Information Technology Outsourcing: An Institutional Theory Approach

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ABSTRACT

The study explores factors contributing to adoption of information technology outsourcing (ITO). The focus is on adoption of ITO as a management innovation. The research model is motivated by institutional theory. The model posits that it is the fit among two factors that determines the adoption rate of ITO services: (1) institutional profile- propensity to adopt by a firm is influenced by factors such as prestige level of the firm, educational level, support from senior management and firm size; and (2) field level characteristics such as intensity of competition, density of inter-firm connections, service professionalization, skilled staff availability, knowledge codification in the field, and effort level by intermediaries in promoting legitimacy of ITO.

1. INTRODUCTION

Information technology outsourcing (ITO) is the contracting of a specific business task relating to development and management of IT to a third party service provider (Yourdon 2004). The service provider is then responsible for the day-to-day development, management, running and maintenance of the delegated task. The study investigates factors contributing to adoption of ITO. The research model is based on institutional theory (Scott 2001). In the paper, ITO is viewed as a management innovation that incorporates new procedures and routines in the management process (Hamel 2006).

The focus of this research is on adoption of ITO as a new idea. Our model (Figure 1) posits that it is the fit among two independent variables that determines the adoption rate of an innovation- the dependent variable. The two factors are:

1. Institutional profile: Damanpour (1991) listed following positive characteristics- size, professionalism, and specialization. Institutional theory has emphasized prestige level of firms (Sherer and Kyungmook 2002) and CEO background as crucial variables (Scott 2001).
2. Institutional field level characteristics such as competitive intensity, density of inter-firm connections, information flow, and the role of intermediaries such as professional associations, and consultants in promoting the legitimacy (DiMaggio 1991) of ITO as an institutional norm.

Figure 1. The basic model

The rest of the paper is organized as follows. In the next section, we discuss the issue of ITO as a form of management innovation. In section 3, the issue of institutional profile of a potential innovator is discussed. Section 4 outlines the institutional field level characteristics that are relevant for ITO adoption. Finally, we conclude in section 7.

2. ITO AS A MANAGEMENT INNOVATION

Afuah (2003) describes innovation in the context of for-profit firms as "the use of new knowledge to offer a new product or service that customers want". Similarly, according to Porter (1990, pg 780), innovation for-profit firms is "a new way of doing things that is commercialized". In a more general vein, innovation for organizations has simply been defined as, " the adoption of ideas that are new to the organization" (Downs and Mohrs 1983). Rogers (2003, pg 12) provided a more general definition of innovation in the context of both individuals and organizations as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption."

Hamel (2006) in a current article defines management innovation as a "marked departure from traditional management principles, processes, and practices or a departure from customary organizational forms that significantly alters the way management is performed. Put simply, management innovation changes how managers do what they do". In the context of firms in the western countries, outsourcing strategic IT services (such as new systems development) and functions (such as IT infrastructure management relating to networks and data services) to service providers from developing nations is a departure from what managers are wont to do. Role and responsibilities of managers alter considerably as important elements of management are farmed out to third party vendors abroad. In the context of this paper, outsourcing of services is taken as a form of management innovation on the part of firms as institutions.

3. POTENTIAL INNOVATOR PROFILE OF ITO CLIENTS

In institutional theory, institutions are patterns of social behavior (Breit and Troja 2003). In social sciences, patterns of interest are social norms, routines of behavior, legal regulations and distributional systems of power and resources (Breit and Troja 2003). In this paper, the terms institutions and organizations are used interchangeably.

A basic tenet of institutional theory is that institutions seek "legitimacy" in the eyes of both internal and external stakeholders (Parson 1960). Institutional theory attempts to explain why institutions of the same type, "such as schools and hospitals, located in widely scattered locales so closely resemble one another?" (Scott 2001). A key concept here is that of isomorphism- resemblance among institutions in terms of structures (DiMaggio and Powell 1983). Considerable evidence of such isomorphism has been provided by Slack and Hinnings (1995).

The theory has mostly focused on the "movement towards, and maintenance of, isomorphic institutional environments". Focus on institutional evolution and change has been weak (Powell 1991). However recent studies on birth, evolution, and diffusion of new institutional norms in the business sector have tried to mitigate this (Greenwood et al. 2002, in business services). Even though mimetic, coercive and normative forces drive institutions towards isomorphism, not all organizations in a field are alike.
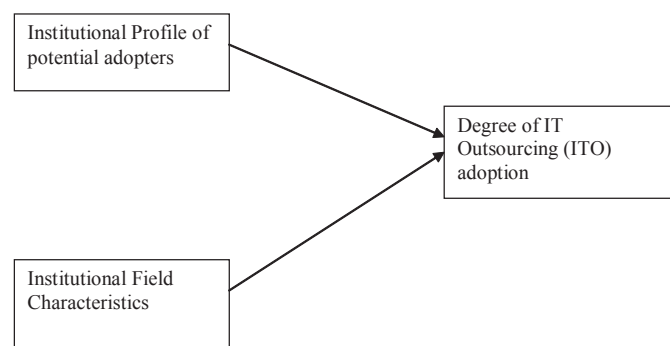
Kondra and Hinnings (1998) provide a typology of institutions based on their degree of fit and institutionally defined performance norms. Their typology consists of: institutional operators, equifinalists, renegades and dogs.

- Institutions that have a high fit with both norms of operations and performance levels are called "institutional operators". Much of a field is likely to be populated by institutional operators.
- Institutions that operate differently but have performance that are within norms prevalent in the field are called "equifinalists".
- Institutions that are performing well above institutional norms are called "Renegades"
- Institutions performing below institutional norms are called "dogs". Dogs are likely to be weeded out due to lack of legitimacy in the field and are not likely to have any impact on institutional norms. There is no incentive to mimic these organizations.

Renegades according to Kondra and Hinnings (1998) are firms that are performing well above institutional norms. They may include firms that are new entrants to the field, and are able to have a novel operational model as they have not been subject to forces of isomorphism for long. They could also be existing firms that have deviated from norms knowingly (active agency) or unknowingly (passive agency). Organizations that are weakly bound to field norms are more willing to risk transgression of norms and operate in a manner that allows superior performance.

In organizational innovation literature, Rogers (2003, 411) describes organizational innovativeness as a dependent variable dependent on independent variables such as leader characteristics, internal characteristics of an organization such as size, complexity, and similar factors. Our model for predicting organizational propensity to innovate in the managerial field is shown in figure 2.

Renegades
By definition, firms that are star performers are likely to be "renegades" as their performance level is above field level norms.

Proposition 1a: Renegade firms are more likely to adopt outsourcing than non-renegade firms, and in turn act as exemplar for others in the institutional field.

Leader's Characteristic: Attitude Towards Change
IS research literature is replete with evidence that top management's support is crucial for technology adoption (Chatterjee et al. 2002).

Proposition 1b: More positive the attitude of top management towards outsourcing, greater the potential adoption rate of ITO related services .

Figure 2. Institutional profile variables related to adoption rate of ITO
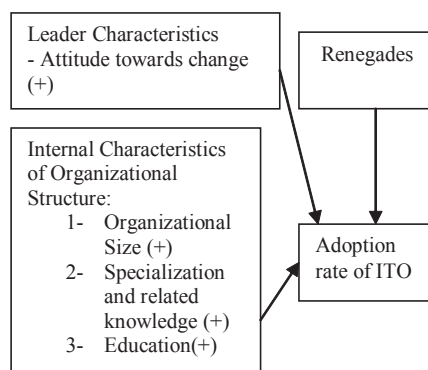
Organizational Characteristics—Organizational Size
Mahler and Rogers (1999) found that organizational size, revenue, and people employed are positively correlated with telecommunication technology adoption. Sherer and Lee (2002) show that large law firms are more likely to adopt innovative HR practices.

Proposition 1c: Greater the organizational size, greater the potential adoption rate of ITO related services .

Organizational Characteristics—Specialization and Knowledge Diversity
Kimberely and Evanisko (1981) ascribe innovativeness of organizations to specialization in related activities.

Proposition 1d: Greater the specialization and knowledge employees have related to outsourcing, greater the potential adoption rate of ITO related services.

Organizational Characteristics—Education
Pierce and Delbecq (1977), and Fichman (2001) relate education to professionalism and thereby to ability to innovate.

Proposition 1e: Greater the employee education and training level in the firm, greater the potential adoption rate of ITO related services .

4. INSTITUTIONAL FIELD CHARACTERISTICS
There are three levels of analysis in institutional theory (Chiasson and Davidson 2005). Lowest level is that of a single institution. That is the main focus of institutional theory. The second level is that of population, which is a set of similar institutions that is entities that "produce similar products and services, operate is similar environment, share systems of meaning, and take actions that are influenced by shared normative, cognitive and regulatory structure" (Scott 2001). Then we have the level of institutional field which "includes those organizations that in the aggregate, constitute a recognized area of institutional life; key suppliers, resources and product consumers, regulatory agencies and other organizations that produce similar services and products" (DiMaggio and Powell 1983).

The field constitutes an environment, a material environment and an institutional environment. The material environment and also called the technical environment, provides (Chiasson and Davidson 2005, Scott 2001):

- demand side factors such as complexity, and variation in demand for product and services,
- the supply-side factors provide factors such as scarcity and concentration of key inputs,
- technologies provide skills and knowledge to produce outputs, including material technologies and
- market structure that includes alignment of suppliers and customers that influence flow of resources.

The institutional environment provides (Chiasson and Davidson 2005, Scott 2001):

- Institutional logic, that is, organizing principles underlying practices and belief systems.
- Institutional actors, which includes individuals and organizations that create and enact belief systems
- Governance systems, the system of regulatory and normative control

DiMaggio (1991) characterizes institutional fields in terms of dimensions related to professionalization (Larson 1977), and dimensions related to structuration (Giddens 1979). In terms of professionalization, Dimaggio (1991) listed factors such as (i) creation of body of knowledge, (ii) organizations of professional associations, and (iii) consolidation of a professional elite. He used these factors to demonstrate how the Carnegie Corporation facilitated the development of the organizational field of U.S. Art Museums.

More recently, we have IBM promoting the concept of service and process management and helping universities such as North Carolina State University

to come up with the first MBA program in the field (http://www.mgt.ncsu.edu/news/2006/mba_ssme.php dated 01/31/2006). One of the major sub-field in the proposed area is that of managing vendors engaged in outsourcing activities- "emphasizing the management of relationships between service providers and their clients". IBM had similarly helped consolidate the subject of Computer Science in 1960s, helped develop their many professional associations and encouraged universities to provide degrees in the subject and thus populate the professional world of computer science. This professionalization helped in legitimation of the subject and its subsequent widespread use in sciences, businesses and engineering (previous web site).

Proposition 2a: Creation of a body of knowledge, organization of professional associations and consolidation of a professional elite in the field of IT outsourcing will help in legitimation of the subject and its correspondent institutional forms, which in turn will promote its diffusion.

Motivated by Giddens (1979), DiMaggio (1991) suggested following structuration variables impact the development of an institutional field and its subsequent impact on institutional members: (i) density of inter-organizational contacts, (ii) rate of flow of information, and (iii) emergence of a center-periphery structure. Coleman (1939), showed how increasing contact among member museums led to smaller museums adopting professional methods. Lawrence et al. (2002) and Phillips et al. (2000) show the importance of information flows in fields for institutional effects to occur.

Proposition 2b: Increasing density of contacts, information flow and emergence of center-periphery structure leads to an institutional field exercising more influence on its members in the field of ITO adoption.

Following are the institutional actors in the material environment (Scott 2001) that are of interest to us:

1. Competitors and Customers
   Haveman (1993) and Clemons (1990) point to imitation effect in firm behavior in the airline and banking industry.

Proposition 2c: Greater pressure and influences from competitors and customers will leads to greater adoption rate of ITO services.

2. Suppliers and vendors
   Burt (1982) and Markus (1987) point to pressures from dyadic channel. Teo et al. (2003) find effect of suppliers on a firm's intention to adopt inter-organizational systems.

Proposition 2d: Greater assistance and influence from outsourcing suppliers and vendors will lead to greater adoption rate of ITO services.

3. Government Agencies and Trade Associations:
   King et al. (1994), and Teo et al. (2003) find evidence that participation in industry, trade associations and with government sanctioned bodies constitute pressure on a firm.

Proposition 2e: Greater positive influence from mass media, professional networks, and government agencies will lead to greater adoption rate of ITO services.

5. CONCLUSION

The purpose of this study is to explore factors contributing to adoption of ITO outsourcing (ITO) by firms in western countries. The focus is on adoption of ITO as a management innovation. The research model is motivated by institutional theory (Scott 2001).

The model posits that it is the fit among two factors that determines the adoption rate of ITO services: (1) innovator profile- propensity to adopt by a firm is influenced by factors such as prestige level of the firm, educational level, support from senior management and firm size; and (2) field level characteristics such as intensity of competition, and density of inter-firm connections, and effort level by

intermediaries in promoting legitimacy of ITO, professionalization of outsourcing services, availability of managers skilled in ITO vendor management and knowledge codification in the field.

The ITO vendor community has a major role to play in enhancing popularity and legitimacy of outsourcing activity in western countries to third world country vendors. They need to follow IBM's role in this regard. The vendor community should attempt to reduce the initial learning cost in adopting this innovation on the part of customers. There are many steps that the vendor community can take in the country of operations. They can promote courses, programs of study, case studies, and industry projects in the outsourcing field in business schools, universities, and in the training industry. By helping outsourcing management achieve an identity as a subject and specialization, and promoting availability of study and training in the area, they will foster creation of a pool of outsourcing professionals that can be employed in both customer and vendor side. Easy availability of trained staff in outsourcing area will help in reducing initial adoption costs. Availability of courses, seminars, books and cases will lead to outsourcing activity getting legitimized within the community, and thus promoting its acceptability and popularity. ITO vendors are also advised to recruit sales staff from the community they will be selling to, as this will help overcome the initial reluctance on the part of firm owners and managers to deal with people with different cultural background.

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