., and S.-K. Han. 2004. A Systematic Assessment of the Empirical Support for Transaction Cost Economics. *Strategic Management Journal* 25: 39–58.
- de Leon, L., and R.B. Denhardt. 2000. The Political Theory of Reinvention. *Public Administration Review* 60(2): 89–97.
- Donaldson, L. 1995. *American Anti-Management Theories of Organization*. Cambridge: Cambridge University Press.
- . 2006. The Contingency Theory of Organizational Design. In *Organization Design the Evolving State-of-the-Art*, edited by R.M. Burton, B. Eriksen, D.D. Håkansson, and C.C. Snow, 19–40. New York: Springer Publishing Company.
- Dobrev, S.D., and G.R. Carroll. 2003. Size (and Competition) Among Organizations: Modeling Scale-Based Selection Among Automobile Producers in Four Major Countries, 1885–1981. *Strategic Management Journal* 24(6): 541–58.
- Dyer, J.H. 1997. Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value. *Strategic Management Journal* 18(7): 535–56.
- Dyer, J.H., and W. Chu. 2003. The Role of Trustworthiness in Reducing Transaction Costs and Improving Performance: Empirical Evidence for the United States, Japan, and Korea. *Organization Science* 14(1): 57–68.
- Eisenhardt, K.M., and C.B. Schoonhoven. 1990. Organizational Growth: Linking Founding Team, Strategy, Environment, and Growth Among US Semiconductor Ventures, 1978–1988. *Administrative Science Quarterly* 35(3): 504–29.
- Fabrizio, K.R. 2012. Institutions, Capabilities, and Contracts: Make or Buy in the Electric Utility Industry. *Organization Science* 23(5): 1264–81.
- Feiock, R.C., M.G. Jeong, and J. Kim. 2003. Credible Commitment and Council-Manager Government: Implications for Policy Instrument Choices. *Public Administration Review* 63(5): 616–25.
- Fernández-Monroy, M., J.D. Martín-Santana, and I. Galván-Sánchez. 2018. Building Successful Franchise Partnerships: The Importance of Communication and Trust. *Management Decision* 56(5): 1051–64.
- Galbraith, J.R. 2002. *Designing Organizations*. San Francisco: Jossey-Bass.
- Geyskens, I., J.-B.E.M. Steenkamp, and N. Kumar. 2006. Make, Buy, or Ally: A Transaction Cost Theory Meta-Analysis. *Academy of Management Journal* 49(3): 519–43.
- Ghemawat, P., and J.W. Rivkin. 1998. *Creating Competitive Advantage*. Boston: Harvard Business School.
- Harrigan, K.R. 1984. Formulating Vertical Integration Strategies. *Academy of Management Review* 9: 638–52.
- Hefetz, A., and M.E. Warner. 2012. Contracting or Public Delivery? The Importance of Service, Market, and Management Characteristics. *Journal of Public Administration and Theory* 22(2): 290–317.

- Hefetz, A., M. Warner, and E. Vigoda-Gadot. 2014. Concurrent Sourcing in the Public Sector: A Strategy to Manage Contracting Risk. *International Public Management Journal* 17(3): 365–86.
- Heide, J.B. 2003. Plural Governance in Industrial Purchasing. *Journal of Marketing* 67(October): 18–9.
- Helfat, C.E. 1997. Know-how and Asset Complementarity and Dynamic Capability Accumulation: The Case of R&D. *Strategic Management Journal* 18(5): 339–60.
- Hillman, A.J., M.C. Withers, and B.J. Collins. 2009. Resource Dependence Theory: A Review. 2009. *Journal of Management* 35(6): 404–1427.
- Hitt, M.A., R.E. Hoskisson, and R.D. Ireland. 1990. Mergers and Acquisitions and Managerial Commitment to Innovation in M-Form Firms. *Strategic Management Journal* 11: 29–47.
- Hood, C. 2002. Control, Bargains, and Cheating: The Politics of Public-Service Reform. *Journal of Public Administration Research and Theory* 12(3): 309–32.
- Hrebiniak, L.G., and W.F. Joyce. 1985. Organizational Adaptation: Strategic Choice and Environmental Adaptation. *Administrative Science Quarterly* 30(3): 336–49.
- Huber, G.P., K.M. Sutcliffe, C.C. Miller, and W.H. Glick. 1993. Understanding and Predicting Organizational Change. In *Organizational Change and Redesign: Ideas and Insights for Improving Performance*, edited by G.P. Huber and W.H. Glick, 215–65. New York: Oxford University Press.
- Jensen, M.C. 1989. Eclipse of the Public Corporation. *Harvard Business Review* 89(5): 61–75.
- Josefy, M., S. Kuban, R.D. Ireland, and M.A. Hitt. 2015. All Things Great and Small: Organizational Size, Boundaries of the Firm, and a Changing Environment. *Academy of Management Annals* 9(1): 715–802.
- Kearney, R.C., B.M. Feldman, and C.P. Scavo. 2000. Reinventing Government: City Manager Attitudes and Actions. *Public Administration Review* 60(6): 535–48.
- Kettl, Donald. 1997. The Global Revolution in Public Management: Driving Themes, Missing Links. *Journal of Policy Analysis and Management* 16(3): 446–62.
- Kimberly, J.R. 1976. Organizational Size and the Structuralist Perspective: A Review, Critique, and Proposal. *Administrative Science Quarterly* 21(4): 571–97.
- Krzeminska, A., G. Hoetker, and T. Mellewigt. 2013. Reconceptualizing Plural Sourcing. *Strategic Management Journal* 34: 1614–27.
- Lam, A. 2005. Organizational innovation. In *The Oxford Handbook of Innovation*, edited by J. Fagerberg, D. Mowery, and R.R. Nelson, 115–47. Oxford: Oxford University Press.
- Lawrence, P.R., and J.W. Lorsch. 1969. *Organization and Environment*. Homewood, IL: Irwin.
- Meier, M., M. Lütkevitte, T. Mellewigt, and C. Decker. 2016. How Managers Can Build Trust in Strategic Alliances: A Meta-Analysis on the Central Trust-Building Mechanisms. *Journal of Business Economics* 86(3): 229–57.
- Miranda, R., and A. Lerner. 1995. Bureaucracy, Organizational Redundancy, and the Privatization of Public Services. *Public Administration Review* 55(2): 193–200.
- Moe, T.M. 1984. The New Economics of Organization. *American Journal of Political Science* 28(4): 739–77.
- Mohr, Z.T. 2017. Cost Accounting at the Service Level: An Analysis of Transaction Cost Influences on Indirect Cost Measurement in the Cost Accounting Plans of Large US Cities. *Public Administration Quarterly* 41(1): 91–129.
- Mols, N.P., J.R. Hansen, and A.R. Villadsen. 2012. Plural Governance: The Effect of Internal Production on Supplier Performance. *Industrial Marketing Management* 41: 874–85.
- Mudambi, S.M., and S. Tallman. 2010. Make, Buy, or Ally? Theoretical Perspectives on Knowledge Process Outsourcing through Alliances. *Journal of Management Studies* 47(8): 1434–56.
- Nickerson, J.A., and T.R. Zenger. 2002. Being Efficiently Fickle: A Dynamic Theory of Organizational Choice. *Organization Science* 13(5): 547–66.
- Nord, W.R., and S. Tucker. 1987. *Implementing Routine and Radical Innovations*. Lexington, MA: Lexington Books.
- Osborne, D.E., and T. Gaebler. 1992. *Reinventing Government: How the Entrepreneurial Spirit Is Transforming Government*. Reading, MA: Addison-Wesley.
- Parmigiani, A. 2007. Why Do Firms both Make and Buy? An Investigation of Concurrent Sourcing. *Strategic Management Journal* 28: 285–311.
- Pe'er, A., I. Vertinsky, and T. Keil. 2016. Growth and Survival: The Moderating Effects of Local Agglomeration and Local Market Structure. *Strategic Management Journal* 37(3): 541–64.
- Pfeffer, J., and G.R. Salancik. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper and Row.
- Piening, E.P. 2013. Dynamic Capabilities in Public Organizations: A Literature Review and Research Agenda. *Public Management Review* 15(3): 209–45.
- Prahalad, C.K. 1983. Developing Strategic Capability: An Agenda for Top Management. *Human Resource Management* 22(3): 237–54.
- Schindehutte, M., and M.H. Morris. 2001. Understanding Strategic Adaptation in Small Firms. *International Journal of Entrepreneurial Behaviour & Research* 7(3): 84–107.
- Schneider, M. 2005. The Status of US Public Pension Plans: A Review with Policy Considerations. *Review of Public Personnel Administration* 25(2): 107–37.
- . 2013. Agency Theory. In *Encyclopedia of Management Theory*, edited by E.H. Kessler, 30–4. Los Angeles: Sage.
- Schneider, M., and Fariborz Damanpour. 2002. Public Choice Economics and Public Pension Plan Funding: An Empirical Test. *Administration & Society* 34: 57–86.
- Scott, W.R. 1997. *Organizations: Rational, Natural and Open Systems*. Englewood Cliffs, NJ: Prentice-Hall.
- Spekman, R.E., T.M. Forbes, L.A. Isabella, and T.C. MacAvory. 1998. Alliance Management: A View from the Past and a Look to the Future. *Journal of Management Studies* 35: 747–72.
- Staw, B., and L. Epstein. 2000. What Bandwagons Bring: Effects of Popular Management Techniques on Corporate Performance, Reputation, and CEO Pay. *Administrative Science Quarterly* 45(3): 523–56.
- Sommer, N., and D. Morselli. 2017. Keep Calm and Learn Multilevel Logistic Modeling: A Simplified Three-Step Procedure Using Stata, R, Mplus, and SPSS. *International Review of Social Psychology* 30(1): 203–18.
- Tushman, M., K. Lakhani, and H. Lifshitz-Assaf. 2012. Open Innovation and Organization Design. *Journal of Organization Design* 1(1): 24–7.
- von Bertalanffy, L. 1968. *General System Theory: Foundations, Development, Applications*. New York: G. Braziller.
- Warner, M.E., and A. Hefetz. 2008. Managing Markets for Public Service: The Role of Mixed Public–Private Delivery of City Services. *Public Administration Review* 68(1): 155–66.
- Warner, M.E., A.M. Aldag, and Y. Kim. 2020. Pragmatic Municipalism: U.S. Local Government Responses to Fiscal Stress. *Public Administration Review*. <https://doi.org/10.1111/puar.13196>.
- Williamson, O.E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- . 1981. The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology* 87: 548–77.
- . 1991. Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. *Administrative Science Quarterly* 36(2): 269–96.