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The Theory of Entrepreneurial Policy Alignment: A Newer Institutional Economics

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ABSTRACT: The emergence of supply chain as a growing area of research has generated a renewed interest in theory and theory-making within the field of operations management. This interest is the result of the parallel advances in other areas like economics, sociology, and general management that have developed theoretical perspectives and tools relevant for the operations domain. Work in these areas has demonstrated the relevance of strategic action and organizational structure that are traditionally ignored in an operations framework. In this paper we propose a new theory through which existing research paradigms in the field of operations management may be reinterpreted and redirected. We call this theory the Theory of Entrepreneurial Policy Alignment (TEPA). The point of departure for the theory is the concept of the policy as the locus of institutional activity. The TEPA defines the policy as the fundamental unit of economic analysis and the strategic lever of entrepreneurial action. Analysis of policy – as opposed to the individual choice or the transaction cost – permits the examination of economic activity, which draws attention to the Schumpeterian dynamics of competing supply chains operating in environments far from equilibrium. This theoretical innovation marks the theory as distinct from others on order and can be seen as a movement through transaction cost economics. The TEPA recognizes the consequential nature of operations and incorporates policy considerations to arrive at a newer institutional economics. In this paper, we motivate the argument for developing such a theory, present its basic features and provide an example of how TEPA may be applied to a decision to offshore a manufacturing production facility.

Keywords: *Institutional economics, transaction cost economics, entrepreneur, policy alignment.*

1. INTRODUCTION

It is widely acknowledged that operations management has traditionally lacked sound theory that is consistent, revealing and useful at the meso and micro levels of economic activity (Swamidass and Newell, 1987; Anderson et al., 1989; Flynn et al., 1990). Research in operations management has developed briskly for decades without an organic theory to link its discoveries to a broader interpretation of economic activity. There have been recent contributions to the theoretical discussion that rely upon and augment microeconomic theory (Schmenner and Swink, 1998) as well as some compelling work that addresses organizational design and its influence on operational outcomes (Ruffini et al., 2000; Miles and Snow, 2007). Barney (1986) states that "the implications of Schumpeterian competition for normative theories of strategy remain largely unexplored," and Porter (1981) identified research that develops "a model of competitive interaction among multibusiness firms with business units in partly overlapping markets" as "an intriguing frontier." But work that contributes to a theoretical foundation in operations management – a microfoundation that comfortably accommodates the domain of entrepreneurial economic activity – has been conspicuously absent.

Theoretical orientations are critical because without them there is a tendency for the field to drift without obvious direction, devolving into a set of loosely associated techniques. Theory construction is helpful in any science because it gives practical researchers a common framework for discussion and a set of building blocks with which to develop specific research programs. Operations management is, at its root, an economic discipline, but the connections between its practice, as well as the research devoted to analyze or improve its practice, and prevailing economic theory are tenuous at best. Neoclassical economic theory, as a theory of individual choice, has famously experienced difficulty in reconciling the behavior and performance of economic institutions. New developments in the area would be supported if such a theoretical framework could be developed

Part of the challenge of linking the research practice of operations management to the abstract theory of professional economics is what might be called the "embarrassment of the firm": the failure of economic theory to plausibly account for the obvious large-scale organization of economic life into competing and imperatively structured institutions. Among

the most successful and promising approaches to handle the problem of organization and coordination in economic life are the various examples of institutional economics. Of these, the Transaction Cost Economics perspective (TCE) of Oliver Williamson, with its natural fit with mainstream economic theory and its tight theoretical structure, has been more successful than most. But TCE helps us to answer questions that are not the most central from an operations perspective. TCE helps to develop thinking about when and where the primary institutions of capitalism – the operations themselves – will emerge, but it has little to say about how optimal logistical arrangements or production and inventory policies within those operations will contribute to success or failure of any given operational system. This incapacity of the current institutional economics is no accident; rather it is the direct result of the theory's point of departure and core assumptions which it borrows from mainstream economics. In the place of a theory of the governance of transactions, operations management requires a theory of policy performance and policy alignment. In place of a theory of individual choice, operations management requires a theory of efficient administration. This failure of TCE to account for the deliberate and scientific management of operations is analogous to the "embarrassment of the firm" that plagues neoclassical economics.

2. LITERATURE REVIEW

Concern for theory development within operations and supply chain management has been episodic but persistent over time. Within the last three decades Swamidass and Newell (1987), Schmenner and Swink (1998) and Miles and Snow (2007) have all addressed the state of theory development within operations or supply chain management and have prescribed both new and old ideas to advance research and theory.

At the same time Schmenner and Swink (1998) were calling for contributions to operations management theory while positing their own Wacker (1998) was discussing the definition of theory and the implications of such a definition for theory-building in operations management. Wacker (1998) concluded that theory-building had not developed evenly across methodological domains and provided recommendations for increasing theoretical abstraction to assist in broader theory development in the field.

Work in operations and supply chain management theory development over the last decade has built largely upon contributions from the past. Gupta and Boyd (2008) echo the argument of Schmenner and Swink (1998) from a decade earlier that the Theory of Constraints (TOC) is a general theory for operations management and Seuring (2009) develops supply chain design strategies based upon Schmenner and Swink's (1998) theory of swift, even flow. Größler et al. (2008) discuss the usefulness of systems dynamics as a structural theory and system dynamic models as content theories for operations management through a literature review and illustrative examples from operations management. Organizational and management theorists such as Ketchen and Hult (2007a, 2007b) describe how organization theory may be used to advance research in supply chain management and Cho and Barrow (2009) describe a method for predicting collaboration strategies in supply chains based upon stakeholder theory. Chen and Paulraj (2004) analyze 400 articles across multiple disciplines to develop supply chain management constructs in order to "pave the way for theory-building" in supply chain management but make no connections between supply chain and economic theory. Williamson (2008) himself describes the linkage between transaction cost economics and supply chain management and numerous others have also praised its usefulness to include Grover and Malhotra (2003) who introduce a measurement model for transaction costs and describe how it might be used for research in operations and supply chain management.

Recently, Singhal and Singhal (2012) have stated that although operations and supply chain management have progressed steadily as research fields over the last 60 years there remain opportunities to advance to include theory development. What has been revealed over the last three decades and summarized recently by Singhal and Singhal (2012) is that there is agreement within the operations supply chain management research community that more can and should be done in terms of theory development. What is missing is any new discussion or change in the model of the basic economic environment which would therefore change the way in which the field thinks about its work. None of the work in operations or supply chain theory has challenged the fundamental shortcomings of prevailing economic theory nor has it offered an alternative.

An examination of some of the most popular textbooks in operations and supply chain management serves to highlight the lack of connection between economics – be it of the neoclassical or transaction cost variety – while in some cases reinforcing its commitment to scientific management (see Table 1). What is revealed by an examination of these textbooks is that the theoretic or foundational point of departure – or philosophical starting point – for the field of operations and supply chain management tends to be business strategy. The observation that the point of departure for operations and supply chain management is business strategy is an important one because strategy – in particular, the ideas of Porter (1980) – assumes a Schumpeterian economic view in which the entrepreneur, or entrepreneurial function, is dominant and where markets function not in equilibrium but in a state of disequilibrium which allows for strategy and opportunities to compete on such things as operations and structuring your operations and supply chains to outperform competitors.

Table 1 – Some popular operations and supply chain management texts and their corresponding foundational point of departure or philosophical starting point

Year Published	Author(s)	Title	Theoretic Foundational Point of Departure or Philosophical Starting Point
2011	Anupindi, R., Chopra, S., Deshmukh, S., Mieghem, J., & Zemel, E.	Managing Business Process Flows (3rd Ed.)	Business Strategy
2012	Bowersox,D., Closs, D., & Cooper, M.	Supply Chain Logistics Management (4th Ed.)	Business Strategy
2012	Cachon, G. & Terwiesch, C.	Matching Supply with Demand (3rd Ed.)	Business Strategy
2012	Chopra, S. & Meindl, P.	Supply Chain Management: Strategy, Planning and Operation (5th Ed.)	Business Strategy
2011	Hopp, W. & Spearman, M.	Factory Physics (3rd Ed.)	Business Strategy with an emphasis on scientific management
2010	Jacobs, F., Chase, R., & Aquilano, N.	Operations and Supply Management (13th Ed.)	Business Strategy
2008	Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E.	Designing & Managing the Supply Chain (3rd Ed.)	Business Strategy

We propose a new point of departure and a new set of assumptions to underlie a “newer institutional economics” that conforms better to ongoing practice in operations management and therefore promises to be of more direct use than existing institutional theories. We posit that a good theory for operations management would accomplish four ends. First, it will open up intellectual space and allow consideration of new ideas and modes of inquiry from a common frame of reference. Second, it will provide an opportunity to reexamine familiar concepts through a new lens in a manner that is systematic and disciplined. Third, it will be flexible with respect to its level of abstraction or levels of analysis. The concepts, as well as the relationships among them, will be internally consistent but also robust so that both gross and finite economic activities may be examined from the same vantage. Fourth, and most importantly, a good theory in operations management should allow an investigator to ask questions whose answers are interesting and useful, and for which the researcher has a readily deployable set of tools to begin.

We suggest that the following Theory of Entrepreneurial Policy Alignment (TEPA) has all of these features and can be supported with concrete examples of research design drawn from proven methods in operations management. The Theory of Entrepreneurial Policy Alignment is not a set of hypotheses or a heuristic paradigm, but rather an integrated middle range theory of economic life which takes for granted that most interesting economic activity takes

place in the context of complicated supply chains of interrelated operations and a free enterprise system. The first makes operations management the natural place to situate the theory and the second connects the field to the broader tradition of economic theory and rational action.

3. THE FIRST STEP: RECOGNIZING ECONOMIC INSTITUTIONS AND TRANSACTION COSTS

A first step toward a solid theory of economic institutions was the Transaction Cost Economics (TCE) approach developed by Oliver E. Williamson built upon the work of his predecessor Ronald H. Coase and grounded in the institutional economics of John R. Commons (Coase,1937; Commons, 1931; Williamson, 1981a, 1985, 2000). In “The Nature of the Firm,” Coase (1937) developed the idea that the firm exists because transactions are not costless. Make or buy decisions, according to Coase, are determined based on how difficult it is to discern prices in the market and the degree of difficulty that arises during the course of a particular transaction. The more difficult it is to discover the price of a good, or conduct the transaction to legally secure it, the more likely the purchase will be governed by a hierarchy such as a firm rather than a market. Moreover, by relying on the Marshallian idea of the margin, Coase stated that the firm will be indifferent to how transactions are organized as the “costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an

exchange in the open market or the costs of organizing in another firm" (Coase, 1937). Williamson further developed transaction cost economics by "moving beyond the agency theory tradition of *ex ante* incentive alignment" to the "ex post stage of the contract" that aligns transaction types with appropriate governance structures, and where all incentives are ultimately shaped (Williamson, 2000). Williamson's contributions emphasized the different forms of governance structures – markets or firms – that would arise under different market conditions. For example, the degree to which assets are redeployable and contracts are long-term or incomplete has a direct influence on the type of governance structure that will render the most efficient outcome (Riordan and Williamson, 1985; Williamson, 2000, 2002). Asset specificity (Doeringer and Piore, 1971) has become an important construct and is useful for describing and predicting how firms arrive at a decision to either make or buy. When there is a high degree of asset specific city then those assets will likely be governed by a hierarchy such as a firm. Transaction cost economics has moved economic thinking forward in several ways but three are important for the development of a Theory of Entrepreneurial Policy Alignment. First, TCE focused attention on the institution rather than the spontaneous coordination of rational individuals as the basic unit of economic analysis. Second, it indicated that different empirical contexts require different economic institutions; markets are efficient for transactions that are simple, complete and short-term while firms are efficient when contracts are relatively complex and incomplete over long time horizons (Williamson, 2000). Third, TCE emphasized the need to look at more than one firm at a time, and to consider the nature of inter-firm relationships as well as transactions among them. This has been true of the TCE approach from the beginning. According to Coase (1998), "[w]e cannot confine our analysis to a single firm," instead "[w]hat we are dealing with is a complex interrelated structure."

However, transaction cost economics is still susceptible to the same critiques of the optimistic, utopian neoclassical constructions of economic equilibrium characteristic of Walras (1954), Pareto (1971), Arrow and Debreu (1954), and Debreu (1959). It is a well-known vulnerability of equilibrium economics that it lacks correspondence with the observed data, and such endeavors have been pejoratively referred to by Nicholas Georgescu-Roegen as "pure mathematical

exercises" (Georgescu-Roegen, 1966). Because Coase and Williamson take equilibrium as the natural state of economic activity they are restricted to the study of governance structures and inter-firm boundaries. Additionally, they cannot directly model industrial dynamics, which has been an important contribution of the operations management discipline since the ground-breaking work of Jay Forrester (1958, 1961). Observation of transaction costs at the boundary of the firm ignores day-to-day, inter-firm operational dynamics. Indeed, any consideration of inter-firm dynamics may be dispensed with entirely by invoking the neoclassical notion of equilibrium which considers day-to-day operations to be either a nondescript "production function" (Samuelson, 1962), as static, or trivial in the face of the historical long-run. Although Williamson (1999) has stated that TCE is not static, the use of terms such as *ex ante* and *ex post* in its theoretical development betray his defense, and instead explicitly describe activity that comes before and after a decision made at a point in time. But operations occur in *medius res*; they are ongoing, constant and have no clear beginning, middle or end.

4 THE NEXT STEP: ENTREPRENEURIAL POLICY ALIGNMENT

The Theory of Entrepreneurial Policy Alignment (TEPA) is an institutional theory of economics.

Building on the work of John R. Commons, Ronald H. Coase and Oliver E. Williamson, TEPA incorporates theoretical, empirical and computational advances that allow us to better understand the consequences of policy on the operations and success of the firm. Our theory is one of the middle range, and a central feature is the role of the entrepreneur as the locus of strategic action in a capitalist economy. Fundamental assumptions regarding the natural state of the economy, the origin of economic institutions, the importance of strategy and entrepreneurship, the basic unit of strategic analysis, and the intellectual product of the theory itself that differentiate TEPA from neoclassical economics and transaction cost economics will be explicated in order to render a theory that is useful (see Table 2).

Table 1 – Some popular operations and supply chain management texts and their corresponding foundational point of departure or philosophical starting point

	Neoclassical Economics	Transaction Cost Economics	Entrepreneurial Policy Alignment
Level of the Theory	Unified	Middle Range	Middle Range
Natural State of Economy	Equilibrium	Equilibrium	Disequilibrium
Origin of Economic Institutions	Unknown	Emergent	Entrepreneurial Activity
Strategy and Entrepreneurship	Trivial	Auxiliary	Central
Basic Unit of Strategic Analysis	Individual Choices	Firm Boundaries	Supply Chain Dynamics
Intellectual Product	Price	Governance Structure	Strategic Plan

4.1 SAMPLE DEMOGRAPHIC PROFILE

Our is a modest proposal. Rather than attempt a unified, “theory of everything” which is so common among the economic and social sciences, we propose a Mertonian theory of the middle range – one whose value and usefulness is determined through its correspondence to the observed data, and its utility with respect to allowing us to discern problems in new ways and posit new questions (Merton, 1957). Our middle range theory allows us to actually observe specific cases and model them with a great degree of specificity, something that Williamson (1999) has previously called for. We are not developing theory so that we may simply see the world differently but rather to answer questions that previously we did not even know to ask. We are indebted to transaction cost economics for its emphasis on the interdependence of firms in an industrial sector, particularly with respect to the make-buy decision. However, more is required if we are to move toward providing an explanatory basis for concrete industrial settings, and a way to determine whether policies are aligned or misaligned. Our contribution is to provide a more fully dynamic construction of economic activity.

4.2 NATURAL STATE OF THE ECONOMY

There are two critical assumptions we make with respect to economic activity: history is of consequence and that though there are equilibrating tendencies in economic activity they are never realized and disequilibrium is the norm rather than the exception. We assume the natural state of the economy to be far from equilibrium. Assuming that the economy is dynamic, not static, is fundamental for allowing the possibility of strategy and strategic action. Strategic action relies on disequilibrium, disruption, and asymmetry to function (Jacobson, 1992). We recognize that there is no optimal economic strategy in a

fair game; equilibrium is a theory of fair games. We agree with Williamson (1999) that “saying dynamics is easy, doing dynamics is hard.” The hardest part of putting a handle on dynamics is maintaining the comforting fiction of equilibrium. We dispense with any notion of it entirely by adopting a middle range approach to our theory.

A persistent and pernicious conceit running through neoclassical economics is the excessive focus on long-run behavior while dismissing the short-run. Operations management, in particular, should take issue with the neoclassical tradition of dismissing short-run activity because operations management is, if nothing else, concerned with specific outcomes that obtain over short time horizons. Attention to the short-run entails an historical perspective – we assume that if events did not unfold in the precise way and sequence that they did that a very different outcome would result. Transaction cost economics places no emphasis on the implications of short-run competition. While long-run outcomes of economic activity are academically interesting, institutions and firms compete over the short-run. As Keynes (1923) has so famously stated:

In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again.

Transaction cost economics does little to address this failing of neoclassical economics. Williamson’s debt to John R. Commons for providing the notion of the exchange to better understand transactions is well satisfied (Williamson, 1975, 1981a,b, 1985, 1996, 1999, 2000, 2002). But whatever may be Williamson’s intellectual kinship to Commons he did not inherit the largest part of his estate: the historical perspective

on economic development. The historical perspective is based upon the principle that things could be otherwise. History respects the passing of time and the sequence of events as being consequential. Equilibrium does not. Williamson recasts Commons as a transaction cost economist but Commons had intellectual roots, grafted through his mentor, Richard T. Ely, in the German historical school characterized by List (1966) and Schmoller (1931) as well as the English Historical School characterized by Toynbee (1884) and Ashley (1897). Commons was interested in the transaction as a vehicle for historical insight rather than as a way of generalizing a theory of equilibrium. One can imagine that Commons would not recognize himself in Williamson's work. If doing dynamics is hard, doing dynamics historically is even harder. We require a method of representing economic activity in historical time, this requires radical simplification. One approach would be to construct simulation models that allow us to render the operational environment in a way that is explicit and concrete. We would then be able to observe possible outcomes over the short-run and better understand the operational consequences of strategic decisions.

4.3 THE ORIGIN OF ECONOMIC INSTITUTIONS

Neoclassical economics cannot account for the organization of capital into persistent, future-oriented organizations. However, modern capitalism is composed primarily of hierarchies that manifest in the form of firms (Burnham, 1941). Transaction cost economics regards institutions as emergent; they arise because of the need to subject complete, long-term transactions to a structured hierarchy that results in making them more efficient (Williamson, 2002). Entrepreneurial policy alignment observes institutions as the product of past entrepreneurial activity; institutions are the result of deliberate entrepreneurial policy and artifacts of a particular strategic legacy. The fact that a particular organizational form is efficient or inefficient may have been driven by either a desire for efficiency – such as reducing transaction costs (Coase, 1937; Williamson, 1985) – or by a desire for advantage (Porter, 1980; Wernerfelt, 1984; Barney, 1991) – but it may also be the result of a poor decision. No normative expectations are assigned to institutions – they are recognized simply as the out-

growth of a deliberate policy put into place by an entrepreneur at some earlier point in time. One could say that capitalism, like Churchill said of democracy, is the worst form of economic system, except for all those other forms that have been tried from time to time.

There are forebears of our ideas in Nelson and Winter (2002) with respect to their definition and consideration of routines, as well as Coriat and Dosi (1998) who introduce the notion of organizational forms as a way to describe clusters of routines. But the evolutionary explanations of economic activity treat routines almost the way in which Dawkins (1978) describes "memes" which bring to mind fantasies of a Vast Active Living Intelligence System (Dick, 1987), or Gaia (Lovelock, 1979; Tielhard de Chardin, 2004) that acts through rational agents. Consider three conceptual challenges to such a theory. The first challenge is the fact that environments change quickly, and when the rate of change in the environment is greater than the rate of selection, trait-selection mechanisms become less significant. The second is that economic environments are often small relative to the number of members of the population. An economic environment, or market, is defined by the countable number of members who participate in it. When that countable number is small it is difficult to have a modular selection process – whole systems are not selected out. Efficient evolution requires large numbers. Third, the number of traits in any given environment may be large relative to the number of members of the population. If there are more traits than members of the population it is difficult to determine which among them matter with respect to survival. For these reasons we do not subscribe to any emergent theory of the firm or economic institutions based on routines. Instead, we subscribe to a theory where entrepreneurs take deliberative action and create firms through policy. It is not that we consider feedback unimportant but rather that we are agnostic with respect to matters of selection. Entrepreneurs make policy but not in the manner of their choosing. Rather than taking a stand on the appropriate biological metaphor to employ we prefer to model industrial systems directly.

A Policy is Not a Routine. A routine is an emergent property – a non-intentional element. No individual is essential for a routine to occur, manifest or function. A routine is implicit. A person does not have to know if they are in a routine. A policy is explicit

so that even if it is not articulated by management it possesses attributes and features so that it could be. Regardless of how latent it may be a policy is always recognized when it has been violated. If a person is not correctly following a policy they will know it because the operational system will discipline them or give them feedback.

A policy is a deliberative guideline that may be as general as a principle or as specific as a rule. A policy cuts across the strategic, tactical and operational levels of the firm. The firm itself is a policy decision made by the entrepreneur. Policies are different from routines in that we are always actively aligning them through a process we typically refer to as management. The function and prerogative of management is to take routines, align them, discipline them and make them policy. Active management takes routines and makes them explicit so that they may become policy, much like Frederick Taylor's famous example of Schmidt the pig iron handler (Taylor, 1911).

5. IMPORTANCE OF ENTREPRENEURSHIP AND STRATEGY

At the root of our theory is the assumption that there are two types of rational economic actors that constitute mature capitalism: entrepreneurial and normal. The distinction between the two is a choice of pursuing existent cash flows or creating new ones (Bradford and Osborne, 1976). Entrepreneurial actors are what Weber has called autocephalous – they are “independent heads” possessing not only autonomy but also the authority to compel others to behave (Weber, 1964). The entrepreneur, or the entrepreneurial function, is the visible hand (Chandler Jr., 1977) – both the creative and destructive force – that drives capitalist economies (Schumpeter, 1947, 1961).

Modern industrial states require entrepreneurs who are able to accumulate and aggregate surplus capital in quantities sufficient to pursue large industrial projects such as railroads, mining, and automotive manufacturing (Chandler Jr., 1977; Johnson, 1991). It has been observed that capital must necessarily be accumulated into the hands of a few strategic economic actors for modern economies to thrive. Behold any economy made up entirely of entrepreneurs and you will find an economy that is not industrialized – a bazaar of fruit stalls, textile vendors and fishmongers (Soto, 2000).

If one chooses the path of an entrepreneurial actor they enter the realm of strategic action where strategic opportunities are possible. The entrepreneur has real assets that they play with – not just claims on assets; they have operations and the ability to create policies that reorganize those operations. Entrepreneurs are the locus of strategic action within a specific economic domain – be it a market, a firm or a collection of institutions engaged in exchange – and they set the policies that others are compelled to follow. The entrepreneur is vested with the authority to direct and reorganize existing institutional and economic structures by virtue of their accumulated surplus and inheritance of supply. Entrepreneurs structure organizations and determine their boundaries.

Within hierarchical organizations, such as a firm, we find normal actors who are reduced to functional rather than substantive rationality – they may pursue adaptive behavior that is confined to what is observable and known about the economic environment but they may not unilaterally behave or act rationally because they do not have the freedom or autonomy to arrange the rules under which their own economic activity takes place. Instead, normal actors follow and enforce the entrepreneur's policy. Normal actors conform to an existing range of economic activity and seek existing cash flows bestowed by entrepreneurs. A choice to pursue the path of a normal economic actor is to pursue functional action with functional opportunities that are at most adaptive but not ultimately innovative.

Entrepreneurial actors are strategic foremost in that their actions are calculated and deliberate. The entrepreneur has access to both substantive and functional rationality whereby they may both perceive and act rationally due to their privilege of unilateral and strategic action; they are two dimensional in the Marcusean sense (Marcuse, 1964). Our notion of strategic action is different from that of TCE which defines it as either adaptive, in a Hayekian sense of expanding within the existing range of practice, or as economizing to eliminate waste and inefficiency (Williamson, 1991). Our view of strategic action is Schumpeterian in that it is both creative and innovative. The strategic action of an entrepreneur is a response to change that is “outside the existing range of practice” and is “an essential part of the historical process” (Schumpeter, 1947).

5.1 NORMAL VERSUS STRATEGIC ACTION

There are three things that distinguish strategic from normal action: a lack of risk aversion, genius and accumulated surplus. Wilken (1979) provides a discussion of the relationship between entrepreneurship and risk, and recently McMullen and Shepherd (2006) have addressed how entrepreneurs perceive and bear risk as well as uncertainty. However, risk aversion is a subject that has been studied extensively and we will not give a full exposition of it here. We accept that varying degrees of risk avoidance are present. It is traditional to ascribe entrepreneurship to some unique, creative genius. Either by some marvelous invention, astounding innovation or sheer force of charisma the hero shapes the world around them and structures history (Carlyle, 1840, 1843; Epstein, 1926; Collins and Moore, 1964). We shall leave investigations of risk aversion and the cult of the hero to others. Instead, we shall confine our attention to what we believe is the most robust and readily observable source of entrepreneurship: the possession of wealth (Cooper and Dunkelberg, 1986). It is the previous accumulation of surplus that is by far the most formidable characteristic of the entrepreneur in that it accords significant advantage to the possessor.

The previous accumulation of surplus endows the entrepreneur with the opportunity to pursue strategic action, and to be creative with latitude and intensity that normal actors can only imagine. Opportunity – or any path that leads to obvious economic advantage – is scarce in any given environment. The accumulation of surplus gives the entrepreneur advantage in pursuing opportunity by either affording him the economic strength to wrest it from another or by acting on the opportunity more quickly. The magnitude of the entrepreneur's ability to reorganize and restructure their economic environment is amplified in proportion to their accumulated surplus – the greater their aggregation of surplus the greater their potential force.

Capitalism is an ideal economic domain for entrepreneurial action because it is the only way entrepreneurs can engage in competitive, strategic activity with other entrepreneurs (Schumpeter, 1961). However, this is not to say that all entrepreneurs are created equal. There are entrepreneurs both large and small – just as there are manifold predatory creatures that roam the Serengeti Plain – and they are in an endless competition to accumulate greater

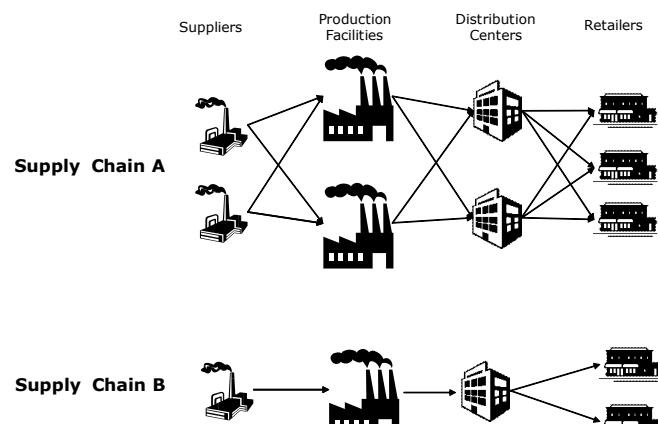
and greater degrees of economic surplus in an arena that is characterized by unadorned competition; a state of capitalistic "nature red in tooth and claw" (Tennyson, 1998).

The autocratic authority of the entrepreneur to reorganize capital as they choose is what gives capitalism its character and organizational efficiency. The scope of autonomy possessed by normal actors is bounded within the firm by policy that is set by the entrepreneur. The scope of the entrepreneur's autonomy is bounded only by the magnitude of their accumulated surplus, their will to exercise it, and whatever prevailing limits that may be prescribed and set by the state.

5.2 BASIC UNIT OF STRATEGIC ANALYSIS

We define an institution as a collection of policies intentionally aligned to provide a good at the highest possible price with the lowest possible cost. An institution is an intentional structure – someone intended it to be that way and that someone is the entrepreneur. The institution is not an individual nor is it necessarily a single organization or firm. The institution is defined simply as an operational system that is dimensionalized at the level of competition. This definition of the institution is a distinguishing feature of our theory. Consider two competing supply chains that produce a similar good (see Figure 1).

Figure 1 – Two competing supply chains.



Institutional and transaction cost economics would begin and end with an examination of the nature of the transactions between particular suppliers, production facilities, distribution centers and retailers

as well as the degree of asset specificity. However, a policy-based approach would examine the inter-relationship of the policies that structure the dynamics of the entire supply chain. The production facilities in Supply Chain A are not competing with the production facilities in Supply Chain B. The entire supply chains of both A and B are competing against one another. Should the retailers of either supply chain fail or cease operation it is not just the distribution centers that will suffer but the entire chain of economic entities that support the retailer. If the production facilities in Supply Chain A close or move offshore the suppliers will not simply be able to effortlessly and immediately sell their goods to the production facilities in Supply Chain B. Disruptions in any part of the chain will reverberate and if the suppliers in Supply Chain A are able to stay in business at all it will be the result of one of two things: 1) the ability and willingness of the production facilities in Supply Chain B to reorganize and take them in or, 2) their ability to exercise their entrepreneurial freedom to organize or produce something new and innovative. What makes our Theory of Entrepreneurial Policy Alignment distinctive is that we recognize the regular structure of productive environments, and turn our attention to chains – supply chains, value chains or commodity chains (Gereffi et al., 2005) – that are real, coherent entities that we define as a single institution. Here, an institution is comprised of whatever grouping of entities makes sense for evaluating competitive behavior and its outcomes.

5.3 INTELLECTUAL PRODUCT

The chief intellectual product of our Theory of Entrepreneurial Policy Alignment is a strategic plan. This is in contrast to analysis in TCE which produces a justification for a particular governance structure for transactions. It is also different from neoclassical economics which provides a rationale for assigning an equilibrium price and expectations of penalties for deviating from it.

Whether strategy is planned in detail or is emergent (Mintzberg and Waters, 1985; Mintzberg and McHugh, 1985; Miles and Snow, 2003) we agree with Chandler Jr. (1962) that strategy is “the determination of the basic long-term goals and objectives of the enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals.” Strategy is the conscious work

of rational agents who shape the world rather than simply react to it. While Chandler has provided an idea of what strategy is we still need to understand how to deploy it. A strategic plan is a course of action – it describes what is to be done to achieve a strategic objective and operations is chiefly about doing things. By focusing on policies and how they direct people to do things we can move forward with a theory that is useful for studying operations.

6 CONCLUSION

We have introduced the Theory of Entrepreneurial Policy Alignment (TEPA) that moves economic analysis beyond traditional neoclassical, transaction cost, and institutional economics. The TEPA opens a theoretical space for economic exploration that considers the operational aspects of institutional activity. Institutions are defined as supply chains comprised of firms with a mutual economic interest. Two types of economic actors are identified: entrepreneurial and normal. The entrepreneur is identified as the key strategic actor in any economic context while the normal actor seeks out cash flows existent in the economic domain that is configured by entrepreneurial activity. Entrepreneurs are interested in discovering the position in the supply chain that provides the greatest cash flow as well as understanding how a particular strategic decision will affect current and future cash flows. Both history and strategy are critical to understanding how economic activity evolves. Policies are the strategic levers of entrepreneurial action, and they are the fundamental unit of economic activity. The notion of pure economic equilibrium is rejected and therefore allows for notions of competitive asymmetry that makes strategic opportunity possible. Strategic frameworks such as those put forth by Schumpeter (1961), and later transliterated for the management community by Porter (1980), are all part of the furniture that constitutes the apartment of entrepreneurial theory.

The Theory of Entrepreneurial Policy Alignment is not methodologically deterministic and lends itself to multiple forms of investigation. We can imagine other researchers using interesting and substantive methods within the context of TEPA. Examples might include survey methods supported by active field work as well as modeling techniques that involve computer simulation. However, TEPA is fundamentally empirical in that it is grounded in what John R. Commons called the “go and see” approach to re-

search; models, cases, and hypotheses are grounded in thorough observation to ensure correspondence with ongoing or emerging economic activity.

If we wish to move beyond the arm-chair economics of the neoclassicists who are unable to provide management with any useful place to begin a serious investigation of operations beyond a “production function”, a bald and unsatisfying $f(x)$, then we must conduct thorough empirical investigations of operations and describe and model them as they are – not as we would like them to be for purposes of our analysis. If we wish to move beyond governance structures, efficiency and neo-Hayekian adhocracy we require a newer institutional economics that considers advantage in the context of an entire supply chain.

Researchers in management are struggling to understand why and how supply chains are structured and function as they do. In the process, they are turning to the most readily available tools that are applicable to the task, those being the middle range theories of transaction cost economics, consideration of strategy through some notion of competitive advantage, and the resource-based view of the firm. However, because TCE implicitly relies on equilibrium theory it cannot seriously interact with the concepts of strategy or advantage which, in important ways, contradict it. McIvor (2009) has recently shown that depending upon the potential for opportunism and the firm's resource position (“strong” versus “weak”) transaction cost economics and the resource-based view of the firm will prescribe contradictory decisions with respect to outsourcing. Because our theory is one of the middle range, and does not rely on a concept of equilibrium, but rather accepts that there are equilibrating tendencies in economic activity and that the preponderance of this activity is far from equilibrium, it is compatible with other management theories that are current or may emerge. The theory opens up methodological space for simulation analysis as well as field studies that utilize process or ethnographic analyses. Simulation analyses that focus on transient states – and not just steady-state equilibrium – would reveal the implications of different operational management policies on outcome variables of interest such as inventory, product stockouts or backorders, and financial profitability over time. Outcomes that affect the firm in the short-run often have profound determining effects – whether it survives or goes bankrupt – and simulation that looks specifically at the time series

of variables of interest could provide insight to managers with respect to the short-run risk associated with different policy decisions. TEPA allows operations and supply chain management to understand, and communicate about, economic activity in terms of policies that are managerial in nature, and to dispense with the notions that operations are reducible to a “production function” and that such activity takes place in stable equilibrium. TEPA provides a theoretical microfoundation for operations and supply chain management that comfortably accommodates the domain of entrepreneurial economic activity that has been conspicuously absent in other economic and management theories. As we stated earlier, theoretical orientations are critical because without them there is a tendency for the field to drift without obvious direction, devolving into a set of loosely associated techniques.

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