Institutional Theory: Relevance to Supply Chains

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Since it was first introduced in the mid-1970s, Institutional Theory has been extensively employed in management research. Previous studies, across disciplines, have mostly used organizations as a unit of analysis. Very few studies apply institutional theory concepts to supply chains. Supply chains are defined by interorganizational processes which conform to organizational fields, a central construct of the new institutional theory. Supply chain, therefore, forms an appropriate unit of analysis for an examination of IT concepts. By relating the fundamental elements of the theory to supply chains, this paper attempts to establish the conceptual validity of institutional theory to supply chains.

Keywords: Institutional theory, supply chain, organizational fields, institutional logic, institutional agents

INTRODUCTION

Analysis of an organization's performance necessarily focuses on the efficiency of operations. *A priori*, there is an assumption that organizational decisions are rationally determined by efficiency and other objective concerns. However, evidence suggests that not all organizational actions are singularly motivated by operational efficiency considerations. Organizations are subject to isomorphic pressure and many of their actions are determined by dual considerations of efficiency and institutional pressures (Rogers et al., 2007). Social theory, specifically, Institutional Theory (IT), is not limited to governmental and social organizations alone "but encompass all organizations including market oriented for-profit firms" (Scott, 2001) and provides a useful lens to analyze organizational actions and decision making. The great utility of IT is that it tries to explain some of the fundamental issues pertaining to our understanding of organizations, such as the reasons for their similarity and differentiation.

Compared to other management disciplines there has been limited research on the applicability of IT to supply chains *per se*. The extant research deals mostly with the application of IT to operational management practices such as adoption of total quality management, six sigma, ISO 9000 etc. This is surprising given that entire concept of supply chains revolves around interorganizational processes and networks which is fully aligned with a fundamental element of IT, the notion of organizational fields. Supply chain, as a unit of analysis, is a fertile area for examination of the relevance of IT concepts. The attempt of this paper is to conceptually establish the applicability of the fundamental elements of IT to supply chains.

The paper is structured as follows. The concept of supply chains is discussed first, followed by a description of the basic tenets of IT. This is followed by a discussion of the applicability of IT to supply chains. Finally, some concluding remarks are made.

SUPPLY CHAIN

Supply chain is defined as a "network of organizations that are involved, through upstream or downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer" (Christopher, 1992). The oft-quoted statement of recent years that companies do not compete, but it is the supply chains of companies that compete, underscores the value of supply chains. Practice of supply chain management has led to many operational benefits, such as lower inventories, reduction in cycle time, improved quality, and better customer service (Davis, 1993).

Recent decades have seen a transformation in an organization's understanding of how work should be performed and the importance of supply chain managements stems from that transformation. For long, most organizations were organized along functional lines. The function-oriented organization was the result of certain assumptions about the nature of work, namely, that it was possible to identify small sub-components of work element, and that improvement in each sub-assignment led to improvement of the whole. These assumptions in turn led to functional specialization and a vertical hierarchy in organizations (Mentzer, Myers, & Stank, 2007). Companies have now moved away from a vertical view to a horizontal perspective which focuses on processes which cut across functions in an organization (Kanji & Wong, 1999). A process orientation is premised on a systems approach to the organization which necessitates coordination across functional and organizational boundaries.

This shift from functional focus to a process-based view, specifically, the enlarged view of processes incorporating coordination and collaboration across organizational boundaries is what gave rise to the concept of supply chain management. Supply chain management is, but an application of the process view (Mentzer et al., 2007) – it shifts the focus away from products to customers and from functions to processes. Supply chains consist of different organizations working together to convert inputs into outputs for delivery to customers (Mabert & Venkataramanan, 2007).

A supply chain is an alliance of many partners and information is the glue that holds a supply chain together. The synergistic effects of the supply chain are determined by the efficiency with which information is processed both within an individual firm and between organizations. This has been greatly facilitated by the advancement in information technology. Fundamental to supply chain management is the integration of processes along the entire supply chain. Earlier, when organizations were organized along functional lines (vertically), the focus was primarily on achieving functional efficiency. The realization that functional efficiency may lead to sub-optimization of organizational performance led first to the practice of internal integration of the various functions of an organization and later to the integration of processes along the entire supply chain. The development of core competency as the dominant management paradigm (Prahalad & Hamel, 1994) and the resultant enhanced reliance on suppliers for intermediate goods and other allied activities such as product development added further to the importance of supply chain management.

INSTITUTIONAL THEORY

Among the various organizational theories, IT has emerged as a dominant paradigm in recent decades. IT has been viewed as an extension of open systems theory which recognizes the importance of the external environment on "the structure and functioning of the organization" (Scott, 2003). While the open systems theory highlights the impact of the overall environment on the organization, institutional theory goes beyond that and focuses on the social and cultural forces existing in the environment. From the IT perspective "organizations were seen to be more than production systems; they were social and cultural systems" (Scott, 2001).

It is agreed that the works of Meyer and Rowan (1977) and DiMaggio and Powell (1983) lay the foundation of IT. DiMaggio and Powell's (1983) article attempted to answer the question as to why organizations were so similar. They submitted that the response of organizations to environmental forces is not just an objective reaction to external forces and solely governed by efficiency concerns but also

governed by meanings shared by organizational agents and motivated by a desire to gain legitimacy. It is motivated by the need to conform to expectations of others in the industry and explains the influence of external forces on organizational behavior (Liang et al., 2007). It is this desire that leads to organizational conformity i.e., institutional isomorphism.

Institutional isomorphism is a fundamental proposition of IT and is defined as "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (DiMaggio & Powell, 1983, p. 149). It is of three types: coercive, normative, and mimetic (DiMaggio & Powell, 1983). Formal and informal pressures on an organization by other organizations or other agents on whom the organization is dependent is referred to as coercive isomorphism. It stems from political influence and organizational legitimacy. This is best illustrated by the actions of government and governmental agencies that significantly affect a firm's actions (Zhu & Sarkis, 2007). Normative isomorphism is associated with professional values and is driven by pressures brought about by professions. Normative isomorphism occurs because of internalization of norms by members of the professions. Mimetic isomorphism results when uncertainty encourages imitation of other organizations as models. This happens often through benchmarking the company against the leaders in the industry (Zsidisin et al., 2005). These three mechanisms which lead to institutional isomorphism do not necessarily work in isolation with each other; they can work together and at times are indistinguishable from each other. IT suggests that it is the presence of coercive, normative, and mimetic mechanisms that leads to organizational conformity and institutionalization of organizations.

IT itself has evolved over the years, from "old institutionalism" to "new institutionalism." Old institutionalism focused on the "enabling and constraining qualities of institutions" while new institutionalism highlights how organizations adapt to environmental pressures and in the process are institutionalized (Selznick, 1996). One of the primary ways in which the different versions of institutional theories differ is in their levels of analysis i.e., whether the focus of what is being investigated is more of a micro or a macro phenomenon. Scott (2001) has identified six levels of analysis: world system, society, organizational field, organizational population, organization, and organization subsystem.

The major constituents and building blocks of IT that are particularly relevant to supply chain management are the concepts of open systems, isomorphism, organizational field, institutional logic, and institutional agents. In the next section, we relate these concepts which provide an understanding of firm dynamics and institutional pressures that guide the development of organizational processes and routines to supply chain management.

APPLICABILITY OF INSTITUTIONAL THEORY TO SUPPLY CHAINS

Thompson (1967) first propounded the open systems theory. Open system theory recognizes that firms are complex systems, 'indeterminate and faced by uncertainty, but at the same time as subject to criteria of rationality and hence needing determinateness and certainty' (Thompson, 1967, p.10). The contribution of the open system approach was to transform the way organizations were analyzed and understood. It persuaded others to look at organizations not in isolation but as part of a larger environment in which it operated. Open systems recognize organizational interdependence with the environment.

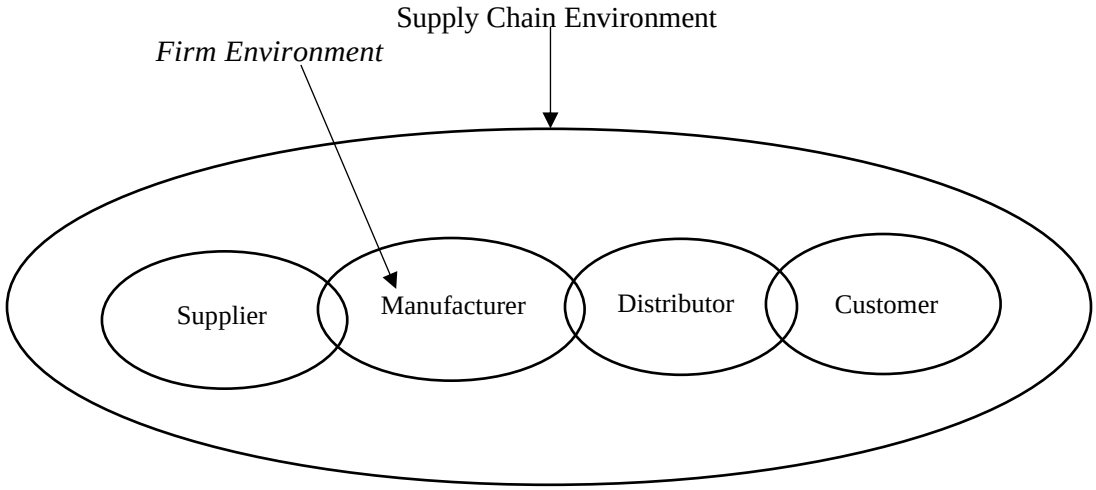
The larger context of open systems has a great bearing on how an organization functions; it constrains an organization's actions in many instances and influences its processes and procedures (Katz & Kahn. 1966; Scott, 1998). Interestingly, this external influence is not limited to tangible aspects such as the effect of technology (historically, organizations have been understood as production units that transforms inputs into outputs). The environment also has a significant effect on the social and cultural aspects of the organization.

Organizations may try to influence and control the environment, but it can only have limited control over the wide array of environmental forces. The efficacy of its efforts to influence environmental elements is dependent on power play. Thus, a focal organization's sway on its supplier base is determined by the level of dependency of one on the other.

While no organization is immune to environmental pressures, the effect of the environment is even more pronounced in the case of supply chains as supply chains are defined by relatedness of organizations. It is a network of many players with a lead firm and other players such as customers, suppliers, distributors etc. At a minimum, a supply chain is impacted and influenced by suppliers, customers, competitors and the broader market and regulatory authorities (Zsidisin, Melnyk & Ragatz, 2005).

A supply chain has been presented as an ecosystem by Moore (1996) highlighting its holistic aspect and its linkages to other subsystems and the environment. The supply chain is necessarily always reacting to the environment and evolving within it. A simple illustration, adapted from Schary & Skjøtt-Larsen (2001), of the effect of the environment on a supply chain is shown in Figure 1.

FIGURE 1
SUPPLY CHAIN ENVIRONMENT



Environmental pressures influence organizational methods and strategies such as selection in use of technology and collaboration among supply chain partners (Ketchen & Giunipero, 2004). Further, the impact of the environment on supply chains is not limited to material and technological resources but also encompasses cultural and relational effects. This is more so as supply chains transcend national boundaries and operate in a true global environment.

The concept of open system, applicable as it is to a broad understanding of supply chains, does not however, fully explain the dimensions or the dynamics existing within a supply chain network. The open system approach implies a passive construct where organizations (in our case the supply chain) are being impacted by the environment. The concept of organizational fields is a more dynamic concept and is particularly relevant to the study of supply chains. This concept itself is built on the concept of social worlds in sociology which refers to actors with "shared commitments to certain activities, sharing resources of many kinds to achieve their goals, and building shared ideologies about how to go about their business" (Clark, 1991, p. 131).

Organizational fields include, *inter alia*, all organizations with whom an organization is competing or those with whom interorganizational relationships exists (Powell & DiMaggio, 1991). More specifically, it refers to "those organizations that, in the aggregate, constitute an area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio & Powell, 1983, p. 148) i.e., a "totality of relevant actors" that have a bearing on or influence on the organization. Various actors outside the organizations bring formal and informal pressures on them which leads to organizations practicing similar routines and procedures to that of other field members and which eventually leads to conformity. Organizational fields thus determine the acceptable norms of organizational behavior and organizational structures.

Scott (1994, pp. 207-208), highlights the relational aspect of members of the organizational field by defining it as "a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside of the field." Similarly, DiMaggio & Powell (1983, p. 143) refers to organizational fields as a set of interdependent organizations that "constitute a recognized area of institutional life."

The relatedness, the interdependency of actors, and sharing of the common purpose highlighted in the above discussion are the defining characteristics of supply chains and clearly establishes the legitimacy and relevancy of the concept of organizational fields to supply chains. As opposed to open systems, the organizational field concept tends to portray a much more dynamic and an activist view wherein, the construct itself is being organized. This is indeed true of supply chains. Though influenced by very many environmental factors, the supply chain associated with a focal organization is indeed to a large extent a deliberate construct of many players and is thus really an agglomeration of differentiated but common goal-sharing organizations. A supply chain field is an area where a focal firm establishes and promotes its business model, product and technology choices and management methods while seeking its goals and objectives (Wua & Jia, 2018).

Organizational fields differ in their permanence. Some may have more permanence and others transitory. The dynamism of the organizational field is best exemplified in the case of virtual supply chains. The defining characteristics of a virtual supply chain is that it has a total customer orientation, and that the relationships are temporary and flexible. According to Bovet & Martha (2000), "a value net begins with customers, allows them to self-design products and build to satisfy actual demand." Thus, the supply chain will have no permanent structure; the focal organization will arrange the network of partners to execute a specific order which could be modified in the case of another order. The organizational field concept is thus an extremely relevant concept to the understanding of supply chain networks.

Aligned to organizational fields is the concept of interorganizational processes that is particularly relevant to supply chains. The growth and development of interorganizational systems and processes necessary for coordination and integration of activities that is so crucial to supply chain efficacy can be best understood in terms of institutional processes. It has been argued by Whitley (1992) that institutional processes have greatly affected the formation of markets and the behavior of organizations. These are not necessarily governed by some economic logic but rather by rules and regulations that have evolved over time. And processes have an inherent relationship to the structure of the system. The way a supply chain is structured, i.e., the relationships between organizations, especially between the focal organization and others and the power equations governing the relationships significantly impact inter-organizational processes. The concept of organizational fields discussed above is particularly relevant for we are concerned not only with the processes within the boundaries of an individual organization but more importantly in the institutional processes in the inter-firm context.

Another IT concept of relevance to supply chains is that of institutional logic. It has been defined as "the belief systems and related practices that predominate in an organizational field" (Scott, 2001). They provide the "organizing principles" which help the participants in the field to achieve their objective. The success of any field, in our case the supply chain, is among other things dependent on how well the logic i.e., the belief system is understood and practiced by the members of the field.

Organizational fields vary based on the degree of dominance of their governing logics. Some are characterized by major belief systems which are fully dominant while in others there could be secondary set of beliefs which may even be in conflict (Scott, 2001). This is indeed true and applicable in the case of supply chains. A supply chain can be defined by a dominant logic e.g., low cost which is fully understood and subscribed to by all members of the organizational field (supply chain members), and which impinges on and influences all decision making. Walmart best exemplifies such a supply chain where cost is the pre-eminent logic. Southwest Airlines in its initial years also exemplified the dominance of low-cost belief systems. This belief system was coherent and fully subscribed to by all supply chain members such as worker unions, suppliers, and customers alike. Thus, no meals were served on flights, no seat assignments were made, pilots helped in the boarding of passengers, and only one type of aircraft was inducted into the fleet. All these were the result of one governing logic which was to keep the costs low.

Similarly, consider the practice of Lean Manufacturing and Just-in-Time concepts. Just how effectively the concept is operationalized along the entire supply system is, *inter alia*, a function of how well the institutional logic permeates in the organizational field. The Japanese auto industry's implementation of these management practices is significantly more effective compared to that in other countries as the institutional logic i.e., the belief system in such practices is much more dominant in the organizational fields in Japan.

Relevant to an understanding of supply chains is Gidden's theory of structuration. As an element of social theory which informs IT, structuration theory suggests a more active and interactive role for institutional actors (Scott, 2001). It states that actors (institutions) act in a fashion "that can be used to enhance or maintain power" (Sewell, 1992, p. 9). An understanding of the structuration theory will help in understanding the dynamics between the focal organization and other business partners, both downstream and upstream in the supply chain. This indeed is important as the theory suggest that the "actors are knowledgeable and reflexive, capable of understanding and taking account of everyday situations and of routinely monitoring the results of their own and others' actions" (Scott, 2001, p. 76). Di Maggio and Powell (1983) have interpreted structuration as the degree of interaction and the nature of interorganizational structure that arises at the level of the organizational field. Thus, understanding the degree and extent of interorganizational structures and coalition patterns would lead to a better understanding of the extent of integration among the supply chain partners.

Another concept of IT applicable to supply chains is that of institutional agents. Institutional agents have the capacity to significantly impact both at the macro as well as the micro level. Thus, governments as institutional agents can influence the development of supply chains. Streeck & Schmitter (1985) point out the unique importance of the state since it has the "ability to rely on legitimate coercion". Among the prominent drivers of supply chain are the social and political organizations, utility service companies, the custom and tax set up as also the financial regulatory authorities. All of these are either directly managed by the state or significantly regulated by it. Moreover, at the macro level the state influences many elements of the business environment which have a direct or an indirect bearing on the growth of supply chains. To illustrate, the development of logistical infrastructure which includes the development of roads, ports, and communication facilities which are essential for an effective supply chain is largely governed by the actions of the state.

IT literature also points out the role of professions as an institutional agent. The number of professionals or professional organizations that are associated with the spread of supply chain concepts can have a bearing on practice of supply chain management. The effectiveness of supply chain management is a function of "hard" and "soft" factors. While the hard factors are well understood, the soft factors are no less critical to its success. Professions help in the dissemination of soft factors which are concerned with non-hard capabilities such as capacity to integrate, skills in dispute resolution, vendor development, trust among supply chain partners etc. These play an important role in determining a supply chain's success.

CONCLUDING REMARKS

Not all organizational actions are determined solely by efficiency considerations. Organizations are subject to pressures, coercive, normative, and mimetic and their actions are influenced by institutions that populate an organizational field. Additionally, they are subject to uncertainty. In an uncertain environment, organizations seek to gain legitimacy by imitating actions of other players.

The object of the paper was to conceptually establish the validity of the fundamental concepts of institutional theory to supply chain and supply chain management. IT analysis is most significant at the level of organizational fields which is a central construct of IT (Scott, 2001). Organizational fields apply fully to supply chains since supply chains are defined by interorganizational networks and processes. Supply chain, therefore, forms an appropriate unit of analysis for an examination of IT concepts.

It is hoped that an application of IT to supply chains can provide useful insights to decision makers in the field. Previous studies of IT across disciplines have mostly used organizations as a unit of analysis (Weerakkody et al., 2009). Using empirical data, future researchers can develop and test propositions using

supply chain as a unit of analysis. This would be a significant contribution to the fields of IT and supply chain management alike. Further, most empirical research related to IT theory are from US based organizations. Data collected from non-US organizations or from firms with cross-border supply chains would be of added interest.

REFERENCES

Bovet, D., & Martha, J. (2000). *Value Nets - Breaking the Supply Chain to Unlock Hidden Profits*. New York, NY: John Wiley & Sons

Christopher, M. (1992). *Logistics and Supply Chain Management*. London: Pitman Publishing.

Clarke, A.E. (1991a). Social Worlds/Arenas theory as Organizational Theory. In D.R. Maines (Ed.), *Social Organization and Social Process*. Essays in Honor of Anselm Strauss, NY: Aldine de Gruyter.

Clarke, A.E. (1991b). Social Worlds/Arenas Theory as Organization Theory. In D. Maines (Ed.), *Social Organization and Social Process: Essays in Honor of Anselm Strauss* (pp. 119–58). (Hawthorne, NY: Aldine de Gruyter).

Davis, T. (1993). Effective Supply Chain Management. *Sloan Management Review, 34*(Summer), 35–46.

Di Maggio, P.J., & Powell, W.W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review, 8*(2), 147–160.

Kanji, G.K., & Wong, A. (1999). Business excellence model for supply chain management. *Total Quality Management, 10*(8), 1147–1168.

Katz, D., & Kahn, R.L (1966). *The Social Psychology of Organizations.* New York, NY: John Wiley.

Ketchen, D.J., Jr., & Giunipero, L.C. (2004). The intersection of strategic management and supply chain management. *Industrial Marketing Management, 33*(1), 51–56.

Liang, H., Saraf, N., Hu, Q., & Xue, Y. (2007). Assimilation of enterprise systems: The effect of institutional pressures and the mediating role of top management. *MIS Quarterly, 31*(1), 59–87.

Mabert, V., & Venkataramanan, M. (2007). Special Research Focus on Supply Chain Linkages: Challenges for Design and Management in the 21st Century. *Decision Sciences, 29*(3), 537–552.

Mentzer, J.T., Myers, M.B., & Stank, T.P. (2007). *Handbook of Global Supply Management.* California: Sage Publications.

Meyer, J.W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, (83), 340–363.

Moore, J.F. (1996). *The Death of Competition.* New York: Harper Business

Powell, W.W., & DiMaggio, P.J. (Eds.). (1991). *The new institutionalism in organizational analysis.* Chicago: University of Chicago Press

Prahalad, C.K., & Hamel, G. (1994). Strategy as a field of study: Why search for a new paradigm. *Strategic Management Journal, 5*(Suppl. S2), 5–16.

Rogers, K., Purdy, L., Safayeni, F. & Duimering, P. (2007). A supplier development program: Rational process or institutional image construction? *Journal of Operations Management, 25*(2), 556–572.

Schary, P.B., & Skjøtt-Larsen, T. (2001). *Managing the Global Supply Chain*. Copenhagen: Copenhagen Business School Press (2 ed.)

Scott, W.R. (1994). Conceptualizing organizational fields: Linking organizations and societal systems. In H. Derlien, U. Gerhardt, & F. Scharpf (Eds.), *Systems rationality and partial interests* (pp. 203–221). Baden: Nomos.

Scott, W.R. (1998*). Organizations: Rational, Natural, and Open Systems*. Englewood Cliffs, NJ: Prentice Hall (4th ed.).

Scott, W.R. (2001). *Institutions and Organizations.* California: Sage Publications (2nd ed.).

Scott, W.R. (2003). *Organizations: Rational, Natural and Open Systems*. Upper Saddle River, NJ: Prentice-Hall (5th ed.).

Selznick, P. (1996). Institutionalism: Old and new. *Administrative Science Quarterly, 41*(2), 270–277.

Sewell, W.H., Jr. (1992). A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, *98*(1), 1–29.
Streeck, W., & Schmitter, P.C. (1985). Community, Market, State-and Associations? The Prospective Contribution of Interest Governance to Social Order. In W. Streeck, & P.C. Schmitter (Eds.), *Private Interest Government: Beyond Market & State* (pp. 1–29). CA: Sage.
Thompson, J. (1967). *Organizations in Action*. New York: McGraw-Hill.
Weerakkody, V., Dwivedi, Y.K., & Irani, Z. (2009). The diffusion and use of institutional theory: A cross-disciplinary longitudinal literature survey. *Journal of Information Technology*, *24*(4), 354–368.
Whitley, R. (1992). The Social Construction of Organizations and Markets: The Comparative Analysis of Business Recipes. In M. Reed, & M. Hughes (Eds.), *Rethinking Organizations: New Directions in Organization Theory and Analysis* (pp. 120–43). CA: Sage.
Wu, Z., & Jia, F. (2018). Toward a theory of supply chain fields–understanding the institutional process of supply chain localization. *Journal of Operations Management*, *58*, 27–41.
Zhu, Q., & Sarkis, J. (2007). The moderating effects of institutional pressures on emergent green supply chain practices and performance. *International Journal of Production Research*, *54*(18–19), 4333–4355.
Zsidisin, G.A., Melnyk, S.A., & Ragatz, G.L. (2005). An institutional theory perspective of business continuity planning for purchasing and supply management. *International Journal of Production Research*, *43*(16), 3401–3420.