

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 2008 Proceedings

Americas Conference on Information Systems
(AMCIS)

2008

IT Outsourcing Adoption by Small and Medium Enterprises: A Diffusion of Innovation Approach

Abhijit Chaudhury
Bryant University

Pratyush Bharati
Bryant University

Follow this and additional works at: <http://aisel.aisnet.org/amcis2008>

Recommended Citation

Chaudhury, Abhijit and Bharati, Pratyush, "IT Outsourcing Adoption by Small and Medium Enterprises: A Diffusion of Innovation Approach" (2008). *AMCIS 2008 Proceedings*. 390.
<http://aisel.aisnet.org/amcis2008/390>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2008 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

IT Outsourcing Adoption by Small and Medium Enterprises: A Diffusion of Innovation Approach

Abstract

The study investigates factors contributing to the adoption of IT services outsourcing (ITO) by small and medium enterprises (SMEs) in western countries. The focus is on the process of diffusion and adoption of ITO as a management innovation. The paper is written from the perspective of ITO vendors from developing countries and seeks to identify steps that will help these vendors sell ITO services to SMEs in first world countries. The model is motivated by two research streams: diffusion of innovation theory and institutional theory. The model posits that vendors should exploit the fit among three factors (as it is this fit that determines the adoption rate of ITO services): (1) innovation profile, including features such as relative advantage and complexity of service offered; (2) innovator profile, including features such as prestige level of the firm, educational level, and firm size; and (3) field-level characteristics such as intensity of competition, density of inter-firm connections, service professionalization, knowledge codification in the field, and effort level by intermediaries in promoting legitimacy of ITO.

Key words: Innovation, diffusion, institutional theory, SMEs, outsourcing

IT Outsourcing Adoption by Small and Medium Enterprises: A Diffusion of Innovation Approach

1. Introduction

The trend of outsourcing continues to rise in the western countries.¹ However, small and medium enterprises (SMEs) are usually laggards in adopting innovations (Afuah, 2003), including IT outsourcing (ITO). For instance, it was reported that SMEs in the UK found ITO not to be cost-competitive.² Similarly, in Canada, small firms were missing out on outsourcing because they were not convinced of the cost and other advantages of ITO.³ In another report, Gartner confirmed that among countries providing IT outsourcing, India, China, Russia, and Brazil continue to be favorites.⁴ It is in the interest of both SMEs, who are being squeezed by cost pressures, and ITO vendors to be brought together.

The study investigates factors contributing to the adoption of ITO by small and medium firms (SMEs) in western countries and how vendors from third and second world countries could break into this market. In this study, IT outsourcing (ITO) is defined as the contracting of a specific IT business task to a third-party service provider (Yourdon, 2004). The service provider is then responsible for the day-to-day running and maintenance of the delegated process. Using extant research in the field, the goal is to arrive at actionable guidance for IT vendors trying to popularize the use of ITO among SMEs.⁵ Firms with employee strength below five hundred are considered SMEs in this paper. The model is based on diffusion of innovation (DOI) theory (Rogers, 2003) and institutional theory (Scott, 2001). The focus here is on the process of diffusion and adoption of ITO as a new idea. Our model (Figure 1) posits that it is the fit among three factors that determines the adoption rate of an innovation—the dependent variable. The three factors are:

1. Innovation profile, including such features as relative advantage, compatibility with existing culture and routines, complexity, and observability.
2. Innovator profile, including features such as professionalism and specialization (Damanpour, 1991). Institutional theory has emphasized prestige level of firms (Sherer & Kyungmook, 2002) and CEO background as crucial variables (Scott, 2001).

¹ http://www.cio.com/article/152251/Outsourcing_Continues_to_Rise_State_of_the_CIO_Data_Show dated December 24, 2007

² <http://www.computing.co.uk/computing/news/2196827/outsourcing-expensive-smbs>, dated December 24, 2007.

³ <http://www.businessedge.ca/article.cfm/newsID/12785.cfm>, dated December 24, 2007.

⁴ http://searchcio.techtarget.com/originalContent/0,289142,sid182_gci1286775,00.html, dated December 24, 2007.

⁵ According to a review paper on Outsourcing by Gonzalez, Gasco, and Llopis (2006), more than a third of the papers published in IS academic journals are theoretical in nature—that is, without any data analysis.

3. 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.

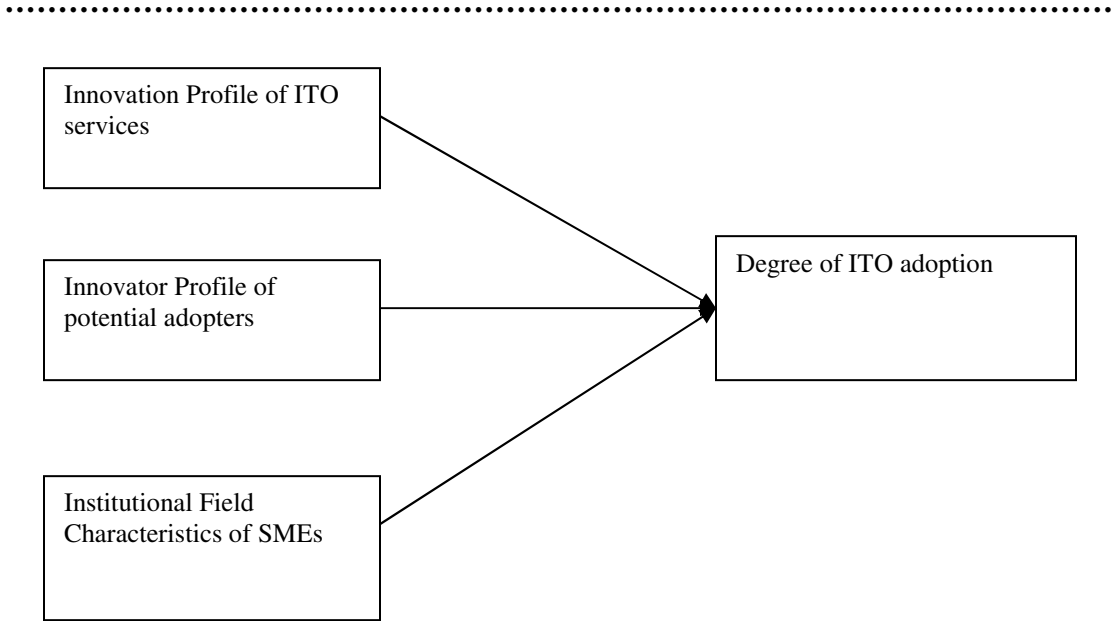


Figure 1: The Basic Model

.....

2. Literature Survey and Contribution

Dibbern et al. (2004) categorized 200 papers according to the decision process model of Simon (1957), into decisions related to why to outsource, what to outsource, which decision process to take, how to implement, and what is the outcome. In the category of why, they focus on factors that affect clients’ decision to choose outsourcing. Institutional theory has been used by Ang and Cummings (1997) to explain how banks have undergone organizational change through the process of ITO adoption. Several papers have used innovation diffusion theories (Loh & Venkatraman, 1992b; Hu, Saunders, & Gebelt, 1997) using empirical data on adoption to fit an econometric model describing the dynamics of diffusion.

In terms of determinants within firms, Ang and Cummings (1997) find evidence that financial slack and capacity play a role. Loh and Venkatraman (1992a) find that cost structure and financial leverage are important, while Smith et al. (1998) find that core competency, strategy types, and focus on cost reduction

are factors that induce firms to opt for outsourcing. Loh (1994) and Loh and Venkatraman (1995) observe that perceived fiscal impetus and business benefits of outsourcing play a major role.

Gonzalez et al. (2006) provide the most recent literature survey on IS outsourcing. Their sample of papers totaled 131. About a third of the papers were theoretical in nature—that is, they did not contain any empirical data or case studies. The vendor's perspective has not been much researched (Levina & Ross, 2003). Only a few papers have been from the perspective of providers seeking to supply guidance and information to the vendor community, and they suffer from narrow focus (Gonzalez, 2006). Papers from vendors' perspective have concentrated only on application service providers and on the historic evolution of services from hardware servicing to general consultancy. Some of the relevant papers from vendors' perspective include Levina and Ross's (2003) paper on how vendors provide cost advantages to large customers and Brown and Lockett's (2004) study on the role of IS providers in assisting small and medium enterprises investing in e-business applications.

It does not seem that there is any research providing actionable guidance to outsourcing vendors attempting to introduce ITO services in the SME community, which is the focus of this paper. To the best of our knowledge, this is the first paper that uses the twin lenses of innovation diffusion theory and institutional theory to develop a model of ITO adoption. Extant research conclusions in academic literature are used to help derive policy guidance for third world ITO vendors operating in the SME community.

3. Innovation Profile of ITO Services

As early as the 1960s (Rogers, 1965), it was suggested that several primary product-related attributes govern the rate of diffusion. These attributes are as follows:

1. Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes (Rogers, 2003). By its promise of cost reduction, ITO offers a relative advantage over the current alternatives.
2. Complexity is the degree to which an innovation is perceived as difficult to use and understand (Rogers, 2003). A common tool to cope with complexity is education on how the innovation works and how it can be used, and it is advisable that vendors educate potential adopters.
3. Trialability is the degree to which an innovation may be experimented with on a limited basis (Rogers, 2003). New ideas that can be tried on an experimental basis are likely to be adopted more quickly than ideas that cannot be experimented with. To the extent that vendors can enhance the trialability of their services, they will improve the rate of ITO adoption.
4. Observability is the degree to which the results of an innovation are visible to others (Rogers, 2003). The easier it is for adopters to observe the new idea and its consequences, the more likely they are to adopt it. Vendors should promote success stories and encourage discussion among successful and potential adopters.

Therefore it can be asserted:

Proposition 3a: The more vendors can enhance the perceived relative advantage, trialability, and observability of the benefits of ITO and lower the complexity of the services they offer, the greater will be the diffusion of ITO-related services.

SME Characteristic

The most obvious characteristic of SMEs is their small size, which has important consequences. They have small asset bases; often, a significant portion of the capital is sourced from the owners. SMEs are therefore more risk-averse (Leyden & Link, 2004) than large firms where decisions are made by managers who have no direct stake in the financial success of the firm (Wiklund, Gerard, & Zahara, 2005). The capacity of SMEs to take economic risks and invest for the very long term is limited (Hunter et al., 2002). Compared to large firms, SMEs are almost always behind the curve in adopting new business and manufacturing technologies (Afuah, 2003). Thus, we state:

Proposition 3b: Compared to large firms, SMEs are more risk-averse in adopting innovations such as IT outsourcing.

Proposition 3c: Compared to large firms, SMEs require outsourcing proposals to be less complex, provide more relative advantage, and be more trialable and observable before they adopt ITO⁶.

4. Potential Innovator Profile of ITO Clients

A key concept in institutional theory here is that of isomorphism—resemblance among institutions in terms of structures (DiMaggio & Powell, 1983). 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 the birth, evolution, and diffusion of new institutional norms in the business sector have tried to mitigate this (e.g., Greenwood, Suddaby, & Hinnings, 2002, in business services; Reay & Hinnings, 2004, 2005, in health care; Ashworth et al., 2005, in public organizations).

Within the field, institutions fit institutional norms to varying degrees. Much as Rogers (2003, p. 23) proposed categorizing adopters with respect to their propensity for innovation adoption, Kondra and Hinnings (1998) provide a typology of institutions based on their degree of fit with institutionally defined

⁶ In order to meet word limit, multiple factors have been included in a single proposition

performance norms. Their typology consists of four types: 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 any given field is likely to be populated by institutional operators.
- Institutions that operate differently but have performance 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 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 because they have not been subject to forces of isomorphism for long. Renegades could also be existing firms that have deviated from norms knowingly (active agency) or unknowingly (passive agency). Over time, according to Fligstein (1991), renegades become a new source of legitimacy and new norms. “Legitimacy is contagious” (Zucker, 1988, p. 38) and there is a spread of legitimation, more so when the organizational field is tightly integrated. Hinnings and Greenwood (1988) suggest that these firms over time establish themselves as “leading organizations” in the field.

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

.....

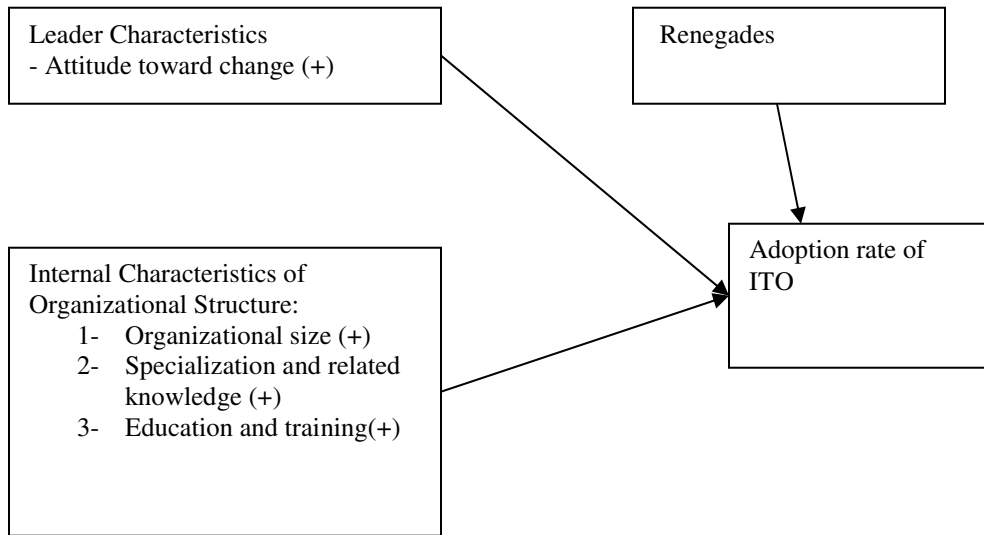


Figure 2: Innovator Variables Related to Adoption Rate of ITO

A. Renegades: By definition, firms that are star performers are likely to be “renegades,” as their performance level is above field-level norms. Sherer et al. (2002) show how prestigious law firms have led innovation in HR practices in the field of legal services. Organizations with prestige have the legitimacy to act as initial adopters (Rogers, 2003). Moreover, market feedback about successful firms and their mode of operations shapes managers’ cognitive premises directly through exposure and indirectly through other intermediaries such as consultant firms and authors, thus providing the necessary mimetic and normative forces for conformity to star performers (Lee & Pennings, 2002).

Proposition 4a: Renegade firms are more likely to adopt outsourcing than non-renegade firms, and in turn act as exemplars for others in the institutional field consisting of the SME community.

B. Leader’s characteristic: Attitude toward change: IS research literature is replete with evidence that top management’s support is crucial for technology adoption (Chatterjee, Grewal, & Sambamurthy, 2002; Jarvenpaa & Ives, 1991). Chatterjee, Grewal, and Sambamurthy (2002) and Lane (1985) have established the role of senior managers and their attitude toward technology adoption as a critical variable in determining organizational innovativeness.

Proposition 4b: The more positive the attitude of top management towards outsourcing, the greater the potential adoption rate of ITO-related services.

C. Organizational characteristics: organizational size, specialization, related knowledge, and education: According to Rogers (2003), size is one of the most critical determinants of the innovator profile. Mytinger

(1968) provides evidence that organization size is one of the most important variables explaining innovativeness. Mahler and Rogers (1999) found that organizational size, revenue, and number of people employed are positively correlated with telecommunications technology adoption. Sherer and Lee (2002) show that large law firms are more likely to adopt innovative HR practices.

Kimberly and Evanisko (1981) ascribe the innovativeness of organizations to specialization in related activities. Rogers (2003, p. 411) credits organizational innovativeness to a “range of occupational specialties,” a “high level of knowledge and expertise,” and a “degree of professionalism as expressed by formal training.” Cohen and Levinthal (1990) ascribe adoption of new technologies to existence of related knowledge. Pierce and Delbecq (1977) and Fichman (2001) relate education to professionalism and thereby to the ability to innovate. Thus we can state:

Proposition 4c: The greater the organizational size, degree of specialization, degree of employee education and knowledge, and training level in an SME firm, the greater the potential adoption rate of ITO services by that firm.

5. Institutional Field Characteristics

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. The Carnegie Corporation made grants to colleges and universities to facilitate art scholarship and the application of scientific techniques to art analysis. The American Association of Museums was encouraged to investigate the efficacy of different exhibition methods and develop training schemes that produced a cadre of experts in museum administration. The corporation helped the professional association get established, and it also supported the association’s publication and research activities. Lastly, Carnegie Corporation’s efforts with universities such as Harvard helped develop a professional body of Harvard graduates who constituted a vast and powerful network that dominated the art museum field for decades and helped get the profession established.

More recently, IBM has been promoting the concept of service and process management; it helped North Carolina State University develop the first MBA program in the field⁷. One of the major subfields 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 similarly helped

⁷ http://www.mgt.ncsu.edu/news/2006/mba_ssme.php, dated 01/31/2007

consolidate the subject of computer science in the 1960s, helped develop its many professional associations, and encouraged universities to provide degrees in the subject and thus populate the professional world of computer science. This professionalization helped legitimate the subject and its subsequent widespread use in science, business, and engineering (previous web site).

Proposition 5a: Creation of a body of knowledge, organization of professional associations, and consolidation of a professional elite in the field of outsourcing will help in the legitimation of the subject and its correspondent institutional forms, which in turn will promote its diffusion.

Motivated by Giddens (1979), DiMaggio (1991) suggested that the 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. The information flow in the institutional field consisting of SMEs is a result of their small size limiting them to interacting with firms in a particular geographical area. Their suppliers, customers, and employees tend to belong to a few different communities located in the same region (Burgess, 2002).

SMEs are often organized in geographical clusters, such as in the bio-sciences industry, in software, and in textiles and metalworking (Khan & Ghani, 2004; Chiarvesio, di Maria, & Micelli, 2004). Granovetter (1973) differentiated between strong and weak ties. Strong ties emphasize a network of family, community, and kinship ties, whereas weak ties refer to more dispersed relationships. An overreliance on strong ties on the part of SMEs (Mackinnon, Chapman, & Cumbers, 2004) leads to the problem of “lock-in” through progressive closure of the network, preventing access to other information and cultural sources (Grabher, 1993).

SMEs, as a result of weak management systems, tend toward developing relational exchanges and depend on resilient trust in their inter-firm relationships. The fact that SME clusters are embedded in their society and the consequent social ties play an important role in their business dealings (Chiarvesio, di Maria, & Micelli, 2004; Mackinnon, Chapman, & Cumbers, 2004). Monetary and pecuniary incentives play a proportionately weaker role in the SME environment (Agell, 2004). In contrast, among large firms, trust is fragile, and where transaction risks are managed through administrative control and the legal system (Bennett & Robson, 2004; Ring, 1977; Macneil, 1980). According to Sahay, Nicholson, and Krishna (2003, p. 250), SMEs are more prone to depend on identity- and knowledge-based trust at the beginning of an inter-firm relationship. Hence we can state:

Proposition 5b: SMEs' exposure to diverse cultures is limited in comparison to that of managers working for large multinational firms, and they are more prone to identity-based trust at the beginning of an inter-firm relationship. Therefore, SMEs will be less open to initial sales efforts by vendors from different cultures.

Once the idea of ITO takes hold in part of the SME community, the system of deep contacts and information flow will start to assist in the propagation of the idea. Due to dense contacts among themselves and burgeoning relationships with vendors who are becoming part of the small circle of trust-based relationships, we can claim:

Proposition 5c: Once ITO is successfully introduced to SMEs, it is likely to diffuse at a rapid rate as a result of higher social contact density and higher information flow rate in this community characterized by Granovetter's strong ties.

6. Conclusion

The study conceptualized factors contributing to the adoption of IT services outsourcing (ITO) by small and medium enterprises (SMEs) in western countries. The focus was on the process of diffusion and adoption of ITO as a management innovation. The model was applied to the case of SMEs in the US and other first world countries.

This is one of the first papers that looks at the issue from the vendors' perspective and uses the twin theoretical lenses of innovation diffusion and institutional theory. Through a literature survey, the business and sociocultural characteristics of SMEs were determined in terms of administrative formalization, risk-taking propensity, cultural diversity, and education levels. Given such characteristics of the SME sector, the model recommends that the vendor community do the following:

- (a) Seek an industry where competitive pressures are high and the sector has the advantage of dense social interconnection among members; help outsourcing earn legitimacy as a profession in the SME community through promotion of courses, seminars, and training related to ITO (*field-level characteristics*)
- (b) Within this favorable sector, seek individual firms that are successful, large, and prestigious, as they are likely to be early adopters and they in turn can act as role models to the rest of the community (*innovator profile*)
- (c) Promote the trialability and observability of their outsourcing solutions and provide clients with adequate training and learning opportunities to mitigate risks (*innovation profile*)

REFERENCES

- Afuah, A. (2003). *Innovation management: Strategies, implementation, and profits*. Oxford, England: Oxford University Press.
- Agell, J. (2004). Why are small firms different? Managers' views. *Scandinavian Journal of Economics*, 106(3), 437-453.
- Ang, S., & Cimmings, L. L. (1997). Strategic response to institutional influence on information systems outsourcing. *Organization Science*, 8(3), 253-256.
- Ashworth, R., Boyne, G., & Delbridge, R. (2005). *Institutional pressures on public organizations: An empirical test of isomorphism*. Paper presented at Public Management Research Association Conference, Los Angeles, CA.
- Bennett, R., & Robson, P. J. A. (2004). The role of trust and contract in the supply of business advice. *Cambridge Journal of Economics*, 28(4), 471-489.
- Brown, D. H., & Lockett, N. (2004). Potential of critical e-applications for engaging SMEs in e-business: A provider perspective. *European Journal of Information Systems*, 13, 21-34.
- Burgess, S. (2002). Information technology in small business: Issues and challenges. In S. Burgess (Ed.), *Managing information technology in small business: Challenges and solutions* (pp. 1-17). Hershey, PA: Idea Group Publishing.
- Chatterjee, D., Grewal, R., & Sambamurthy, V. (2002). Shaping up for e-commerce: Institution enablers of the organizational assimilation of web technologies. *MIS Quarterly*, 26(2), 65-89.
- Chiarvesio, M., di Maria, E., & Micelli, S. (2004). From local networks of SMEs to virtual districts: Evidence from recent trends in Italy. *Research Policy* 33(4), 1509-1529.
- Chiasson, M. W., & Davison, E. (2005). Taking industry seriously in information systems research. *MIS Quarterly*, 29(4), 591-605.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Coleman, L. (1939). *The museums in America: A critical study*. Washington, DC: American Association of Museums.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 555-590.
- Dibbern, J., Goles, T., Hirscheim, R., & Jayatilaka, B. (2004). Information systems outsourcing: A survey and analysis of literature. *Database for Advances in Information Systems*, 35(4), 6-102.
- DiMaggio, P. J. (1991). Constructing an organizational field as a professional project: U.S. art museums, 1920-40. In W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 267-292). Chicago, IL: University of Chicago Press.
- DiMaggio, P. J. & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147-160.

- Fichman, R. (2001). The role of aggregation in the measurement of IT-related organizational innovations. *MIS Quarterly*, 25(4), 401-429.
- Fligstein, N. (1991). The structural transformation of American industry: an institutional account of the cause of diversification of large firms, 1919-1979. In W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 311-336). Chicago, IL: University of Chicago Press.
- Giddens, A. (1979). *Central problems in social theory: Actions, structure, and contradictions in social analysis*. Berkeley, CA: University of California Press.
- Gonzalez, R., Gasco, J., & Llopis, J. (2006). Information systems outsourcing: A literature analysis. *Information and Management*, 43, 821-834.
- Grabher, G. (1993). The weakness of strong ties: The lock-in of regional development in the Ruhr area. In G. Grabher (Ed.), *The embedded firm: On the socio-economics of the industrial network* (pp. 255-277). London: Routledge.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-1380.
- Greenwood, R., Suddaby, R., & Hinings, C. R. (2002). Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Review*, 45(1), 55-80.
- Hu, Q., Saunders, C., & Gebelt, M. (1997). Research report: Diffusion of information systems: a re-evaluation of influence sources. *Information Systems Research*, 8(3), 288-301.
- Hunter, M. G., Diochon, M., Pugsley, D., & Wright, B. (2002). Unique challenges for small business adoption of information technology: The case of the Nova Scotia Ten. In S. Burgess (Ed.), *Managing information technology in small business: Challenges and solutions* (pp. 98-117). Hershey, PA: Idea Group Publishing.
- Jarvenpaa, S. L., & Ives, B. (1991, June). Executive involvement and participation in the management of information technology. *MIS Quarterly*, 15(2), 205-227.
- Khan, J., & Ghani, J. (2004, December). Clusters and entrepreneurship: Implications for innovation in a developing economy. *Journal of Developmental Entrepreneurship*, 9(3), 221-239.
- Kondra, A. Z., & Hinings, C. R. (1998, Winter). Organizational diversity and change in institutional theory. *Organization Studies*, 19(5), 743-767.
- Kimberley, J. R., & Evanisko, M. J. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technical and administrative innovations. *Academy of Management Journal*, 24(4), 689-713.
- Lane, R. L. (1985, March-April). The key to managing information technology. *The Bankers Magazine*, 168, 20-27.
- Larson, M. S. (1977). *The rise of professionalism: A sociological analysis*. Berkeley, CA: University of California Press.
- Lawrence, T. B., & Hardy, H. (2002). Institutional effects of inter-organizational collaboration: The emergence of proto-institutions. *Academy of Management Journal*, 45(1), 281-290.

- Lee, K., & Pennings, J. M. (2002, February). Mimicry and market: Adoption of a new organizational form. *Academy of Management Journal*, 45(1), 144-162.
- Levina, N., & Ross, J. W. (2003). From the vendor's perspective: Exploring the value proposition in information technology outsourcing. *MIS Quarterly*, 27(3), 331-364.
- Leyden, D. P., & Link, A. (2004, October). Transmission of risk-averse behavior in small firms. *Small Business Economics*, 23(3), 255-260.
- Loh, L. (1994). An organization-economic blueprint for information technology outsourcing: Concepts and evidence. *Proceedings of the 15th International Conference on Information Systems, Vancouver, Canada*, 73-89.
- Loh, L., & Venkatraman, N. (1992a). Determinants of information technology outsourcing: A cross-sectional analysis. *Journal of Management Information Systems*, 9(1), 7-24.
- Loh, L., & Venkatraman, N. (1992b). Diffusion of information technology outsourcing: Influence sources and the Kodak effect. *Information Systems Research*, 3(4), 334-358.
- Loh, L., & Venkatraman, N. (1995). An empirical study of information technology outsourcing: Benefit, risks, and performance implications. *Proceedings of the 16th International Conference on Information Systems, Amsterdam, The Netherlands*, 277-288.
- Mackinnon, D., Chapman, K., and Cumbers, A. (2004, March). Networking, trust and embeddedness amongst SMEs in the Aberdeen Oil Complex. *Entrepreneurship & Regional Development*, 16, 87-106.
- Macneil, I. R. (1980). *The new social contract*. New Haven, CT: Yale University Press.
- Mahler, A., & Rogers, E. M. (1999). The diffusion of interactive communication innovations and the critical mass: The adoption of telecommunication services by German banks. *Telecommunications Policy*, 23, 719-740.
- Mytinger, R. E. (1968). *Innovations in local health services: A study of adoption of new programs by local health departments with particular references to new health practices*. Washington, DC: Division of Medical Care Administration, Public Health Services, U.S. Department of Health, Education, and Welfare.
- Phillips, N., Lawrence, T. B., & Hardy, C. (2000). Inter-organizational collaboration and the dynamics of institutional fields. *Journal of Management Studies*, 37, 23-43.
- Pierce, J. L., & Delbecq, A. L. (1977). Organizational structure, individual attitudes, and innovation. *Academy of Management Review*, 2, 23-37.
- Powell, W. (1991). Expanding the scope of institutional analysis. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 183-203). Chicago, IL: University of Chicago Press.
- Reay, T., & Hinnings, C. R. (2005). The re-composition of an organizational field: Healthcare in Alberta. *Organization Studies*, 26(3), 351-384.
- Ring, P. S. (1997). Processes facilitating reliance on trust in inter-organizational networks. In M. Ebers (Ed.), *The formation of inter-organizational networks* (pp. 113-145). Oxford, England: Oxford University Press.
- Rogers, E. M. (2003). *Diffusion of innovation*. New York: Free Press.

- Sahay, S., Nicholson, B., & Krishna, S. (2003). *Global IT outsourcing: Software development across borders*. Cambridge, England: Cambridge University Press.
- Scott, R. W. (2001). *Institutions and organizations*. Thousand Oaks, CA: Sage.
- Sherer, P. D., & Lee, K. (2002). Institutional change in law firms: A resource dependency and institutional perspective. *Academy of Management Journal*, 45(1), 102-119.
- Simon, H. A. (1957). *The new science of management decisions*. New York: Harper.
- Slack, T., & Hinnings, B. (1995). Institutional pressures and isomorphic change: An empirical test. *Organization Studies*, 17(5), 803-827.
- Wiklund, J., Gerard, G., & Zahara, S. A. (2005, April). Ownership and the internationalization of small firms. *Journal of Management*, 31(2), 210-236.
- Yourdon, E. (2004). *Outsource: Competing in the global productivity race*. Upper Saddle River, NJ: Prentice Hall.
- Zucker, L. G. (1988). Where do institutional patterns come from? Organizations as actors in social systems. In L.G. Zucker (Ed.), *Institutional patterns and organizations: Culture and environment* (pp. 23-49). Cambridge, MA: Ballinger.