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Toward a theory of public entrepreneurship

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Abstract
This paper explores innovation, experimentation, and creativity in the public domain and in the public interest. Researchers in various disciplines have studied *public entrepreneurship*, but there is little work in management and economics on the nature, incentives, constraints, and boundaries of entrepreneurship directed to public ends. We identify a framework for analyzing public entrepreneurship and its relationship to private entrepreneurial behavior. We submit that public and private entrepreneurship share essential features but differ critically regarding the definition and measurement of objectives, the nature of the selection environment, and the opportunities for rent seeking. We describe four levels of analysis for studying public entrepreneurship, provide examples, and suggest new research directions.
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Introduction

The recent financial crisis and subsequent economic downturn have raised a host of new questions about the relationship between the private and public sectors (Reinhart and Rogoff, 2009). Legislators and regulators, accused of being passive and allowing too much innovation and experimentation during the boom years (e.g., in financial derivatives), have responded by vastly expanding their role in monetary, fiscal, and industrial policy (e.g., with *ad hoc* financial rescue, bailout, and stimulus programs). Public bodies are also becoming more active in shaping private innovation toward particular national and international objectives (e.g., alternative energy, climate-change reduction). Government itself is becoming more entrepreneurial, a salient example being the widespread legitimization in recent years of privatization and global outsourcing of functions that traditionally were performed by government such as the construction of roads, the operation of information technology systems, and the construction and operation of prisons (Engel *et al*., 2006; Morris, 2007; Gupta, 2008). In short, private entrepreneurs are increasingly charged with serving public ends, while at the same time, government action is becoming more 'entrepreneurial.' Are these good ideas?

The answers depend on achieving a level of clarity about what we mean by 'public entrepreneurship.' This concept is imprecise, in part, because public interests, which change over time, are difficult to identify even under the best of circumstances. The unit of analysis for *publicness* is also complex: in cross section, the local community, provincial authorities, small and large voluntary associations, nation-states, and the international community are all relevant. Publicness changes over time just as the public interest changes. Ostrom (1990) emphasizes that the resolution of *public* collective-action problems may occur through *private* action by voluntary, non-governmental associations. Calls for entrepreneurship and innovation in the public interest conjure up familiar visions of energy unleashed in pursuit of efficiency or innovation, but innovation in the public interest also evokes ideas about the updating of staid, public institutions that have lost relevance and accountability.

Public entrepreneurship, as we define it below, is both enabled and constrained by a political system and institutional context (Maguire *et al*., 2004; Henisz and Zelner, 2005). The field of management would benefit from a systematic assessment of issues in the public interest that joins insights from transaction costs theory (Williamson, 1975), political science (Ostrom, 1990), international business studies (Henisz and Zelner, 2004), the theory of entrepreneurship (Foss *et al*., 2008), and dynamic capabilities (Pitelis and Teece, forthcoming). Despite important research in economics, history, government, international affairs, and political science focusing on major changes in public interests and public institutions (Olson, 2000; North, 2005; Guthrie and Durand, 2008), there is little research from first principles on management problems in public entrepreneurship.

The starting point for our analysis is the idea of public agents as nominal stewards of resources that are commonly or jointly owned by members of a community. Public entrepreneurship is manifest in a variety of activities, such as changing the institutional environment or rules of the game, establishing new public organizations, creating and managing new public resources, and taking advantage of spillovers by private action for the wider good. These activities involve creating public resources and making resource-allocation decisions about them once they exist. Innovation in the public interest occurs when these resources are deployed in new ways based on new ideas about their relevance to public interests or new mechanisms for their deployment. Entrepreneurs pursuing public interests combine public resources in light of, and sometimes in concert with, private resources in pursuit of social objectives (Ostrom, 1990).

Like private entrepreneurs, public entrepreneurs pursue a variety of objectives, including private gain. The process of managing public entrepreneurial effort is thus complex. We submit that familiar concepts of the entrepreneur from management and economics are useful for understanding resource allocation and economic change in non-market settings. Our analysis shows that public resources and their associated property rights must be defined, understood and managed effectively for innovation to occur (Raymond, 2003). While the analogy between the private entrepreneur and the public entrepreneurial actor has limits and must be used with care, insights are available from theories of private entrepreneurship that draw on the conceptualization of entrepreneurs as decision-makers in the allocation of scarce resources under uncertainty.

Our goal is to develop a research agenda for analyzing public entrepreneurship in light of theory from management and economics. We begin by reviewing entrepreneurship concepts from these literatures, asking if and how these concepts shed light on public entrepreneurial behavior and institutions. We then describe four levels of analysis concerning public entrepreneurship, and suggest new ways of interpreting and understanding public entrepreneurial using this framework. Finally, we extend North's (1990) idea of States as transaction cost minimizing mechanisms that increase returns to ruling groups, noting that States can act entrepreneurially by realigning property rights and creating new governance mechanisms to increase returns – often blurring private and public interests. We conclude with suggestions for advancing research and practice in public entrepreneurship.

Overall, the analysis extends and develops ideas about innovation in the public interest, clarifies how and why innovation may occur in the public domain, and points toward opportunities for further development of theory. One proposition is that public entrepreneurship not only can substitute for, but also can complement, private entrepreneurship. *Private and public entrepreneurship are mutually dependent and co-evolve in ways that can be gradual or sudden and are often path-dependent* (Ostrom, 1990). Moreover, while we are motivated centrally by an interest in informing public policy, we are equally motivated by a desire to spark research in the field of entrepreneurship on important issues related to public interests and public institutions. By building on seminal contributions by Nobel laureates, such as Arrow (1970), Coase (1960), North (1990), Ostrom (1990), and Williamson (1975), theories of entrepreneurship can be usefully leveraged to illuminate our understanding of property rights and of resource deployment.

A caveat in this endeavor is that *public interests* may not be well defined (Walsh *et al.*, 2006). First, the alignment of individual objectives into a public interest is a complex problem. Mechanisms such as majority voting, arbitration, and consensus-building are highly imperfect aggregators of individual interests (Downs, 1957; Buchanan and Tullock, 1962; Riker and Ordeshook, 1973), and under some conditions, aggregation may not even be possible (Arrow, 1951). Second, individual interests are multi-faceted, and apparent alignment may reflect problematic understandings and temporary compromises. Third, private interests are changing, which may mean that current declarations of the public interest are no longer valid (Stiglitz, 1998; Mahoney *et al.*, 2009). Theoretical and empirical examination of the concept of the public interest is analogous to examination of the concept of corporate performance: despite the challenges, the process of inquiry itself delivers rich insights about the phenomenon.

Concepts of entrepreneurship

Entrepreneurship is often conceived as innovation, creativity, the establishment of new organizations or activities, or some kind of novelty. Under this conceptualization, entrepreneurship occurs in markets, firms, government, and universities (Slaughter and Leslie, 1997). But novelty alone is an incomplete and somewhat simplistic characterization. The economics and management literatures have also identified additional specific conceptualizations of entrepreneurship that are useful for understanding innovation in the public sector (Klein, 2008). We focus here on entrepreneurship not as a specific individual or type of firm but as a function that can be performed by a variety of individuals under varying circumstances. In particular, three characterizations of the entrepreneurial function have been identified in the literature: alertness to opportunities (Kirzner, 1973), judgmental decision making about investments under uncertainty (Knight, 1921), and product, process, and market innovation (Schumpeter, 1934).

Below we consider each of these functional conceptions in turn. In doing so, we keep in mind some important differences between private and public entrepreneurial action. For instance, while the entrepreneurial firm typically has well-defined objectives, can rely on market signals of success (economic profit) and failure (economic loss), and must overcome a competitive selection process to continue as a going concern, public actors have more complicated objectives, may not have access to clear signals of performance – in the words of Kornai (1986), face 'soft budget constraints' – and may persevere for reasons other than customer satisfaction and shareholder wealth (Mueller, 2003). Despite these differences, we think entrepreneurial concepts make sense in the context of public action.

Entrepreneurship as opportunity identification

In Kirzner's (1973, 1997) influential formulation, entrepreneurship is the facility of *awareness, or alertness, to profit opportunities existing in a world of disequilibrium.* Productive factors may be available at prices below their discounted marginal revenue products; consumers may demand products that have not yet been produced; and arbitrage opportunities may not have been fully exploited. A large literature on antecedents of entrepreneurial discovery (Shane and Venkataraman, 2000; Shane, 2003) focuses on how individuals perceive their environment, how they value factors and products, and how they communicate their discoveries to others.

If profit opportunities are simply superior ways of doing things, then they are everywhere, including the political sphere (Schuler *et al.*, 2002). The entrepreneurship literature, however, defines profit opportunities more narrowly in terms of *economic value creation aimed at private economic value capture.* Shane defines an entrepreneurial opportunity as 'a situation in which a person can create a new means-ends framework for recombining resources that the entrepreneur *believes* will yield a profit' (2003: 18). This profit can result from discrepancies between real (disequilibrium) prices and their long-run equilibrium values, and the entrepreneur 'proceeds by his alertness to discover and exploit situations in which he is able to sell for high prices that which he can buy for low prices. Pure entrepreneurial profit is the difference between the two sets of prices' (Kirzner, 1973: 48).

If the objective of public entrepreneurship is to fulfill the public interest rather than to pursue private profit, can anything be gained from this conceptualization (Bernier and Hafsi, 2007)? In a non-market setting, this requires ideas about the values of public resources and public outputs. The analogy is that both private and public entrepreneurs perceive *gaps* between actual and potential outcomes or performance, and look for resources to close the gap. Where private entrepreneurs see a way to acquire resources and deploy them to achieve privately appropriable revenue in excess of costs, public entrepreneurs seek to marshal resources for fulfilling nominal public or social interests and to deploy them for better performance on public objectives (Ostrom, 1965, 2005). Public objectives are closely linked to private ones, by definition, as they are part and parcel of the objective function of a private individual. Therefore, the resolution of agency problems in the closing of gaps between actual and potential performance is central to public entrepreneurship.

North (1990), subscribing to this characterization, emphasizes transaction costs as a primary source of inefficiency and suggests that appropriately crafted political structures can create economic value by reducing these costs. More generally under this conceptualization, private and public entrepreneurs share the same fundamental objective, that is, to capture value out of their advantages, capabilities, and action potential (Pitelis and Teece, forthcoming). In the case of private entrepreneurs economic value creation aimed at value capture (economic profit) is the criterion for success, whereas in the case of political entrepreneurs, the private benefits accruing are only indirectly linked to economic profits and may be realized in terms of popularity (e.g., electoral success) or some deferred reward rather than the direct, private appropriation of the created value.

Entrepreneurship as judgmental decision making

A second major insight concerning the entrepreneur arises from Knight's (1921) concept of *entrepreneurship as judgmental decision making about investments under uncertainty*. While Kirzner's (1973) formulation emphasizes the entrepreneur's awareness of existing profit opportunities, Knight's (1921) concept reflects the idea that profit opportunities do not exist until gains and losses are realized *ex post*. Judgment refers primarily to business decision making when the range of possible future outcomes, rather than the likelihood of particular individual outcomes, is unknown – what Knight (1921) terms uncertainty rather than probabilistic risk. An important example is the purchase of factors of production in anticipation of future receipts from the sale of finished goods (Knight, 1921). In the public domain, this uncertainty takes on a character that is an order of magnitude and complexity higher than in the private domain precisely because resources are jointly owned and public interests and even the very definition of 'public' may shift over time (Hirschman, 1982; Doering, 2007).

The critical insight from this reasoning for the public domain relates to theory development concerning uncertainty-bearing, control over resources, and the exercise of judgment about the efficiency of policies in fostering public interests. Under Knight's (1921) conceptualization of entrepreneurship, the greatest economic returns accrue to those who successfully bear market uncertainties, which often requires establishment of new organizations and new organizational forms and involves processes of experimentation, failure, and learning. In public entrepreneurship, these ideas translate to the view that innovation requires making investments under uncertainty, which may require establishment of public organizations (e.g., regulatory bodies), and yield major returns for the public, but which also may lead to failure. The subsequent success or failure, in turn, will impact analogously to the reputation of the political actor (a private interest).

Entrepreneurship as innovation

While Kirzner (1973) conceived of the entrepreneur as a force helping to move prices and quantities toward their equilibrium values by exploiting gaps in the marketplace, Schumpeter (1934) saw the entrepreneur as a disequilibrating force. Even if all Kirznerian (1973) opportunities are fully exploited, scientific and technical discoveries that cannot be anticipated drive exogenous change. New sources of supply are found, and consumer demands change. The source of these exogenous shocks, according to Schumpeter (1928), is the entrepreneur. Entrepreneurship, in this definition, disturbs existing patterns of resource allocation through bold, creative action.

The analogy in public domains is that the public interest shifts. Old institutions become out-dated. Innovation, both technological and organizational, is required but is difficult to accomplish because of conflict between short-run and long-term performance. Entrenchment is deepened by agency problems and by lack of clarity about the public interest. When uncertainty is abundant, public actors, charged with pursuit of the public interest, may pursue policies for private benefits.

Most of the political entrepreneurship literature takes a Schumpeterian perspective, focusing on *creative political innovations,* which depend crucially on windows of opportunity (Kingdon, 1995; Mintrom, 2000) for modifying the way that public entities operate (Kuhnert, 2001; Mack *et al*., 2008; Oliver and Holzinger, 2008). According to Teske and Schneider, entrepreneurs 'propel dynamic policy change in their community' (1994: 331). Schnellenbach (2007) denotes this kind of entrepreneurship as promoting political innovations. On the other hand, political entrepreneurship often seems far removed from the bold, intrinsically motivated pursuit of novelty typically associated with Schumpeter (1934), often encompassing the mundane (Schnellenbach, 2007).

Alertness, judgment, and innovation: property-rights issues

Despite such differences, the relationship between the entrepreneur and the institutional environment may be similar across the private and public sectors. Ostrom (1990) maintains that unlocking the human potential of individuals requires an opening of both public and private institutions to mobilize collective action and to attenuate opportunism/free-riding (Olson, 1965; Hirschman, 1982; Williamson, 1996). In particular, e*ffective public entrepreneurship requires the co-evolution of an active public enterprise system together with a vigorous private enterprise system* (Ostrom, 2005). Public entrepreneurship can bring together unique combinations of public and private resources to take advantage of social opportunities (Morris and Jones, 1999; Kearney *et al*., 2007). The quality of institutional arrangements supporting public entrepreneurship is crucial for democratic capitalism (North, 1990; Sheingate, 2003). Furthermore, the processes by which these public and private systems interact are worthy of careful attention in the next generation of management research (Hillman *et al*., 2004; Hitt, 2005; Keim and Hillman, 2008).

Public entrepreneurship can also be conceived as the *creation or definition of property rights in ways that make private and political action more efficient and effective* (Barzel, 1989; Foss and Foss, 2005), usually subject to the perception by the political actor that this will confer personal gain. As Holcombe notes, 'if political goals are not being implemented in the least-cost way, then there is a profit opportunity from restructuring the nature of the government activity so that the goals are achieved at least cost. The cost savings are a political profit that the entrepreneur can then apply toward the satisfaction of other goals' (2002: 147). Such goals usually relate to re-election (or, for civil servants, promotion or expanded authority) and in cases even to private appropriation of pecuniary benefits. If the political actor is a private entrepreneur or group of entrepreneurs seeking to use the political system to achieve economic goals – for example, an industry association lobbying for an import tariff or a firm-seeking regulation that raises rivals' costs (Salop and Scheffman, 1983; McWilliams *et al*., 2002), – then the goals may be strictly pecuniary. Thus, one opportunity for the development of the theory of public entrepreneurship is in integrating a conception of value-seeking private and public entrepreneurs with a framework that accepts the complexity of private and public institutions deployed to frame and pursue the public interest (Kaplan and Murray, forthcoming).

Besides the issue of measuring gains from trade in politics, another important distinction is between market and political behavior: the allocation of resources through politics is based on forced transfers rather than through voluntary consent. Thus, political actors can benefit (materially or in utility terms) from forcibly transferring resources from one individual or group to another. Holcombe states that: 'If the political support lost from those who pay for the transfer is less than the political gain in support from the recipients, then the political entrepreneur can profit from such a forced transfer' (2002: 147). Hence, the exchange of resources through political markets cannot be presumed to be Pareto efficient (Bonardi *et al*., 2005; Capron and Chatain, 2008). In Baumol's (1990) terminology, entrepreneurship can be productive, unproductive or destructive. Destructive political entrepreneurship includes not only forced wealth transfers resulting from regulatory capture or other forms of rent seeking but also the discovery or creation of new forms of moral hazard, the creation of economic holdups, increasing transaction and information costs, and similar activities (Krueger, 1974; Appelbaum and Katz, 1987). Such problems that can arise in private organizations as well (Stern and Feldman, 2004; Foss *et al*., 2007), but may be moderated more by forces of creative destruction (Schumpeter, 1934) and hard budget constraints (Kornai, 1986).

Summary

In short, political actors – elected officials, government bureaucrats, or civil servants, as well as individuals and organizations seeking to use the political process to accomplish private objectives – can up to a point be described using the language of entrepreneurship theory. Like Kirznerian (1973) entrepreneurs, political actors seek to create or discover opportunities for gain, whether private or social. Like Knightian (1921) entrepreneurs, they invest resources, tangible, and intangible (time, effort, and reputation), in anticipation of uncertain future rewards. Like Schumpeterian (1934) entrepreneurs, they can introduce new political products and processes. Public entrepreneurs may also set up organizations and institute organizational change to further their perceived public and private interests. Unlike private entrepreneurs, however, public entrepreneurs cannot use privately appropriated benefits as a criterion for success, and the selection mechanism for allocating resources over time towards more successful public entrepreneurs is complex and poorly understood.

Competitive forces are typically weaker in the public domain than in the private market-place, because objectives are poorly defined, performance is more difficult to gauge, and elections only occur on specific times, which may engender political business cycles (Nordhaus, 1975). Assent to political power can also entrench individuals and organizations leading to duopolistic political structures with similar policies and collusive attitudes, and even political dynasties and clans – not unknown even in mature democracies. These differences suggest that it may be much more difficult to weed out poor political entrepreneurs from poor private ones (Pitelis and Clarke, 1993; Mueller, 2003). Importantly, political entrepreneurs are likely to undertake actions that foster economic value if they also personally benefit from these actions in ways other than the mere private appropriation of value created.

Table 1 summarizes this section. The first column lists concepts from the existing private entrepreneurship research literature, the second shows how each concept can be manifested in public entrepreneurship, the third lists issues and problems with the conceptualization, and the fourth column provides references to the extant literature. The table illustrates the variety of terms, concepts, illustrations, and issues that occupy this emerging research literature.

Public entrepreneurship: a research framework

These concepts of private entrepreneurship help suggest a framework for establishing and developing a research program on public entrepreneurship. This section describes four levels of analysis for understanding the public entrepreneur and public entrepreneurial action.

In this discussion, we use the terms *private* and *public* to define ends, not means. Private action, in this sense, is pursued to improve the actor's well-being, narrowly defined. Firms pursuing profit, cooperatives seeking to generate returns for their members, politicians seeking to advance their own careers or reward their financial backers, all qualify as private action. By contrast, the textbook government agency, delivering public goods to citizens, and social enterprises are public actors. In other words, we do not focus on the distinction between voluntary, market action and coercive, government action (though we recognize its importance more generally). By *public* we mean 'in the public interest,' whether the means used are voluntary (e.g., the Red Cross) or governmental (e.g., a municipal police force) (Mises, 1944). Likewise, we do not focus on the legal form of organization within which public entrepreneurial action takes place (Austin *et al*., 2006).

We propose four levels of analysis for studying public entrepreneurship and its relationship to private entrepreneurial behavior (see Table 2):

1. *Rules of the game*. Public entrepreneurship identifies goals, establishes terms, and otherwise sets a framework for the pursuit of private interests and other public interests. Public entrepreneurship establishes rules of the game (for good or ill), and private entrepreneurship is the play of the game (Ostrom, 1965).
2. *New public organizations*. Another manifestation of public entrepreneurship is the creation of new public organizations (Bartlett and Dibben, 2002; Schnellenbach, 2007). Such institutions are rooted in and constrained by resources for which property rights may be ambiguous and subject to agency problems. Many of these problems have been studied compellingly in the fields of public administration and political science. Yet little research has comprehensively addressed methods for recognizing opportunities, marshalling resources, and establishing governance structures (Williamson, 1985) or institutions (North, 1990) for pursuing public interests.
3. *Creative management of public resources*. The identification, creation, and development by public actors of new resources that are either publicly owned or that are integral to the public interest (Lewis, 1980; Roberts and King, 1996). The emphasis in research on public institutions – again centered in fields other than management – has focused on public agency and activity rather than on stewardship of resources for which property rights are partly or wholly public.
4. *Spillovers from private actions to the public domain*. Private entrepreneurs pursuing private objectives may seek to create and clarify public interests, infrastructure, institutions, norms, and procedures because their absence is strategically limiting of their private interests.

Within and across all four levels, public entrepreneurs are alert to opportunities for gain, exercise judgment over the use of private and public resources, and may pursue innovative products and processes. Relative to private entrepreneurs, the objectives are complex and often ill-specified; measurement of public gains and losses is difficult; the selection environment is complicated; and private and public resources may be deployed in socially harmful as well as beneficial ways.

Public entrepreneurship in the 21st century

With this framework in mind, we turn next to some important public–policy challenges. We organize our discussion around the four levels of analysis discussed above.

Rules of the game: the institutional environment for private action

One important manifestation of public entrepreneurship is novelty or innovation regarding the institutional environment or rules of the game (constitutions, laws, norms, property rights, and regulatory systems), our first level of analysis above. Typically, private entrepreneurship is assumed to focus on value creation and capture within a set of (shifting and non-immutable) rules (Argyres and Liebeskind, 1998; Lee *et al*., 2007). And yet, entrepreneurial activity is embedded in a particular institutional environment (North, 1991; Coase, 1998; Klein, 2000; Williamson, 2000). Any change in the institutional environment brought about by public-sector entrepreneurship changes the setting in which private-sector (and public sector) entrepreneurship takes place. Furthermore, the legal political and institutional system establishes the general guidelines concerning political entrepreneurial behavior (Coase, 1960;

Table 1 Concepts of the entrepreneurial function, private and public

Concept of entrepreneurship	*Manifestation in private entrepreneurship*	*Application to public entrepreneurship*	*Issues and problems*	*References*
Alertness to profit opportunities (Kirzner, 1973)	• Management literature on opportunity recognition • Austrian economics literature on market equilibration	• Sensing shifts in public preferences • Anticipating common problems • Identifying out-of-date practices, agencies, and other institutions • Avoiding undesirable outcomes in the public interest	• Lack of market prices, difficulty in measuring profit, 'soft budget constraints' • Complex, hard-to-specify objectives • Misalignment of interests between decision-makers and the general public; likelihood of rent seeking • Pursuit of valuable opportunities may be constrained by bureaucratic procedure • Exchanges based on coercion, not consent • Identifying and managing uncertain outcomes	Bellone and Goerl (1992), Holcombe (2002), Jacobson (1992), Kirzner (1997), McMullen and Shepherd (2006), Schuler *et al.* (2002); Shane and Venkatraman (2000)
Judgmental decision making under uncertainty (Knight, 1921)	• Economics and finance literatures on investment and capital budgeting • Management literature on judgment-based entrepreneurship	• Investment of public resources to meet political objectives • Evaluating the suitability of various policies for achieving particular outcomes • Identifying gamesmanship nominally in pursuit of public interests but truly in private interests	• Decision-makers don't put their own assets at risk • Political actors may have very short time horizons • Discernment of coalition-building from the pursuit of private interests	Foss *et al.* (2008), Kor *et al.* (2007), Langlois (2007), McMullen and Shepherd (2006), Mises (1944, 1949), Penrose (1959), Ostrom (1965, 1990)
Innovation (introduction of new goods, markets, production methods, organizational practices) (Schumpeter, 1934)	• Economics and management literatures on product and process innovation	• Introduction of new policy proposals, political positions, or paradigms • Introduction of new procedures (e.g., the local ballot initiative) • Changing administrative or electoral procedures • Lobbying and other forms of rent seeking	• Decision-makers don't put their own assets at risk • Political actors may have very short time horizons • Bureaucratic organization is highly path dependent • Identifying tradeoffs between short- and long-run interests	Bartlett and Dibben (2002), Kirchheimer (1989), Mack *et al.* (2008), Oliver and Holzinger (2008), Schneider and Teske (1992), Schneider *et al.* (1995), Schnellenbach (2007), Wohlgemuth (2000)

Table 2 A framework for studying public entrepreneurship

Level of analysis	*Examples, issues, problems*
Rules of the game	• Creation or implementation of new laws, administrative procedures, informal norms • Establishes rules of the game, within which private agents 'play' the game of resource allocation and value creation and appropriation
New public organizations	• Establishment of new governmental or nonprofit agencies or enterprises • Involves judgmental decision-making about privately and publicly owned resources • Objectives and performance difficult to measure, and selection environment may be weak, 'softer' budget constraints
Creative management of public resources	• Organization and reorganization of states and state agencies • New forms of public–private interaction
Spillovers of private actions to the public domain	• Pursuit of social and nonprofit objectives by private individuals and firms • Includes establishment of social norms and values

Baumol, 1990), which is not immutable, and can be enabling as well as constraining.

While entrepreneurship, like bargaining, takes place in the *shadow of the law* (Cooter *et al*., 1982), public entrepreneurship also involves changes to the very law and its shadow! That is, public entrepreneurship involves novelty, change, and innovation vis-à-vis the rules of the game (Rodrik, 1996). Ostrom, for example, shows that an 'immensely complicated' (1990: 127) negative externality problem of over-exploitation of ground water basins in California was successfully solved via *public entrepreneurship* by the decentralized water companies themselves, but only after a judge issued a credible threat to enforce a solution that would have disadvantaged all decision-makers involved. In this instance, public entrepreneurship by the judge involved the shaping of incentives in a way unanticipated by the usual treatments of entrepreneurship, for example, Schumpeter (1934) treats entrepreneurship as *sui generis,* not a response to market or institutional incentives.

Moreover, public and commercial entrepreneurial processes evolve in ways that are mutually reinforcing, challenging, and legitimizing. Kaplan and Murray (forthcoming) maintain that private entrepreneurship in biotechnology was fundamentally influenced by the co-evolution of public institutions, private corporations, and scientific discovery. Analysis of the three major phases of the biotechnology industry's development since the 1970s shows that the commercial viability of the bio-technology industry rested on the resolution of fundamental questions about public safety, the legitimacy of private ownership of the human genome, and rules for private use of findings from publicly funded science. Entrepreneurship in the public domain to resolve these questions is a hallmark of the effectiveness of successful commercial entrepreneurs (Garud *et al*., 2007).

Even in established industries, private-sector entrepreneurial firms must also work within, and sometimes inform and shape, the design of public institutions such as regulatory bodies, though this process can involve not only cost-saving innovation but also rent seeking and other forms of wealth transfer. Organizational sociology also suggests that political institutions and organizations may be characterized by embeddedness and isomorphism (DiMaggio and Powell, 1983; Granovetter, 1985). Political entrepreneurs are constrained by the need to fit existing norms and conventions, to plug into existing networks, and to avoid excessive novelty.

The concept of market and ecosystem creation and co-creation (Pitelis and Teece, forthcoming) is also relevant here. Numerous acts by the state, for example, the setting-up and function of the American Research and Development Corporation after the Second World War, helped co-create markets and ecosystems – the US venture capital industry and high-tech clusters. Viewing states and public entrepreneurs as market and ecosystem co-creators helps endogenize the public–private nexus, moves the discussion beyond cost minimization and more towards the leveraging of advantages and capabilities, with an eye to unleashing diverse human potential (Ostrom, 1965). Success, of course, depends on the incentives, constraints, evaluation, and governance; in other words, the analysis must be extended to determine if this value serves a public purpose, or is simply appropriated by state officials and politically connected private agents. Providing an institutional setting in which entrepreneurial firms can appropriate some of these gains while preserving the spillover benefits for the economy as a whole, is critical for fostering organizational innovation in the public sector (Schnellenbach, 2007).

Creating new public organizations

Public entrepreneurship can also be conceived as the emergence and growth of new formal organizations, such as government bureaus, non-profit or social enterprises, and the like. This has been examined extensively in the fields of public administration and political science (Bartlett and Dibben, 2002; Schnellenbach, 2007). Public entrepreneurs, in this context, are individuals and groups who identify opportunities for achieving social or political objectives, assemble and invest resource to achieve these objectives, and (possibly) direct the newly created public or private enterprise. Here, the vast literature on new-venture creation provides considerable insight (e.g., Acs and Audretsch, 1990). However, these entrepreneurs may have difficulty articulating and measuring objectives and may use public, as well as private, resources, suggesting the higher potential for unproductive rent seeking. Moreover, while they compete with other kinds of enterprises in factor markets, because they do not produce output that is bought and sold in markets, they do not face the same kind of product-market competition as private entrepreneurs. Government funds can also render the constraint they face 'soft' (Kornai, 1986), making it more difficult to measure performance and to make decisions about continuing or abandoning the venture.

The state itself, in this context, can be understood using the language of entrepreneurship theory and practice. The efficient allocation and creation of resources in the public interest requires large, often multinational systems for evaluating investment opportunities and for pursuing them effectively. The market, the firm (particularly the multinational enterprise [MNE]) and the nation-state are institutional devices for resource allocation and creation globally. A voluminous and fast-growing research literature on markets and hierarchies, particularly their *raisons d'être*, evolution, attributes, and interrelationships has been developed (Mahoney, 2005). The relationship between MNEs, nation states, and international organizations has also received interest in recent years (Bhagwati, 2005; Dunning and Pitelis, 2008). Yet, interactions between these institutions and the governance of resources in the public interest by alternative forms of markets, firms, nation-states, and collective action – that is, *markets*, *hierarchies,* and *politics* – have not been as fully explored.

The possibility of opportunistic (or, more mildly, own utility-maximizing) behavior by public entrepreneurs, particularly state functionaries, is explicitly accounted for in public-choice and Chicago School perspectives (Stigler, 1971; Posner, 1974; Mueller, 2003). One salient type of failure is empire building in which state functionaries increase their utility by increasing the size and span of control of their organizations. Maximization of state functionaries' utility and demands by powerful organized groups of producers and trades unions, which can capture the state, help explain its dramatic growth in OECD countries (Shapiro and Taylor, 1990). States can be captured by organized interest groups, which hinder efficient allocation of resources (Olson, 1965). Transaction costs theory suggests that such capture means that markets should be allowed to operate more freely, while the state should limit itself to the provision of stable rules of the game, for example, a clear delineation and enforcement of property rights (North, 1990; Alvarez and Parker, 2009).

North (1990) joined the transaction costs and public-choice perspectives on the state in which a wealth- or utility-maximizing ruler trades a group of services (e.g., protection, justice) for revenue, acting as a discriminating monopolist, by devising property rights for each so as to maximize state revenue, subject to the constraint of potential entry by rulers of other states. The objective is to increase rents to the ruler and, subject to that, to reduce transaction costs in order to foster more output, with the increased tax revenues accruing to the ruler. The existing and potential competition from rivals and the transaction costs in state activities typically tend to produce inefficient property rights often leading to favoring powerful constituents and the granting of monopolies. Thus, the existence of competitive rivalry and positive transaction costs gives rise to a conflict between a property rights structure that produces economic growth and one that maximizes rents appropriated by the ruler, and therefore accounts for widespread inefficient property rights (North, 1981). Indeed, North states that: 'the coercive power of the state has been employed throughout most of history inimical to economic growth.' (1990: 14).

Our approach to public entrepreneurship allows a generalization of North's (1990) theory. Drawing on Cyert and March (1963/1992), we submit that increased output engenders resources that can be leveraged to alleviate conflicts. In addition, by rearranging property rights, establishing new bureaus or other forms of organization, and facilitating the forcible transfer of resources among private agents, state functionaries can generate value that can be directed toward public or (politically favored) private ends. The concept of a nationwide strategy for growth, which in North's (1990) context, can be seen as the set of state policies intended to reduce private sector transaction costs so as to increase realized output in the form of income, can thus be framed as a form of public entrepreneurship. The Coase Theorem suggests that the internalization of private sector activities by the state – that is, the increase in public sector, relative to private sector, entrepreneurial activity – should be pursued up to the point where an additional transaction or production activity would be produced at equal cost in the private sector (Coase, 1960). This focus points towards the need for pluralism in institutional forms; that is, the complementarity between public and private sectors for the efficient production and allocation of resources (North, 1990; Ostrom, 1990).

An extension to the approach of North (1990) has more recently been proposed by Olson (2000), which suggests that an important function of the state is market augmentation that helps increase output through the revenue side. Growth can be achieved via domestic and foreign demand, while income-rent will be affected positively through both reductions in transaction-production costs and increases in revenues through, for example, a focus on high-return sectors and/or the creation of agglomerations (Krugman, 1990; Porter, 1990). It follows that national strategy could be designed to reduce overall production and transaction costs for the economy, but could also influence the revenue side, so as to increase the income accruing to the nation and (thus) taxes to the state. In this context, state functionaries could be argued to act as public entrepreneurs (Yu, 1997; Sheingate, 2003). This approach endogenizes the public–private nexus.

What about competition among states and other public entities? In the private sector, competition in product and labor markets constrains opportunistic behavior by agents and value-destroying activities by principals. Identifying a workable degree of competition for political power is a critical issue that has not been explored to date. For example, the one extreme of no competition is dictatorship.

The other extreme of fully contestable political positions can render the pursuit of long-term value-creating public entrepreneurial objectives difficult – given the short-term pressures by organized powerful groups (Olson, 1965). A possible solution may involve the fostering of *hybrid* sectors (beyond market and hierarchy), such as consumer associations and NGOs (Guay *et al.*, 2004). In addition, the 'optimal' timing of elections and the degree of contestability of political power positions are important areas that have been little conceptualized so far, especially by organization scholars.

It is critical, for example, to ensure that endogenous private–public interactions add system-wide value in a sustainable way. Achieving this objective requires avoiding regulatory capture by state functionaries (Stigler, 1971; Levine and Forrence, 1990). It also requires the provision of incentives, sanctions, and enablement that channels public entrepreneurship towards this goal. Last but not the least, it requires an ideological and ethical infrastructure that channels energy to creative and value adding actions, and rewards those who act accordingly (Etzioni, 1988; North, 1990). Rodrik (2004) suggests that to solve market failures and also avoid capture, state functionaries should be involved in dialog with the private sector while maintaining an arms-length relationship. However, such an approach is not likely to be sufficient to avoid capture by state functionaries. For Mahoney *et al.* (2009), protection can be better achieved through pluralism and a diversity of institutional and organizational forms that serve the function of mutual monitoring, accountability, and stewardship. Such an institutional setting could enable private–public interactions to operate in a more virtuous way and enhance the possibility of global sustainable value creation, a concept that offers many advantages over the standard economics focus on Pareto efficiency (Kaul *et al.*, 1999; Stiglitz, 1999; Kapur, 2002).

Finally, we think the entrepreneurial perspective sheds light on the current large-scale failures of public institutions such as Fannie Mae and Freddie Mac (Demyanyk and Hemet, 2008). Many of the most salient opportunities relate to the interplay between public and private objectives in these institutions (Hillman and Hitt, 1999; Hillman *et al.*, 2004). First, the role of these public agencies as priority-balancing bodies cannot be overstated. Private entrepreneurs must evaluate risks that influence the organization's prospects for survival and profitability. In public agencies, ambiguity in the objective function caused by ill-defined goals, an indirect relationship between public interest and personal benefit, and the difficulty of measuring successes and failures, makes achievement of this balance difficult. Techniques such as real-options analysis and scenario planning may prove essential for defining and managing competing public interests, and for balancing public objectives over time as the constituent goals of private parties change (Lee *et al.*, 2007). The lack of clear metrics for goal achievement (such as profitable growth) and a lack of a competitive selection environment render these techniques problematic.

Second, entrepreneurs must contend with information asymmetry and uncertainty that is partly reducible and partly irreducible (Libecap, 1989; Henisz and Zelner, 2003). Mechanisms for extracting information and for evaluating and managing uncertainty of each type have been widely studied in the extant entrepreneurship literature (Sarasvathy, 2001; Dew *et al.*, 2009). Public institutions such as Fannie Mae and Freddie Mac regularly rely on conventional models of risk assessment that are common in the insurance industries, for example, but contemporary techniques from information economics may represent further opportunities for analysis. In particular, finding ways to evaluate and rank risky options that are essentially qualitative – because they are not embodied in market prices and quantities – is critical to public-sector entrepreneurial decision making.

Third, intertemporal theories of change offer opportunities for advancing our understanding of institutional inertia in the public domain. Conventionally, this inertia has been viewed principally as a brake on ill-considered adaptations. Yet as the current environment reminds us, inertia may be a potent source of diseconomy under punctuated change (Baumgartner and Jones, 1991). Such inertia may be due to distorted perceptions (that may stem from myopia, hubris, denial, and/or groupthink), dulled motivation, failed creative responses, action disconnects, and political deadlock (Janis, 1972; Hannan and Freeman, 1984; Rumelt, 1995).

Creative management of public resources by public actors

Public entrepreneurship can also refer to the innovative management of existing, publicly owned resources to achieve established ends, our third level of analysis (Mair and Marti, 2006). Continual, incremental efforts to improve the efficiency and effectiveness of public institutions are expected in modern, democratic societies. Some public figures have taken controversial steps to improve the efficiency of public institutions even by disenfranchising well-established minority interest groups, such as when nine departments of government were consolidated to create the Department of Homeland Security (Relyea, 2004). Individuals and groups also work continually to reshape public institutions to create and extract (private) economic rents, and it can be difficult to distinguish the former set of activities from the latter – particularly when the pursuit of private gain is cloaked in the mantle of the public interest (Yandle, 1983).

Are current issues regarding innovation in the public interest qualitatively different from older ones? One opportunity for further inquiry is in study of the emergence of private entrepreneurial firms that seek to commercialize activities pursued in the public interest. The explosive growth of private military companies such as Blackwater and MPRI since the end of World War II is paradigmatic of the process of public-sector organizational innovation (Avant, 2005; Baum and McGahan, 2009). The growth of these industries depends on the interplay between the resolution of public concerns, development of public institutions, and relative effectiveness of private organizations over public agencies at fulfilling public interests. In the case of private-military companies, some public figures have even gone as far as to divert the pursuit of the public interest toward private companies to favor the achievement of the public's efficiency goals even over other elements of the public interest, such as public debate and scrutiny.

Other public entrepreneurs focus on process, not particular programs or activities. Howard Jarvis, a private entrepreneur with a long career of organizational innovation in the public interest, is archetypical of a class of people that have been celebrated for their accomplishments. Jarvis gained fame, notoriety & accolades, and was featured on the cover of the 19 June 1978 cover of *Time* Magazine for advocating Proposition 13 in California, which cut property taxes by 57% and inspired a national debate over taxation. Jarvis relied on door-to-door and street canvassing to collect the tens of thousands of signatures required to put Proposition 13 on the ballot (Smith, 1998).

Entrepreneurs such as Jarvis often arrive into public life with agendas, accumulated skills, relationships, and capabilities that become the cornerstones of their impact. In the 'learn, earn, serve' model heralded on today's campuses, many students embark upon careers in the private-sector upon graduation with the intention of accumulating credentials and capital so as to eventually support careers of public service (Austin, 2003).

Spillovers from private actions to the public domain

Private organizations also have an impact on public debate through hybrid structures in which their agendas are temporarily or only partially aligned with public interests. The private-military contractors described above are an extreme example (Singer, 2003). More familiar examples include a wide range of multinationals that provide goods and services to public agencies and in the public interest for private gain. Such stalwarts of industry as IBM, General Electric, and General Motors have long been suppliers to local, state, and federal agencies with relatively little controversy. Other firms, including Nestle and Coca-Cola, have sold products both to the government and private purchasers concurrently but with controversy: Nestle's baby milk products have been promoted as a healthful alternative to breast milk, contrary to the advice of many physicians (Sethi, 1994), and Coca-Cola has been cited as an inappropriate consumer of precious clean water in India (Kaye, 2004). Social networking, social media, and what Benkler (2006) calls 'commons-based peer production' are examples of private, voluntary collective action resulting in public goods – often highly tangible, commercially valuable goods. The recent explosion of academic interest in public–private partnerships testifies to their growing economic, political, and social importance (Glachant and Saussier, 2006; Rangan *et al*., 2006; Martimort and Pouyet, 2008). So does the similar explosion of interest in corporate social responsibility (McWilliams *et al*., 2006; Filatotchev and Boyd, 2009; Judge, 2009).

Hertz (2002) submits that the culture of commerce has become so dominant and prevalent that private life has taken over public interests in a way that, while often benign, is sometimes pernicious. The upshot is that the interplay between public and private interests is important and political mechanisms seem to be increasingly constrained by private organizations. As Horsman and Marshall (1994), echoing Vernon (1971), put it:

> Effortless communications across boundaries undermine the nation-state's control; increased mobility, and the increased willingness of people to migrate, undermines its cohesiveness. Business abhors borders, and seeks to circumvent them. Information travels across borders and nation-states are hard pressed to control the flow .... The nation-state … is increasingly powerless to withstand these pressures.

Horsman and Marshall's (1994) assessment is offered with alarm, but the ability of multinational firms to resist and reshape government action may result not only in private capture, but also in more efficient and effective public institutions (Jones *et al*., 2007).

Baum and McGahan's (2009) examination of the mechanisms that led to the outsourcing of military services shows how changes over time in public interests – accumulated subsequent to the establishment of fixed capabilities and their embodiment in institutions – can lead to the resolution of public interest problems through outsourcing to private companies on markets. In some cases, such as the European Union's market for pollution rights or the proposal to create a regulated market for human organs, the state legitimizes, and indeed creates, a market to serve a perceived public interest (Jordan *et al*., 2003). These examples illustrate how temporal changes in strategic priorities for public agencies may be implemented under constraints created by prior solutions to the deployment of resources in the public interest.

Private organizations such as the Rockefeller and Gates Foundations (Fisher, 1993; Muraskin, 2006) may, as a specific mission, support or even create public agencies, particularly in developing countries (Ramamurti, 2004). For-profit firms such as Sekem, which has become a world leader in organic foods and phytopharmaceuticals in Egypt (Merckens and Shalaby, 2001), and Bangladesh's Grameen Bank can be effective in promoting economic development by facilitating private and social entrepreneurship (Rahman, 1999; Mainsah *et al*., 2004). Such private-sector philanthropic ventures and their public-sector counterparts do not always exist in harmony. For example, the Gates Foundation, lauded for its effectiveness in global public health, has been criticized for diverting resources in resource-limited countries from generalized public health services to specific diseases that are of interest to the Foundation such as HIV/AIDS (Shiffman, 2008). This example raises questions about the balancing of competing public interests. According to Garrett (2007), while addressing HIV/AIDS in Haiti may be a public health objective, the success of the initiatives sponsored by the Gates Foundation in controlling the disease there has raised the costs of pursuing other, closely related, public health interests in the country. In general, the economical balancing of competing public interests may be neglected by the private organizations hired to pursue them.

In the US, the infusion of large amounts of public funds into private financial institutions, and the concurrent restraints placed upon their governance, vividly illustrates how, over time, public and private interests co-evolve. In the weeks prior to the unraveling of Lehman Brothers in the summer of 2008, the robustness of the US financial system continued to be lauded by leaders in both the private and public sectors. Yet, the sub-prime lending crisis and the associated explosion of innovations such as derived securities had become an albatross on the world economy (Reinhart and Rogoff, 2009). The United States' largest federal agencies responded with the largest government bailout in world history (Brunnermeier, 2009).

When do private-sector entrepreneurial firms challenge public interests, and when does such entrepreneurship threaten the public interest so extensively that a major re-conceptualization of critical institutions is required, such as has been currently requested by US automakers? When is the most economical response one of allowing private bankruptcy, and when does the public interest in avoiding large welfare payments such as are possible to laid-off autoworkers make a bailout desirable? The answers to these questions require an understanding of the inter-temporal economics of public entrepreneurship, with particular research attention to the consequences of risk-sharing schemes and incentive compatibility (Olson, 2000; North, 2005).

Thus, actions in the public interest are complex in ways that theory suggests but also raise new questions for theory. Institutions such as the Rockefeller Foundation, Fannie Mae, and Freddie Mac evolve as organizations in pursuit of the public interest, and yet also may be inadequately studied as the embodiments of governance structures and entrepreneurial systems in pursuit of the common interest. Entrepreneurs such as Bill Gates and Howard Jarvis may shape institutions to reflect private beliefs about the public interest. At the same time, the actions of both private and public organizations may be complicit in the public interest in ways that are not clearly evident: The failure of large numbers of US financial institutions during 2008 made vivid the consequences of their interdependencies for the public interest. More research is required on the processes of organizational entrepreneurship both in the fulfillment and shaping of public interests.

Summary and conclusion

This paper has outlined an approach to public entrepreneurship that builds on contemporary entrepreneurship theory, adding insights on the role of institutions and the nature of the modern state. While some political science and public-choice economics research has explored the nature and effects of public entrepreneurship, a systematic account of the public entrepreneur and the ways in which public-sector entrepreneurship differs from its private-sector counterpart is mostly absent from the extant research literature, particularly in strategic management and organization. We hope this paper stimulates further research on extending entrepreneurship theory to non-market settings and developing more robust explanations for the state and for private–public (e.g., firm–government) interactions. Such research should result in applied insights for the design of effective public policies and a stronger alignment between public and private objectives.

Our main line of reasoning is twofold. First, we claim that public entrepreneurs do, in many ways, act like private ones, although there are important differences related to the difficulty in measuring performance, ill-defined objectives, collective action problems, softer budget constraints, and the legal monopoly of coercion. Second, we note that public and private entrepreneurship while typically treated in isolation in fact *co-evolve* in important ways (Ostrom, 1965, 1990). Private entrepreneurship occurs in a public context, and public action is undertaken by individual actors. As a result, the modern state contains elements of both private and public entrepreneurial behavior.

Opportunities for public entrepreneurship research arise at each of four levels (Table 2), and reflect the co-evolution of public and private interests, institutions, resources, activities, and governance in rule-making (Level 1), the creation of new public enterprises (Level 2), the innovative stewardship of public resources (Level 3), or the public spillover benefits of private entrepreneurship (Level 4). A further step would be to examine the interactions among levels. Are efforts to craft new formal and informal norms, legal frameworks, and the like complements to, or substitutes for, efforts by private actors to pursue philanthropic goals? Ostrom's (1965) example of the California water industry suggests a complementarity between public rule making and private efforts to solve practical, economic problems, but this is only one example. How general is this complementarity relationship? What are the other interactions effects? What are the appropriate empirical methods for examining them? Most of our examples here are case studies. How can the appropriate variables and relationships be parameterized to permit quantitative empirical research? As the privatization research literature indicates, the key explanatory factors and performance results are difficult to measure consistently across space and time (Megginson and Netter, 2001). How can researchers break through the difficulties to conduct cross-sectional and longitudinal comparisons?

Another opportunity is in breaking the boundary between public and private action. Theories of public entrepreneurship are principally theories of group or collective entrepreneurship, whose research is at a nascent stage of development (Burress and Cook, 2009). How do collectives form, evolve, and dissolve? We suggest a theory of public entrepreneurship as an important application of group or team problems in an entrepreneurial setting (Foss *et al*., 2008). Efforts to develop a theory of team entrepreneurship have focused on shared mental models, team cognition, and capabilities to assemble and lead complementary and co-specialized assets (Mosakowski, 1998; Kor *et al*., 2007; Pitelis and Teece, forthcoming). Entrepreneurs can also form networks to share expectations of the potential returns to projects (Greve and Salaff, 2003).

Within the private firm, too, entrepreneurial decision making is entwined with problems of collective action (Olson, 1965; Hansmann, 1996). Private entrepreneurship is typically a team or group activity. Venture capital, later-stage private equity, and bank loans are often syndicated; publicly traded equity is diffusely held; and professional-services' firms and closed-membership cooperatives represent jointly owned pools of risk capital (Brander *et al*., 2002). Moreover, the firm's top management team – to whom key decision rights are delegated – can be regarded as a bundle of heterogeneous human resources, the interactions among which are critical to the firm's performance (Foss *et al*., 2008). Once an entrepreneurial opportunity has been perceived, decision-makers must assemble a team of investors and a management team, raising problems of internal governance (Kor and Mahoney, 2005). Shared objectives must be formulated; different time horizons reconciled; and free-riding mitigated (Cyert and March, 1963/1992; Casson, 2005; Pitelis, 2007). Thus, organizational and governance problems specific to public entrepreneurship are closely related to general problems of team, group, organizational or collective entrepreneurship. Research on private entrepreneurship within organizations – corporations, partnerships, cooperatives – should be helpful in understanding public entrepreneurship.

Our analysis points to the idea that public entrepreneurship is a management phenomenon. Entrepreneurial ideas are framed, developed, pursued, institutionalized, and enacted through processes that are both analogous to and intertwined with private entrepreneurship. Unleashing creative energy in pursuit of the public interest requires a sophisticated approach to the management of innovation in the public domain. We look forward to exploring these connections as the management field develops a research stream in public entrepreneurship that enriches both theory and practice. Indeed, firm-government interactions are where much of the action of contemporary exchange resides, and thus, a nuanced and sophisticated theory of public entrepreneurship will increase both the theoretical rigor and practical relevance of our management discipline.

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