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# THE ECONOMIC ORGANIZATION OF PUBLIC ENTREPRENEURSHIP

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Abstract:
This paper explores how management theories can be extended and applied to innovation, experimentation, and creativity in the public domain. Researchers in various disciplines have studied public entrepreneurship, but there is little research specifically on the management of organizations to innovate in the public interest. We begin by extending concepts of the entrepreneur to the public domain, and then turn to the role of the entrepreneur in fostering institutional change. The conclusion refines the institutional theory of the state to incorporate the role of entrepreneurs in organizing public and private institutions.

JEL - codes: H0, O3, M0

# The Economic Organization of Public Entrepreneurship


## ABSTRACT

This paper explores how management theories can be extended and applied to innovation, experimentation, and creativity in the public domain. Researchers in various disciplines have studied public entrepreneurship, but there is little research specifically on the management of organizations to innovate in the public interest. We begin by extending concepts of the entrepreneur to the public domain, and then turn to the role of the entrepreneur in fostering institutional change. The conclusion refines the institutional theory of the state to incorporate the role of entrepreneurs in organizing public and private institutions.



**Keywords:** Entrepreneurship, public interests, political economy, industrial organization, institutions, and transaction costs

We are at a crucial turning point in the relationship between the state and initiatives of individual entrepreneurs at a time in American history when many public institutions are perceived as failing in the wake of the sub-prime lending crisis (Coleman, La-Cour-Little & Vandell, 2008). No longer are individuals who are trying to change public institutions seen as non-conforming outsiders. Instead, entrepreneurship has become a central objective and province of government.

The current paper explores how management theories concerning entrepreneurship -- building principally on classic contributions from the economics literature -- can be extended and applied to consider innovation, experimentation, and creativity in the public domain. We call this an examination of the "economic organization of public entrepreneurship" because our focus is on the process of change in the *public* domain, and the effectiveness and efficiency of organizations that promote the fulfillment of public interests.

The examination of political entrepreneurship -- which is both enabled and constrained by a political system and institutional context (Henisz & Zelner, 2005) -- leads us to terrain that has been well trodden in one sense, but only lightly so in another. Research in a broad range of fields -- economics, history, government, international affairs, and political science -- have considered these issues, and have focused particularly on understanding the circumstances that have culminated in major change in public interests and public institutions. Yet little research has been conducted from first principles on the management of organizations -- regardless of whether they are governmental bodies *per se* -- in fulfillment of social or public interests. We know less about how to structure organizations to act innovatively, experimentally and creatively in the pursuit of public interests with the understanding that entrepreneurship often fails.

This paper's goal is to evaluate how current thinking about the entrepreneur and about entrepreneurship in the fields of management and economics sheds light on the achievement of public interests. This examination leads us first to reflect on the nature of public entrepreneurship (Ostrom, 1965), which then leads us to consider how change in institutional agendas takes hold effectively. One salient example of public entrepreneurship can be seen in the widespread legitimization in recent years of privatization and global outsourcing of many functions that had previously been performed by government such as operation of prisons, construction of roads, and operation of information-technology systems (Gupta, 2008). How should the organizations charged with fulfilling public interests in each of these activities be evaluated for their economic efficiency and effectiveness? We focus on this and related questions.

In the discussion that follows we take public interests or social objectives as given, meaning that we attempt to evaluate the most economical mechanisms for fulfilling these interests or objectives, whatever they may be. We offer no normative claims about the "public good," nor do we analyze here the mechanisms by which individuals' preferences are translated into social objectives. Admittedly, this is a stylized approach. For at least three reasons, "public interests" may not be well defined. First, the alignment of individual objectives into a public interest is a messy and complex problem. Mechanisms such as majority voting, arbitration, and consensus-building may lead to the identification of public interests that are flawed in the sense that the expression of the interest does not reflect an underlying reality of alignment (Arrow, 1951; Buchanan & Tullock, 1962; Downs, 1957; Riker & Ordeshook, 1973). Second, individual interests are multi-faceted, and thus apparent alignment may reflect problematic understandings, unholy alliances, and temporary compromises. Third, private interests are constantly changing, which may mean that the current declaration of the public interest is no longer valid. While we consider implications of change in the public interest for organizational efficiency and effectiveness, we offer no analysis of the legitimacy or process of change itself.

Despite these problems, we proceed with the understanding that research from related fields has long attended to the definition of the common or public interest, and that much more theoretical and empirical inquiry is required to identify public interests more definitively. We are respectful of difficulties in identifying the public interest by allowing for "degrees" of definition. Thus, we allow for the possibility that the public interest is ill-defined, lacking in legitimacy, or temporary. This allowance provides us with a theoretical way of attaching value to flexibility for achieving an efficient economic organization in pursuit of the public interest as we consider the role of the entrepreneur in organizing public activity.

## CONCEPTS OF PUBLIC ENTREPRENEURSHIP

Entrepreneurship is often conceived loosely as innovation, creativity, the establishment of new organizations or activities, or some kind of novelty more generally. As such, we expect entrepreneurship to show up in many places, including markets, firms, government agencies, and universities (Slaughter & Leslie, 1997). According to a stricter definition, however, -- alertness to profit opportunities resulting from market disequilibria (Kirzner, 1973, 1997), the introduction of new consumer goods and business practices (Schumpeter, 1928, 1934), the investment of productive resources under uncertainty (Foss, Foss & Klein, 2007; Knight, 1921; Mises, 1949), or the ability to adapt to exogenous change (Klein & Cook, 2006; Schultz, 1975, 1980) -- extending the concept of entrepreneurship to a non-market setting becomes more difficult.

Consider the concept of entrepreneurship as the discovery and exploitation of profit opportunities (Klein, 2008; Shane & Venkataraman, 2000). If "opportunity" is conceived simply as "a better way of doing things," then opportunities are everywhere, including in the political sphere. The entrepreneurship research literature, however, defines opportunities more narrowly, in terms of *economic value creation*. Shane, for example, 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 economic profit results from discrepancies between real (disequilibrium) prices and their long-run equilibrium values, and the pure 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). Entrepreneurial gain, in this sense, can be defined and measured only with reference to prices that emerge through competitive market interactions. Profit is not a subjective, intangible benefit but an objective gain that is manifest in accounting data.

How does this analysis apply to the current focus on *public* entrepreneurship? If the objective of public entrepreneurship is to fulfill the public interest rather than to pursue profit, can anything be gained from this conceptualization? We submit that the answer is yes, and that improved understanding can be gained with the idea that entrepreneurs perceive gaps between actual and potential performance, and are willing to invest resources to achieve novel objectives, even if possessing only limited control over these investments. Where commercial entrepreneurs see a way to acquire low-cost resources and then deploy them to achieve revenue in excess of their costs, public entrepreneurs see a way to marshal the resources available to fulfill purported public or social interests and then deploy them to achieve better performance in terms of public objectives. We discuss these points in greater detail in subsequent sections.

A second major insight concerning the entrepreneur arises from Knight’s (1921) concept of entrepreneurship as judgmental decision making under uncertainty. This concept applies, strictly speaking, only to market settings. Judgment refers primarily to business decision making when the range of possible future outcomes, let alone the likelihood of individual outcomes, is unknown -- what Knight (1921) terms *uncertainty*, rather than probabilistic risk. Exercising judgment thus requires the investment of resources (primarily, the purchase of factors of production in the present in anticipation of future receipts from the sale of finished goods). Knight (1921) introduces the concept of judgment to decompose business income into two elements, *interest* and *economic profit*. Interest is a reward for forgoing present consumption, is determined by the relative time preferences of borrowers and lenders, and would exist even in a world of certainty. Economic profit, by contrast, is a reward for anticipating an uncertain future more accurately than others and such economic gains exist only in a world of "true" uncertainty. Given that production takes time, entrepreneurs will earn either profits or losses based on the differences between factor prices paid and product prices received.[1]

The critical insight from this line of reasoning concerning *private* entrepreneurship for the *public* domain, relates to ideas about uncertainty-bearing and control over resources. Indeed, Knight (1921) distinguishes between economic returns that are associated only with the deferral through time of the economic rewards to prior investment from the economic returns that are associated with insightful investments under uncertainty. Under the Knightian conceptualization of entrepreneurship, the greatest economic returns accrue to those who successfully bear market

[1] This understanding of entrepreneurship is central to Mises's (1920) line of reasoning that rational economic planning is "impossible" under socialism. Entrepreneurs make production plans based on current prices of factors of production and anticipated future prices of consumer goods. What Mises calls "economic calculation" is the comparison of these anticipated future receipts with present outlays, all expressed in common monetary units. Under socialism, the absence of factor markets, and the consequent lack of factor prices, renders economic calculation -- and hence rational economic planning -- impossible. Mises's (1920) point is that a socialist economy may assign individuals to be workers, managers, technicians, and inventors, but it cannot, by definition, have entrepreneurs, because there are no money profits and losses. Entrepreneurship, and not labor or management or technological expertise, is the crucial element of the market economy. As Mises puts it: directors of socialist enterprises may be allowed to "play market," to make capital investment decisions as if they were allocating scarce capital across activities in an economizing way, but entrepreneurs cannot be asked to "play speculation and investment" (Mises, 1949: 705). Without entrepreneurship, a complex, dynamic economy cannot allocate resources to their highest valued use.

uncertainties, which often requires establishment of new organizations and organizational forms and involves processes of experimentation, failure and learning. In *public* entrepreneurship, these ideas translate to the view that breakthrough innovation requires making investments under uncertainty, which may yield major returns for the public but which also may lead to organizational failure. The next sections apply these ideas to the public domain from first principles.

**Entrepreneurship in Non-Market Settings**

To what extent can the Kirznerian and Knightian concepts of commercial entrepreneurship be used to describe non-market behavior, such as political action? One approach is to define entrepreneurship more loosely as "novelty" or "change." Schneider and Teske define political entrepreneurs as individuals whose "policy proposals and political positions represent a dynamic change from existing procedures" (1992: 743). While this definition makes the concept of political entrepreneurship operational, it does not follow from the more general concept of the entrepreneur. Indeed, Schneider and Teske (1992) note that a theory of political entrepreneurship depends, implicitly, on some concept of profit, a concept that "cannot be easily employed in the study of political entrepreneurs. Instead, a much more complicated [objective] function for the political entrepreneur must be developed, including terms related to policy success and status" (1992: 739-40). As political actors do not produce goods and services that are bought and sold on markets, political profit cannot be measured, in monetary terms, in the same way as economic profit, and political entrepreneurs cannot use monetary calculation to gauge the success of their efforts (Mises, 1944). A theory of political entrepreneurship therefore requires some subjective measure of benefits and costs, from the actor's point of view (Pitelis & Teece, 2009).

Positive political theory sidesteps the profit-measurement problem by contemplating that political actors have preferences over positions in some multidimensional policy space (Davis &

Hinich, 1966; Milyo, 2000) allowing gains and losses to be measured in utility terms and outcomes to be ranked according to Pareto efficiency. Entrepreneurial opportunities, in this framework, originate from "the removal of inefficiencies; [the] discovery of potential opportunities for gains from trade through the political process" (Holcombe, 1992: 147) or by finding new sources of revenue (Bellone & Goerl, 1992). North (1981, 1990) emphasizes transaction costs as a primary source of inefficiency, suggesting that appropriately crafted political structures can create economic value by reducing these costs. More generally, private and public entrepreneurs share the same basic objective, to capture value out of their advantages, capabilities, and actions (Pitelis & Teece, 2009). Given an appropriate conceptualization of value, it should therefore be possible to treat public and private entrepreneurship in a common analytical framework.

If political entrepreneurship reflects the identification and exploitation of political profit opportunities (Holcombe, 2002), then creativity by political entrepreneurs is instrumental in fostering innovative change to modify the way that public entities operate (Mack, Green & Vedlitz, 2008). Thus, Teske and Schneider describe the role of entrepreneurs as helping "propel dynamic policy change in their community" (1994: 331). Schnellenbach denotes this kind of entrepreneurship as promoting *political innovations*, defined as "non-incremental changes of political paradigms" (2007: 185). Indeed, the Schumpeterian (1934) view of the entrepreneur as innovator is often a point of departure in the analysis of political entrepreneurship (Bartlett & Dibben, 2002; Wohlgemut, 2000).

However, in some cases the analogy to a "Schumpeterian innovator" may obfuscate what is going on, as much as adding keen insight. For example, Ostrom shows that while an "immensely complicated" (1990:127) negative externality problem of over-exploitation of ground water basins in California, was successfully solved via *public entrepreneurship* of the decentralized water companies themselves; this workable solution was nonetheless, only achieved after a judge issued a credible threat to enforce a solution to the negative externality problem that would have disadvantaged all decision-makers involved. As Schnellenbach (2007) astutely observes such "political innovation" seems to possess little in common with the bold, intrinsically motivated pursuit of novelty that Schumpeter (1934) championed.

That said, we emphasize another lesson that can be gleaned from Ostrom (1990, 2005): Unlocking 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; 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*. Public entrepreneurship can bring together unique combinations of public and private resources to take advantage of social opportunities (Morris & Jones, 1999). Furthermore, the processes by which these public and private systems interact are worthy of careful attention in the next generation of management research (Hillman & Hitt, 1999).

Following Ostrom (1990), the current paper maintains that political entrepreneurship then can also be conceived in property-rights terms, as the creation or definition of property rights in ways that make political action more effective for creating economic value (Barzel, 1989; Foss & Foss, 2005). More generally, "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" (Holcombe, 1992: 147).

Besides the issue of measuring gains from trade in politics, there is another important distinction between market and political behavior: the allocation of resources though politics is based on forced transfers rather than through voluntary consent. Consequently, 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” (1992: 147). Hence, the exchange of resources through political markets cannot be assumed to be Pareto efficient. In Baumol’s (1990) terminology, political 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 holdups, increasing transaction and information costs, and similar activities, problems that can arise in private organizations as well (Foss, Foss & Klein, 2007).

Thus, 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 be explained in the language of entrepreneurship theory, though not always precisely. 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, reputation), in anticipation of uncertain future rewards. Like Schumpeterian (1934) entrepreneurs, they can introduce new products and processes. Like Schultzian (1980) entrepreneurs they must adapt to exogenous technological and market conditions (e.g., changes in communications technology, and the introduction of electronic voting machines; as well as changes in demographics, political ideologies, and voter interest). Unlike commercial entrepreneurs they cannot demonstrate benefits and costs objectively, using accounting data, and the selection mechanism for allocating resources over time towards more successful political entrepreneurs is complex and not well understood. More importantly, political entrepreneurship can destroy as well as create economic value. A key challenge facing political systems is finding ways to encourage *productive* political entrepreneurship[2] while discouraging its non-productive and destructive analogues. Managing this tradeoff, by providing appropriate formal and informal incentives and constraints is an important task for the theory and practice of political economy.

**Public Entrepreneurship as Organizational Entrepreneurship**

Much of the entrepreneurship literature focuses on the lone entrepreneur or the one-person entrepreneurial firm. Recent research has begun to analyze the practice of entrepreneurship in group settings (Cook & Plunkett, 2006; Foss, *et al*., 2008; Mosakowski, 1998; Stewart, 1989). Efforts to develop a theory of team entrepreneurship have focused on shared mental models, team cognition, and other aspects of the process of identifying opportunities. Penrose's (1959) concept of the firm's "subjective opportunity set" is an important link to judgment-based theories of entrepreneurship (Kor, Mahoney & Michael, 2007). Entrepreneurs can also form networks to share expectations of the potential returns to projects (Greve & Salaff, 2003).

Foss, Foss and Klein (2007) focus on the problem of delegated entrepreneurship: How do owners and senior managers organize the firm to encourage subordinates to exercise productive entrepreneurship -- creating or discovering new resource attributes, new business processes, and the like that increase firm value -- while discouraging employee actions that reduce firm value? Strong delegation and performance-based compensation have the potential to increase both

[2] On the selection mechanism for private-sector entrepreneurs see Alchian (1950), Mises (1951), Friedman (1953), Winter (1971), Elster (1989), and Hodgson (1993). The selection environment for political decision-making has received much less attention, with the exception of the debate in the law-and-economics literature over the efficiency of the common law (Benson, 1990; Crew & Twight, 1990; Rubin, 1977; Rowley & Schneider, 2003).

forms of entrepreneurship, suggesting a difficult and subtle tradeoff that must be managed to improve firm performance.

Within the firm, entrepreneurial decision-making is entwined with problems of collective action (Foss, *et al*., 2008; Hansmann, 1996; Olson, 1965). Commercial entrepreneurship is typically a team or group activity. Venture capital, later-stage private equity, and bank loans are often syndicated (Brander, Amit & Antweiler, 2002). Publicly-traded equity is diffusely held (Tirole, 2006). Professional-services firms and closed-membership cooperatives represent jointly owned pools of risk capital (Cook, 1995). 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 & Mahoney, 2005). Shared objectives must be formulated; different time horizons must be reconciled; and free-riding must be mitigated.

In this sense, organizational and governance problems specific to political entrepreneurship are closely related to general problems of team, group, organizational or collective entrepreneurship. As such, the research literature on entrepreneurship within organizations -- corporations, partnerships, cooperatives -- should be helpful in understanding political entrepreneurship. Entrepreneurship in organizations requires the alignment of interests, the development of shared understandings, careful coordination and monitoring, and procedures to resolve disputes. At present, there is little extant research about how organizational practices affect entrepreneurial processes.

## The Relationship between Public and Private Entrepreneurship

What is the relationship between public- and private-sector entrepreneurship? In one sense, political entrepreneurship can be conceived as entrepreneurship regarding the institutional environment or the rules of the game (constitutions, laws, norms, and property rights systems), while commercial entrepreneurship aims at creating economic value by initiating or altering institutional arrangements (contracts, firms and hybrids) -- by playing the game a different way. As the new institutional economics explains, such arrangements are "embedded" in a particular institutional environment (Coase, 1998; Klein, 2000; North, 1991; Williamson, 2000). Any change in the institutional environment brought about by public-sector entrepreneurship changes the setting in which private-sector entrepreneurship takes place. Further, as Baumol (1990) emphasizes, the legal and political system establishes the general constraints on political entrepreneurial behavior.

Moreover, public and commercial entrepreneurial processes evolve in ways that are mutually reinforcing, challenging and legitimizing. Kaplan and Murray (2009) 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 biotechnology 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 was a hallmark of the effectiveness of the industry's legendary commercial entrepreneurs.

Even in established industries, private-sector entrepreneurship also involves communication of shared visions, alignment of interests, monitoring and governance. Private-sector entrepreneurs 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 & Powell, 1993; 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.

## EXAMPLES OF PUBLIC ENTREPRENEURSHIP

Entrepreneurship, in the diverse senses described above, occurs frequently in the pursuit of public interests. Untold scores of public servants have worked to improve the efficiency and effectiveness of public institutions --- often without fanfare. 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. Of course, individuals and groups also work continually to reshape public institutions to create and extract 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).

One opportunity for further inquiry is the emergence of private entrepreneurial organizations 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 &

McGahan, 2009). The growth of these industries depends on the interplay between the resolution of public concerns, the development of public institutions, and the 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.

Howard Jarvis, a private entrepreneur with a long career of organizational innovation in the public interest, is archetypical of a class of populists that have been celebrated for their accomplishments. A successful serial entrepreneur, Jarvis gained fame, notoriety & accolades, and was featured on the cover of the June 19, 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 (Austen, 1997). Many current politicians operate on this model, including former Massachusetts Governor and presidential aspirant Mitt Romney and the current California Governor, Arnold Schwarzenegger.

Private organizations also have an impact through hybrid structures in which their agendas are temporarily or only partially aligned with public interests. Private military contractors are an extreme example. 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 has been promoted as a healthful alternative to breast milk, contrary to the advice of many physicians, and Coca-Cola has been cited as an inappropriate consumer of precious clean water in India. The recent explosion of academic interest in "public-private partner-ships" testifies to the growing importance of this phenomenon (Glachant & Saussier, 2006).

Hertz (2002) maintains that the dominance of multinationals in private and public life has become so great that global firms operate across national boundaries with sovereign authority. Noting that 51 of the largest 100 economies in the world are multinational firms rather than countries, 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 some-times pernicious. The upshot here 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) 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.

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 in the European Union, the state legitimizes a market to serve a perceived public interest. These examples provide vivid illustrations of 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.

When do private-sector entrepreneurs 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's 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 intertemporal economics of public entrepreneurship, with particular attention to the consequences of risk-sharing schemes and incentive compatibility.

The failure of public agencies, institutions and processes has long been the subject of study in the field of political science and public economics. What can the fields of entrepreneurship and entrepreneurial management offer as insight regarding the current large-scale failures of public institutions such as Fannie Mae and Freddie Mac whose actions contributed to the current banking crisis? (Demyanyk & Hemet, 2008)  Many of the most salient opportunities relate to the interplay between public and private objectives in these institutions (Hillman & Hitt, 1999).

First, the role of these public agencies as priority-balancing bodies cannot be understated. Private entrepreneurs must constantly 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 makes achievement of this balance difficult. Techniques such as real-options analysis and scenario planning may prove essential for defining, managing and balancing competing public interests, and for balancing public objectives over time as the constituent goals of private parties change. The lack of clear metrics for goal achievement (such as profit or profit growth) and the lack of a competitive selection environment render these techniques problematic.

Second, entrepreneurs must contend with information asymmetry and uncertainty that is partly reducible (normally at a cost) and partly irreducible (Libecap, 1989). Mechanisms for extracting information and for evaluating and managing uncertainty of each type have been widely studied in the entrepreneurship literature (Dew *et al*., 2008; Sarasvathy, 2001). Public institutions such as Fannie Mae and Freddie Mac regularly rely on conventional models of risk assessment that are widely in use in the insurance industries, for example, but new 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 -- particularly in the constellations of private interests that are conflated into a public objective -- 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 has shown, inertia may be a potent source of diseconomy under punctuated change. 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 (Hannan & Freeman, 1984; Janis, 1972; Rumelt, 1995).

## POLITICAL ENTREPRENEURSHIP AND THE THEORY OF THE STATE

The market, the firm (particularly the multinational enterprise [MNE]) and the nation-state are primary institutional devices for resource allocation and the division of labor globally. A voluminous and fast-growing research literature on markets and hierarchies, particularly their *raisons d'être*, evolution, attributes and interrelationships, represents a recognition of their importance (Mahoney, 2005). The relationship between MNEs, nation states, and international organizations such as the WTO has also received interest in recent years (Hill, 2008). Yet interactions between these allocative institutions and, more generally, governance of resources in the public interest by alternative forms of markets, firms and nation states, have not been as fully explored. The following sections briefly characterize the more prevalent insights on comparative economic institutions for resource allocation in the public interest and draw insights for additional research in this area.

### Firm and State: Complements or Substitutes?

In economics, the market and the firm are viewed as alternative institutions of resource allocation, the first based on voluntary exchange, the second on central authority or direction. It is claimed (assuming pre-existing markets) that markets fail because of excessive market transaction costs (e.g., costs of information, bargaining, contracting, policing, and enforcing agreements), such costs being the result of the co-existence of bounded rationality, uncertainty, opportunism (self-interest seeking with guile) and asset specificity (Williamson, 1985). The firm supersedes the market by internalizing transactions (Coase, 1937) and in so doing reduces market transaction costs due to changes in ownership, more-fine grained incentives, as well as superior monitoring and auditing capabilities (Mahoney, 2005; Williamson, 1985). Similar theorizing can be applied to explain the evolution, strategies and internal organization of firms as stewards of complex inter-divisional transactions (Williamson, 1975, 1996).

The MNE is explained along similar lines within the transaction costs perspective (Buckley & Casson, 1976; Hennart, 1982). The focus of research in this area has been on intermediate-product-market frictions and in particular on appropriation of quasi-rents from intermediate factor markets, such as those for specific managerial skills and know-how when, for example, licensing rather than foreign direct investment (FDI) is used. In theories of multinational enterprises, transaction costs theory co-exists (uneasily) with market power perspectives, such as Hymer's (1976) oligopolistic reaction approach and Dunning's (1980) eclectic ownership, locational, and internalization view.

Neoclassical economics also considers the state to arise as a result of market frictions. In Adam Smith's (1776) account, the state is required mainly for the provision of justice and public works. Coase (1960) and Arrow (1970) generalized the neoclassical assertion of the existence of the state as a response to market frictions, which was extended by North (1991). Recent theorizing points to market failures arising from prisoners' dilemmas, coordination problems, distributional conflicts and asymmetric information (Kim & Mahoney, 2002; Rodrik, 2004).

Despite these developments on the existence of the state, there is little discussion in the neoclassical economics literature concerning the relationship between the firm and the state. Coase (1960) briefly refers to the issue by indicating that both firm and market transactions take place within the general legal framework imposed by the state. An implication is that firms and markets, which together comprise the private sector, are complements to the state. This perspective then suggests a need for an explanation of the state in terms of private-sector failure. A corollary relates to why states do not substitute for the private sector entirely; to paraphrase Coase (1937) why isn't all production carried out in One Big "State" rather than one big firm or combination of firms and markets? An explanation can be offered in terms of government failure, generalized in terms of transaction costs (Eggertsson, 1990; North, 1990).

A neoclassical view in economics on the relationships between MNEs and nation states is that MNEs tend to enhance welfare by increasing global efficiencies. The mechanisms of this efficiency are transactional, but also may arise from ownership advantages (Kindleberger, 1986), which in turn derive from technology diffusion, know-how and employment creation. A problem emerges when the power of the state is being undermined by the MNE. Vernon (1971) observed that such a struggle is possible as a result of the mobility of MNEs as compared with the immobility of the state; albeit the suggestion of "sovereignty at bay" was qualified ten years later (Vernon, 1981) in view of increasing expropriations of MNE assets by Third World countries and the increasing resistance and militancy of at least some states. Nye (1988) pointed to the possible complementarity between MNE and nation-states, each with a comparative advantage: MNEs on production, nation-states on legitimization. In instances where this complementarity arises, private- and public-sector entrepreneurial activity interacts in ways that compound their joint efficiency (Hillman & Hitt, 1999; Ostrom, 1990).

The emergence of international state apparatus can, in principle, be explained in parallel to the development of the state in the neoclassical tradition. Kindleberger (1986) points to the relationship between international public goods (e.g., international stability) and international governments, such as the United Nations and the World Trade Organization. Such goods can, in principle, be provided by hegemonic powers. The United Kingdom and the United States have played such a role in recent history. For a multitude of reasons, however, provisions of such goods are not fully sustained, and international government can be a solution here.

The relationship between international government and the international firm is seen as one of complementarity. An interesting new dimension is added in terms of the relationship between national states and inter-nation states, which again is seen as one of complementarity. Following Nye (1988), it could be claimed that comparative advantage in the provision of international public goods and international production, respectively, explain complementarity between inter-national state apparatus and MNEs.

In sum, the neoclassical perspective on the firm, including the MNE, the nation-state and international organizations can be described as one of complementarity as well as substitutability. Transaction-costs theory, which traditionally views the market and the firm as substitutes, also is giving way to a view of firms and markets as complementary institutions (North, 1991). Even MNEs and nation states may be both complements and substitutes given the transaction costs that can arise within larger firms (Demsetz, 1988) and the loss of comparative advantage suffered by some states (Nye 1988). Thus, the mainstream view now accommodates the idea that the market, the MNE, and the state (national and international) can be analyzed as complementary institutions of resource allocation, with each specializing for efficiency. Further, efficiency and market power may exist simultaneously (Penrose, 1959), and efficiency by state functionaries will tend to be pursued, provided that their own interests are satisfied (Eggertsson, 1990; North, 1981). These ideas suggest an important interplay between the interests of private agents in both private firms and nation states (Ostrom, 1990).

The possibility of opportunistic (or, more mildly, utility-maximizing) behavior by state functionaries (bureaucrats, politicians) is explicitly entertained by public-choice and Chicago perspectives (Mueller, 2003; Posner, 1974; Stigler, 1970). 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. The maximization of state functionaries' utility and the demands by powerful organized groups of producers and trades unions, which have captured the state, helps to explain its dramatic growth in OECD countries (Shapiro & Taylor, 1990).

**North's Neoclassical Theory of the State**

North (1981, 1990) joins 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 maximize rents to the ruler and, subject to that, to reduce transaction costs in order to foster maximum output, with the maximum tax revenues accruing to the ruler. The existing competition from rivals and the transaction costs in state activities typically tend to produce inefficient property rights since efforts to mitigate rivalry usually lead to favoring powerful constituents, while transaction costs in metering, policing and collecting taxes provide incentives for states to grant 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).

**Entrepreneurship within the State**

The above summary of alternative perspectives on the possibility of capture allows a generalization of North's (1990) theory, in which the state exists because of excessive private sector transaction and production costs, and aims to reduce them, so as to increase output and revenue for state functionaries. Increased output also helps to legitimize income inequities. A constraint on state functionaries' attempts to achieve their objectives arises from the possibility of capture, which tends to generate inefficient property rights that in turn hinders increases in output (Eggertsson, 1990). Trans-action costs in metering, policing, and enforcing taxes also lead to inefficiency in terms of states granting monopolies. Moreover, costs of governing put a limit on the ability of the state to replace the private sector, leading to a need for a plurality of institutional forms (Mahoney, McGahan & Pitelis, 2009).

It follows that the aim of the state is, or should be, to reduce private sector transaction and production costs, by attenuating the problem of rent capture by powerful constituents. The entrepreneurship research literature suggests that transaction and production costs, to the extent that they can be mitigated, represent opportunities for entrepreneurial gains, which accrue to multiple segments of society but can be appropriated by private interests. Providing an institutional setting in which private actors can appropriate at least some of these gains, to provide efficient incentives, while preserving the spillover benefits for the economy as a whole, is critical for fostering organizational innovation in the public sector.

However, the potential for destructive entrepreneurship (e.g., predatory rent-seeking) suggests that the pursuit of such opportunities must be carefully monitored, and in some cases constrained (Baumol, 1990). One such constraint is the establishment of competitive conditions in product and labor markets, which tend to reduce problems with governing costs associated, for example, with powerful (opportunistic) private sector suppliers of required state services. Competitive conditions, however, should not be limited to the private sector only, but should be extended to the market for government control, so that political positions are more contestable.

This extension would provide useful sources of information on possible differences in inefficient governing and thereby would tend to reduce the costs of government.

The reduction of private-sector transaction and production costs by the state is aimed at providing conditions for the efficient production of goods and services by the private sector. This goal then leads us to the concept of national strategy for growth, which is the set of state policies intended to reduce private sector production and transaction costs so as to increase realized output in the form of income. The internalization of private sector activities by the state should be pursued up to the point where an additional transaction or production activity would be produced at equal cost in the private sector. The focus on this objective reinforces the concept of pluralism in institutional forms; i.e., the complementarity between public and private sectors for the efficient production and allocation of resources (Ostrom, 1990).

The notion of national strategy takes the revenue-side as given, i.e., as the prerogative purely of the private sector. However, besides affecting production and transaction costs, a government can also affect the revenue side, if it consciously directs its production-transaction cost-reducing activities to specific areas, and/or by directly undertaking production activities. Such a view is particularly important in open economies with trade. In such a world, 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. It follows that, in open economies, 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, the state functionaries could be argued to act as political entrepreneurs (Yu 1997). This approach would also tend to endogenize the public-private nexus.

It is critical, in this context, to ensure that endogenous private-public interactions add system-wide value in a sustainable way. This approach requires at the very least the avoidance of regulatory capture and/or predatory behavior by state functionaries (Stigler, 1971). Rodrik (2004) suggests that to solve market failures and also avoid capture, state functionaries should be involved in dialogue 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, McGahan and Pitelis (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 virtuous way and enhance the possibility of global sustainable value creation (Stiglitz, 1999), a concept that offers many advantages over the standard economics focus on Pareto efficiency. Clearly, much more research is needed on this front, but these issues are well worth addressing -- not least in the current context of apparent institutional failure.

## SUMMARY AND CONCLUSION

This paper has offered a brief tour through the contemporary entrepreneurship literature with a focus on using entrepreneurship theory and evidence to inform debates about public-private interactions. While some political science and public-choice economics research has explored the nature and effects of political entrepreneurship, a systematic account of the political 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 the current paper stimulates further research on extending entrepreneurship theory to non-market settings and developing more robust explanations for the state and for public-private interactions. Such research should result in applied insights for the design of effective public policies and a stronger alignment between public and private objectives.

Clearly, much more remains to be done. For instance, the current paper has addressed the exact nature of the entrepreneurial function (adaptation, opportunity discovery, uncertainty-bearing, innovation, or various combinations of these). We have also avoided the "occupational" and "structural" approaches common to the applied entrepreneurship literature (Klein, 2008), which do not map readily into non-market settings. It may be useful to evaluate these functions independently. We also suggest that future research focus on specific aspects of opportunity exploitation, such as the assembly of heterogeneous human and alienable assets, the design of appropriate organizational structures (firms, bureaus, contractual mechanisms), and the use of feedback in the revision of entrepreneurial plans.

Never in the course of economic life has entrepreneurship in the private and public domain been more important. Interfaces between public and private life are compounding, and connections between private and public agendas are complex. The concept of the public interest and the roles of public institutions are under intense scrutiny. Never has innovation in the economic organization of activities that represent common interests been more important to the stability of societies. This paper outlines several major opportunities for research in this vein. Much more must be done.

## REFERENCES


Alchian, A. A. (1950). Uncertainty, evolution, and economic theory. *Journal of Political Economy*, **58**: 211–221.

Arrow, K. J. (1951). *Social Choice and Individual Values*. New York, NY: John Wiley & Sons.

Arrow, K. J. (1970). The organization of economic activity: Issues pertinent to the choice of market versus non-market allocation. In Haveman, R. H. and Margolis, J. (Eds.), *Public Expenditure and Policy Analysis*. Chicago, IL: Markham, pp. 59-71.

Austen, J. E. (1997). Business leaders and nonprofits. Social Enterprise Series Number 1. Cambridge, MA: Harvard Business School, pp. 1-12.

Avant, D. A. (2005). *The Market for Force: The Consequences of Privatizing Security*. Cambridge, UK: Cambridge University Press.

Bartlett, D. and Dibben, P. (2002). Public sector innovation and entrepreneurship: Case studies from local government. *Local Government Studies*, **28**: 107–21.

Barzel, Y. (1989). *An Economic Analysis of Property Rights*. Cambridge, UK: Cambridge University Press.

Baum, J. C. and McGahan, A. M. (2009). Outsourcing war: The transaction cost dynamics of private military companies after the cold war. University of Toronto, Working Paper.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy*, **98**: 893–919.

Bellone, C. J. and Goerl, F. (1992). Reconciling public entrepreneurship and democracy. *Public Administration Review*, **52**: 130–34.

Benson, B. L. (1990). Customary legal systems with voluntary enforcement. In Benson, B. L., *The Enterprise of Law: Justice without the State*. San Francisco, CA: Pacific Institute for Public Policy, pp. 11–41.

Brander, J. Amit, R. and Antweiler, W. (2002). Venture capital syndication: Improved venture selection versus the value-added hypothesis. *Journal of Economics and Management Strategy:* **11:** 423-452.

Buchanan, J. M., and Tullock, G. (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor, MI: University of Michigan Press.

Buckley, P. J. and Casson, M. C. (1976). *The Future of the Multinational Enterprise*. London, UK: Macmillan.

Coase, R. H. (1937). The nature of the firm. *Economica,* **4**: 386–405.

Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics*, **3**: 1–44.

Coase, R. H. (1998). The new institutional economics. *American Economic Review*, **88**: 72–74.

Coleman, M. Lacour-Little, M. and Vandell, K. D. (2008). Sub-prime lending and the housing bubble. Working paper, University of California-Irvine.

Cook, M. L. (1995). The future of U.S. agricultural cooperatives: A neo-institutional approach. *American Journal of Agricultural Economics,* 77: 1153-1159.

Cook, M. L. and Plunkett, B. (2006). Collective entrepreneurship: An emerging phenomenon in producer-owned organizations. *Journal of Agricultural and Applied Economics***,** **38**: 421–428.

Crew, M. A., and Twight, C. (1990). On the efficiency of law: A public choice perspective. *Public Choice***,** **66**: 15–36.

Davis, O. A. and Hinich, M. J. (1966). A mathematical model of policy formation in a democratic society. *American Journal of Political Science,* **18**: 501-524.

Demsetz, H. J. (1988). The theory of the firm revisited. In Demsetz, H. J., *Ownership, Control and the Firm: The Organization of Economic Activity*. Oxford, UK: Basil Blackwell, pp. 144-165.

Demyanyk, Y. and Hemet, O. V. (2008). Understanding the subprime mortgage crisis. St. Louis, MO: Federal Reserve Bank of St. Louis, pp. 1-39.

Dew, N., Read, S., Sarasvathy, S. D. and Wiltbank, R. (2008). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing***,** forthcoming.

DiMaggio, P. J. and Powell, W. W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review***,** **48**: 147–60.

Downs, A. (1957). *An Economic Theory of Democracy***.** New York, NY: Harper.

Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies,* **11**: 9-31.

Eggertsson, T. (1990). *Economic Behavior and Institutions.* Cambridge UK: Cambridge University Press.

Elster, J. (1989). *Nuts and Bolts for the Social Sciences***.** New York, NY: Cambridge University Press.

Foss, K. and Foss, N. J. (2006). Value and transaction costs: How the economics of property rights furthers the RBV. *Strategic Management Journal*, 26: 541-553.

Foss, K., Foss, N. J. and Klein, P. G. (2007). Original and derived judgment: an entrepreneurial theory of economic organization. *Organization Studies***,** **28**: 1893-1912.

Foss, N. J., Klein, P. G., Kor, Y. Y. and Mahoney, J. T. (2008). Entrepreneurship, subjectivism, and the resource-based view: towards a new synthesis. *Strategic Entrepreneurship Journal***,** **2**: 73–94.

Friedman, M. (1953). The methodology of positive economics. In M. Friedman, *Essays in Positive Economics***.** Chicago, IL: University of Chicago Press, pp. 3-43.

Garrett, L. (2007). The challenge of global health. *Foreign Affairs* (January/February), 1-2.

Glachant, J.-M. and Saussier, S. (2006). Introduction to special issue on public–private partnerships. *Review of Industrial Organization***,** **29**: 1–2.

Granovetter, M. (1985). Economic Action and social structure: the problem of embeddedness. *American Journal of Sociology***,** **91**: 481–93.

Greve, A. and Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship: Theory and Practice***,** **28**: 1–22.

Gupta. A. (2008). *Outsourcing and Offshoring of Professional Services: Business Optimization in a Global Economy*. London, UK: IGI Global.

Hannan, M. T. and Freeman, M. T. (1984). Structural inertia and organizational change. *American Sociological Review*, **49**: 149-164.

Hansmann H. (1996). *The Ownership of Enterprise.* Cambridge, MA: Harvard University Press.

Henisz, W. J. and Zelner, B. A. (2005). Legitimacy, interest group pressures and change in emergent institutions: The case of foreign investors and host country governments. *Academy of Management Review,* **30:** 361-382.

Hennart, J.-F. (1982). *A Theory of the Multinational Enterprise.* Ann Arbor, MI: University of Michigan Press.

Hertz, N. (2002). *The Silent Takeover: Global Capitalism and the Death of Democracy***.** New York, NY: Free Press.

Hill, J. S. (2008). *International Business: Managing Globalization***.** Thousand Oaks, CA: Sage Publications.

Hillman, A. and Hitt, M.A. (1999). Corporate political strategy formulation: A model of approach, participation, and strategy decisions. *Academy of Management Research,* **24**: 825-842.

Hodgson, G. (1993). *Economics and Evolution***.** Chicago, IL: University of Chicago Press.

Holcombe, R. (1992). Political entrepreneurship and the democratic allocation of economic resources. *Review of Austrian Economics***,** **15**: 143–59.

Horsman, M. and Marshall, A. (1994). *After the Nation State: Citizens, Tribalism and the New World Disorder***.** New York, NY: Harper Collins.

Hymer, S. H. (1976). *The International Operations of National Firms: A Study of Foreign Direct Investment.* Cambridge, MA: MIT Press.

Janis, I. (1972). *Victims of Groupthink: A Psychological Study of Foreing-Policy Decisions and Fiascoes.* Boston, MA: Houghton Mifflin.

Kaplan, S. and Murray, F. (2009). Entrepreneurship and the construction of value in bio-technology. *Research in the Sociology of Organizations*, forthcoming.

Kim, J. and Mahoney, J. T. (2002). Resource-based and property rights perspectives on value creation: The case of oil filed unitization. *Managerial Decision Economics,* **23**: 225-245.

Kindleberger, C. P. (1986). International public goods without international government. *American Economic Review*, **76**: 1–13.

Kirzner, I. M. (1973). *Competition and Entrepreneurship*. Chicago, IL: University of Chicago Press.

Kirzner, I. M. (1997). Entrepreneurial discovery and the competitive market process: an Austrian approach. *Journal of Economic Literature*, **35**: 60–85.

Klein, P. G. (2000). New institutional economics. In Bouckeart, B. and De Geest, G. (Eds.), *Encyclopedia of Law and Economics*, pp. 456–89.

Klein, P. G. (2008). Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, **2**: 175–90.

Klein, P. G. and Cook, M. L. (2006). T. W. Schultz and the human-capital approach to entrepreneurship. *Review of Agricultural Economics*, **28**: 344–50.

Knight, F. H. (1921). *Risk, Uncertainty and Profit.* Boston, MA: Houghton Mifflin.

Kor, Y. Y. and Mahoney, J. T. (2005). How dynamics, management, and governance of resource deployments influence firm-level performance. *Strategic Management Journal,* **26**: 489-496.

Kor, Y. Y., Mahoney, J. T. and Michael, S. C. (2007). Resources, capabilities, and entrepreneurial perceptions. *Journal of Management Studies*, **44**: 1187–212.

Libecap, G. D. (1989). *Contracting for Property Rights.* Cambridge, UK: Cambridge University Press.

Mack, W. R., Green, D. and Vedlitz, A. (2008). Innovation and implementation in the public sector: An examination of public entrepreneurship. *Review of Policy Research*, **25**: 233–52.

Mahoney, J. T. (2005). *Economic Foundations of Strategy*. Thousand Oaks, CA: Sage Publications.

Mahoney, J. T., McGahan, A. M. and Pitelis, C. (2009). The interdependence of public and private interests. *Organization Science,* forthcoming.

Marx, K. (1967). *Capital.* New York, NY: International Publishers.

Miliband, R. (1969). *The State in Capitalist Society*. London, UK: Quarter Books.

Milyo, J. T. (2000). Logical deficiencies in spatial models: a constructive critique. *Public Choice***, 105**: 273–89.

Mises, L. v. (1920). *Economic Calculation in the Socialist Commonwealth***.** Translated by S. Adler, Auburn, AL: Ludwig von Mises Institute, 1990.

Mises, L. v. (1944). *Bureaucracy***.** New Haven, CT: Yale University Press.

Mises, L. v. 1(949). *Human Action: A Treatise on Economics***.** New Haven, CT: Yale University Press.

Mises, L. v. (1951). Profit and loss. In Mises, L. v., *Planning for Freedom***.** Fourth edition. Spring Mills, PA.: Libertarian Press, 1980, pp. 108–150.

Morris, M. H. and Jones, F. F. (1999). Entrepreneurship in established organizations: The case of the public sector. *Entrepreneurship Theory and Practice,* **24**: 71-91.

Mosakowski, E. (1998). Entrepreneurial resources, organizational choices and competitive outcomes. *Organization Science* **9**: 625–43.

Mueller, D. C. (2003). *Public Choice.* Cambridge, UK: Cambridge University Press.

North, D. C. (1981). *Structure and Change in Economic History***.** New York, NY: Norton.

North, D. C. (1990). *Institutions, Institutional Change, and Economic Performance.* Cambridge, UK: Cambridge University Press.

North, D. C. (1991). Institutions. *Journal of Economic Perspectives***, 5**: 97–112.

Nye, J. S. (1988). The multinational corporation in the 1980s. In Kindleberger, C. and Audretsch, P. (Eds). *The Multinational Corporation in the 1980s.* Cambridge, MA: MIT Press.

O'Connor, J. (1973). *The Fiscal Crisis of the State***.** New York, NY: St Martin's Press.

Olson, M (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups.* Cambridge, MA: Harvard University Press.

Ostrom, E. (1965). *Public Entrepreneurship: A Case Study in Ground Water Basin Management.* Unpublished dissertation, Los Angeles, CA: UCLA.

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutional Forms of Collective Action.* Cambridge, UK: Cambridge University Press.

Ostrom, E. (2005). Unlocking public entrepreneurship and public economies. Helsinki, Finland: EGDI.

Penrose, E. T. (1959). *The Theory of the Growth of the Firm***.** New York, NY: John Wiley & Sons.

Pitelis, C., & Teece, D. J. (2009). The nature and essence of the firm. *European Management Review***,** forthcoming.

Posner, R. A. (1974). Theories of economic regulation. *Bell Journal of Economics,* **5**: 335-358.

Poulantzas, N. (1969). *Political Power and Social Class***.** London, UK: New Left Books.

Rahman, A. (1999). *Women and Microcredit in Rural Bangladesh: An Anthropological Study of Grameen Bank Lending.* Boulder, Co: Westview Press.

Riker, W. H. and Ordeshook, P. C. (1973). *An Introduction to Positive Political Theory.* Englewood Cliffs, N.J.: Prentice-Hall.

Rodrik, D. (2004). Industrial policy for the twenty-first century. London, UK: CEPR Discussion Paper No. 4767.

Rowley, C. K. and Schneider, F. (2003). The efficiency of common law hypothesis. In Rowley & Schneider, (Eds)., *Encyclopedia of Public Choice***.** New York, NY: Springer, pp. 519–22.

Rubin, P. H. (1977). Why is the Common Law efficient? *Journal of Legal Studies,* **6***:* 151-163.

Rumelt, R. P. (1995). Inertia and transformation. In Montgomery, C. A. (Ed.), *Resources in an Perspective: Towards a Synthesis of Evolutionary and Resource-Based Approaches to Strategy.* Norwell, MA: Kluwer Publishers, pp. 101-132.

Sarasvathy, S. D. (2001). Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, **26**: 243–88.

Schnellenbach, J. (2007). Public entrepreneurship and the economics of reform. *Journal of Institutional Economics,* **3**: 183–202.

Schneider, M. and Teske, P. (1992). Toward a theory of the political entrepreneur: Evidence from local government. *American Political Science Review*, **86**: 737–47.

Schumpeter, J. A. (1928). Entrepreneur. Translated by Knudsen, T. and Becker, M. C. *Advances in Austrian Economics***,** 6 (2003): 235–66.

Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle***.** Cambridge, MA: Harvard University Press.

Schultz, T. W. (1975). The value of the ability to deal with disequilibria. *Journal of Economic Literature,* **13**: 827–46.

Schultz, T. W. (1980). Investment in entrepreneurial ability. *Scandinavian Journal of Economics,* **82**: 437–48.

Shane, S. (2003). *A General Theory of Entrepreneurship: The Individual–Opportunity Nexus***.** Cheltenham, U.K.: Edward Elgar.

Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review***,** **25**: 217–26.

Shapiro, H. and Taylor, L. (1990). The state and industrial strategy. *World Development***, 18:** 861-78.

Slaughter, S. and Leslie, L. (1997). *Academic Capitalism: Politics, Policies and the Entrepreneurial university***.** Baltimore, MD: Johns Hopkins University Press.

Smith, A. (1776). *An Enquiry into the Nature and Causes of the Wealth of Nations. The Glasgow Edition of the Works and Correspondence of Adam Smith***.** London, UK: Strahan & Cadell.

Smith, D. A. (1998). *Tax Crusaders and the Politics of Direct Democracy.* New York, NY: Routledge.

Stigler, G. S. (1971). The theory of economic regulation. *Bell Journal of Economics,* **2:** 3-21.

Stiglitz, J. E. (1999). Knowledge as a global public good. In Kaul, I., Grunberg, I. and Stern, M. A. (Eds.), *Global Public Goods: International Cooperation in the 21st Century.* Oxford, U: Oxford University Press, pp. 308-325.

Stewart, A. (1989). *Team Entrepreneurship***.** Newbury Park, CA: Sage Publications.

Teske, P. and Schneider, M. (1994). The bureaucratic entrepreneur: the case of city managers. *Public Administration Review*, **54**: 331–40.

Tirole, J. (2006). The Theory of Corporate Finance. Princeton, NJ: Princeton University Press.

Vernon, R. (1971). *Sovereignty at Bay***.** Harlow, UK: Longman.

Vernon, R. (1981). Sovereignty at bay ten years after. *International Organization*, **35**: 517–29.

Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications***.** New York, NY: The Free Press.

Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting***.** New York, NY: Free Press.

Williamson, O. E. (1996). *The Mechanisms of Governance.* New York, NY: Oxford University Press.

Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of Economic Literature,* **38***: 595–613.*

Winter, S. G. (1971). Satisficing, selection, and the innovating remnant. *Quarterly Journal of Economics***,** **85**: 237–61.

Wohlgemuth, M. (2000). Political entrepreneurship and bidding for political monopoly. *Journal of Evolutionary Economics*, 10: 273–95.

Yandle, B. (1983). Bootleggers and Baptists: The education of a regulatory economist. *Regulation***, 7**: 12.

Yu, T. F. (1997). Entrepreneurial state: The role of government in the economic development of the Asian newly industrializing economies. *Development Policy Review*, **15**: 47–64.