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The need for Knowledge Management for Service Innovation: A Qualitative study of Sri Lankan Business Service Organizations.

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Abstract

The world is fast moving from a production-based economy toward a knowledge-based one. As a result organizations are becoming more knowledge-intensive and are increasingly dependent on innovative knowledge to create value. Therefore, the question of how activities should be organized in order to generate and exploit new forms of knowledge is a very important one. Thus, the main objective of this research is to explore practice based innovation in service sector organizations. Building on qualitative data from knowledge intensive business sector , analysis identified three work activities through which knowledge for innovation is generated, shows how they constitute a common ground for knowledge creation and redefines practice as a coherent frame for these activities. Further it explains how conventional organizing destroys this knowledge. In addition to the main contributions, this research identified key influencing factors for innovation in Sri Lankan service sector organizations. The study therefore provides both an empirical contribution to the emerging work on service innovation on the condition of knowledge intensiveness, and by extending a theory grounding on the existence and role of practice based knowledge.

Keywords service innovation, knowledge intensiveness, Knowledge management, practices

Introduction

Today the service offers tremendous potential for growth and profitability in the global economy. Service industries have expanded rapidly in recent decades and comprise more than 70% of great majority of the gross domestic product (GDP) in all developed nations (OECD, 2012; Pauson, 2010). In fact, in advanced economies service accounts for about two third of employment (OECD 2012). Relating to the Sri Lankan context, in terms of value added, manufacturing has remained roughly constant at 30.4 percent of GDP, while the value addition of agriculture has declined to 11 percent as the service sector has a share of 58.5 of GDP (Central Bank Report, 2012). Even economies with a strong focus on manufacturing are shifting to service dominated societies (Bruhn, 2009). Now service has become the source of sustainable and strategic competitive advantage rather than competition on the basis of physical products.

It is believed that organizations must constantly develop new services to be able to compete in changing environments thus achieve performance, which requires innovation. (Teece,2008;Popel,2011). Further, service organizations require service innovation in order to experience sustained growth, raise the quality and productivity levels of services, respond to changing customer needs and expectations, or stand up to superior competitive service offerings (Spohers,et.,al,2008., Das, et,.al 2006 Miles, 2005; Consoli, 2007; Consoli and Elche-Hortelano, 2010,). They face the principle challenge to "offer the marketplace continuously improved, if not new, services." (Bulling,et.al., 2003) Service innovations are value propositions not previously available to the customer and result from changes made to the service concept and the delivery process (Mencr, L.,et.al., 2007). It's essential to be aware of aspects that drive innovation for an

organization in order to build innovation capability.

However, the status of innovation both service and manufacturing sector in Sri Lanka at the moment is generally considered weak even by the standards of a developing country (Witharana D,2011, National Science and Technology Foundation, Sri Lanka). Making a presentation at the recently held 18th annual general meeting of National Chamber of Exporters of Sri Lanka, Dr. Kelegama mentioned that the country's export performance relating to both industrial and service sector since 2000 has not been "satisfactory" due to lack of innovation and limited markets. The poor state of innovation is reflected by all innovation indexes prepared by different world national forums. As opposed to a 10-place jump in the 2011, Sri Lanka has suffered 16-place relegation in the latest Global Competitiveness Rankings list including innovation, released by the influential World Economic Forum (WEF) on 5th September 2012. Sri Lanka's rank of 68th place out of 144 countries surveyed from 52nd place in the previous year was despite the overall score changing marginally to 4.2 points from 4.3. WEF assess a country's competitiveness using 12 broad pillars – institutions, infrastructure, macro-economic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication and innovation. Sri Lanka suffered dip in seven of the 12 pillars including innovation.On innovation index , Sri Lanka's rank was 58, down from 42 in 2011.

Adding more evidence to the poor state of innovation, the Global Innovation Index, in 2013, Sri Lanka ranks 98th , down from 94th place in 2012. Its drop in the ranking is the result of relatively poor performance of innovation input side where it comes in at 118th in 2012 .One of the key finding of this year report (GII 2013) was , all the top ranking countries in the GII, have invested comparatively higher amount of resources to develop service sector innovation capabilities. Countries such as Singapore (3rd), Finland (4th) and Netherland (6th), that have proactively built innovative capability for the service sector, have prospered.

In contrast, limited focus on innovative capability constrained the progress of countries such as Sri Lanka and Greece (Innovative input index, Sri Lanka, 118). The poor state of innovation is reflected by the very fact that it took sixty years since independence in 1948 for a national policy on innovation to be adopted finally in May 2009. The history of attempting to design and adopt a national innovation policy dates back to the 1960s and the final outcome was related only to science and technology. Despite the growing importance of services, they have to date been virtually absent from discussions of this national innovation policy. Innovation in services has been poorly understood and its impact has been neglected. Service innovation was merely seen as subset of technology innovation or similar to innovation in manufacturing. Role of innovation in the service sector has been underappreciated.

For the above-mentioned reasons, now, policy makers and business leaders alike have the tendency to promote growth in the service sector in Sri Lanka. However, insufficient understanding of service management, especially in service innovation that is believed to be the new engine of economic growth in the Information and Communication Technology (ICT) era of managers may hinder the enormous benefits that can be gain from service sector. It will hamper the growth of the Sri Lankan economy.

Managers of service sector organizations face two special challenges when it comes to surfacing the ambiguous knowledge of designing and using for innovation. Both arises from the intangible, relational and continues nature of these services. Findings of this exploratory research will help managers to develop strategies to organize the activities of the organization in a way that practice itself creates innovation or new services for the organizations.

Thus, this study explores how work in service organizations can be organized to capture and exploit the knowledge that is necessary to create new services. Further it examines the factors influencing innovation in service sector organizations in Sri Lanka.

Theoritical Foundation

Service Innovation

Service innovation is an activity that incorporates ideas and knowledge into new or existing services to satisfy customers' demand (De Jong and Vermeulen, 2003). As defined by Eurostat (1995), innovation in the services sector comprises new services as well as significant changes in services or their production or delivery. It concerns both the introduction of new services (proposed to firms or to individuals) and the reconfiguration or improvement of existing services (Miles, 1994). Service innovation is different from product innovation because of the service characteristics— intangibility, heterogeneity, perishability, and inseparability (IHIP) (Zeithaml, Parasuraman and Berry, 1995).

This unique nature of service means, service innovation may be very different from product innovation. For instance, the interaction with the customer in the service development process makes the development of new service far more complex than the development of a new tangible product (Johne and Storey, 1998). Due to the intangibility nature, the development of new services usually takes significantly less time (Griffin, 1997) and requires fewer investments in physical assets. But they are less protected from direct imitation by competitors (Terrill and Middlebrooks, 1996).

They are usually interactive (client intensive) whereby high levels of contact occur between service supplier and client in the service activity (Miles, 2005). Innovation occurs as result of such interactivity, in which it often means that services' products are customized to the client's specific needs (Clayton, 2003).

Factors affecting service innovation

Researchers studying the determinants or influencing factors on innovation (Damanpour, 2001; Wolfe, 2004; Tidd et al., 2007.) suggested that the individual factor, organizational factor, and contextual factor would influence innovation. Kwon and Zmud (2007) classified variables affecting technology adoption into individual, task-related, innovation-related, organizational, and environmental characteristics. Tornatzky and Fleischer (2006) suggested that the adoption and implementation of technological and administrative innovation would be affected by the technological context, organizational context, and the external environmental context. Scupola (2007) used technological, organizational, and environmental characteristics to explain the innovations in service sector

Capturing Practice based Knowledge for Innovations in Business Services

Knowledge of designing and using is ambiguous, however, since technologists often cannot say how different designs might work without trying them out, while customers often cannot say what they need without trying the product either(Dougherty,2004). Knowledge-intensive service organizations face two special challenges when it comes to surfacing this ambiguous knowledge of designing and using for innovation. Both arise from the intangible, relational and continuous nature of these services (Yakura, 2001).

 The first is determining what should be organized in the first place to generate the knowledge. Designing new services is deeply and continuously intermeshed with using them, so one cannot simply organize separate venture teams, and one cannot put aside the intermeshing once the product is manufactured to 'spec'. Knowledge for new services literally exists in 'daily operations' (Itami, 2007), or in the practice, which implies that services must organize everything to capture necessary knowledge. To overcome this challenge, it is necessary to identify the kinds of activities that are most crucial to the production and capture of designing and using knowledge.

The second special challenge for service innovation is strategic. While all innovations should be framed strategically, innovation in services is more deeply intermeshed with strategy. Competitive and market pressures are forcing many service firms to provide a 'complete solution' or a more complex, end-to-end package of activities (Meyer and DeTore, 2001). Service innovation concerns introducing order from a strategic perspective, since allowing every client encounter to be unique produces only variation, not innovation. Services must be deployed systematically

across clients to assure quality, keep costs down and absorb new knowledge from particular applications so that offerings can be continuously enhanced in the face of strong competition (Lowendahl, 2000)

To generate and exploit knowledge for innovation, service firms must organize their work to capture the horizontal flow of designing and using, as well as the vertical flow of strategic focus and unique deployment.

Practices

Practice is not simply about tacit knowledge, expertise or experience, but rather it is about the artful, skilled combination of these along with knowledge in routines, procedures and equipment in the situation (Dougherty,2004). For example, experience affects people's ability to comprehend insights generated in practice. It would be useful to explore the kinds of experience that may enable or disable practice-based knowledge in the business world of services. (Carlile, 2005).

Focusing on the actual activities of work

One important contribution to knowledge management from the practice perspective is the identification of a kind of knowledge that is embedded in situated activity. Practice refers to how people actually get work done (Brown and Duguid, 2001). Practice includes the means and the ends of work, the practical wisdom people rely on, and the 'rich, socially embedded clinical know-how that encompasses perceptual skills, transitional understandings across time, and understanding of the particular in relation to the general' (Brown and Duguid, 2007). Practice based knowledge is produced continuously in situated action, as people draw on their physical presence in a social setting, on their cultural background and experience, and on sentient and sensory information (Orlikowski, 2007). Practice-based knowledge does not exist independently of social action, and its content does not necessarily mean the same thing to all involved(Dougherty, 2004).

To manage practice-based knowledge, therefore, it is necessary to focus on the actual activities of work, to enable the situated activities through which people accomplish tasks, to foster skills of knowing and to

legitimate engaged participation in the practice (Barley, 2006). Situated activities would include forming relationships with clients to elicit insights that might not otherwise be revealed, interacting with colleagues over the situation, considering subtle differences in the appearance of material (Barley, 2006) or in equipment displays (e.g. readings in an intensive care unit: Benner, 2003), and improvising to surface problems . The skills for knowing comprise the 'artful competence' of applying principles of the profession to unique situations, and making do with resources available (Orlikowski, 2002). According to Brown and Duguid (2007), practice highlights know-how defined as the ability to put know-what into practice. These skills include tapping into knowledge held by a community. Practice-based knowledge is collective, since no person can know all the heuristics or principles involved, or possess all necessary experience (Cook and Brown, 2007). Competent practitioners need to know how to interact, negotiate access and participate in the community.

Research Questions

The above mentioned purpose and the arguments lead to following research questions.

i   What are specific work activities that are crucial to the generation of practice-based knowledge for innovation?

ii   Why conventional organizing operates as an anti-practice strategy that eliminates the common ground and de-legitimates the continued articulation of practice?

iii What are the pro-practice organizing principles that enables the systematic generation of practice-based knowledge for innovation?

iv   What are the factors (both internal and external) affecting innovation in services in the Sri Lankan context ?

Objectives of the study

This study will have following objectives under the broad area of knowledge management and innovation in services.

1. To identify specific work activities that is crucial to the generation of practice-based knowledge for innovation.

2. Re-define practice as a frame that meaningfully bounds these activities, so people can continually enact the practice and make sense of the knowledge.

3. To explain why conventional organizing operates as an anti-practice strategy that eliminates the common ground and de-legitimates the continued articulation of practice.

4. To identify pro-practice organizing principles that enables the systematic generation of practice-based knowledge for innovation.

5. To identify both internal and external factors affecting innovations in service organizations in organizations.

Research Design

Methodology

Ethnographic interviews (Fielding and Fielding, 1986; Fontana and Frey,1998) were carried out with 24 people in six service firms about how they develop new services. Questions were considered, rephrased and analyzed with interviewees so that they can discuss how they experience their work, and what kinds of things are meaningful to them. The people, who were involved in new service development, had diverse functional expertise and worked senior levels of management. The interviews lasted from between half an hour and one hour, and were done at the interviewee's work site. People were asked to describe what they knew about usage and design as they innovated, how they developed new services with specific examples and how they incorporated knowledge into their work. Managers were asked how they supported innovation, allocated resources and developed strategies. These interview data reveal the kinds of interactions people were engaged in, the nature of their participation in work situations and activities, what they knew about designing and using new services, how they worked across boundaries to create and share knowledge, and how their organization of work affected their ability to generate and use practice-based knowledge.

Sampling

The domain of service sector is large, so the researcher deliberately limited sampling to knowledge-intensive services with three attributes in common: established for 10 or more years, experiencing market and technological transformations and trying to innovate. Firms that were trying to innovate were selected because this is a study of innovation, and is not intended to fit knowledge capture in services that do not innovate. Within these boundaries, two types of knowledge-intensive services were sampled: professional services (management consulting, IT, training) and utility- like services (transportation, communication). Although these two types have different backgrounds, the firms in each type were having similar competitive and marketplace transformations, and trying to change their services to embody the knowledge of designing and using more fully. All were building more ongoing relationships with customers and more flexible internal capabilities.

Data Analysis

Specific analytical steps described by Strauss (1987), as elaborated by Dougherty (2002): 'open coding' (to surface many possible categories), 'axial coding' (to hone categories

and articulate properties) and 'selective coding' (to articulate a core category that integrates others into a theory) were followed. Relating to the practice based knowledge preliminary categories included knowledge about customers, kinds of relationships with customers, kinds of work boundaries and how they were crossed or not, and connections between designing and using. Further relating to influencing factors, preliminary categories included kind of linkages (both internal as well as external), nature of human capita (expertise, skills, and experience), nature of service systems and processes, technological exploration, nature of home market and mentality of workers and customers. Many people said that innovation required different mindsets, and a more holistic view of the minutiae of everyday work.

Findings of the research

The analysis produced three major insights. The first insight is that people generate practice-based knowledge for innovation if they collectively enact three kinds of activities in their everyday work: interweaving designing, participating in the whole flow of designing and using and reflecting in action. These activities constitute a common ground of social action, so people can engage in situated learning and make sense of what they learn in similar ways across the organization. As well, a shared understanding of what the practice is in the first place is needed to keep these activities doable and meaningful. Part of the first insight is that practice in services is defined as a coherent flow of problem setting and problem solving. This definition provides a vivid, sensible framework that keeps the activities salient and doable.

The second insight is that conventional approaches to organizing are 'anti practice' in two ways. First, they push the activities into the background, which eliminates the common ground for knowledge creating, sharing and replicating that the three activities provide. Second, conventional organizing de-legitimates practice by focusing attention on generic outcomes that do not frame everyday activities coherently and sensibly. People cannot articulate new ideas and combine them

with old ones, so the organization cannot learn.

Organizing in some of the firms centered on the achievement of pre-specified outcomes rather than on the activities through which people actually accomplished tasks. This organizing dissipated practice-based knowledge, because it did not support or incorporate the three activities necessary to create this knowledge. The activities were separated into discrete units (either functions or local offices), so people enacted their own work without regard for how these connected with others' activities. The firm's strategic management was also part of the anti-practice organizing, because neither the strategy nor the senior managers provided meaning for what the firms actually did for whom and why. The outcome was that the practice itself, had no collective meaning.

The third insight is that reorganizing requires new organizing principles to continually strategically articulate the problem that the practice addresses as it evolves over time, to embed the three activities of practice into everyone's work, and to transform R&D into a formal process for creating and reflecting on practice-based knowledge. The first is a strategy that articulates the real problems of value creation for customers that are set and solved in specific situations. Defining each practice as a kind of problem that employees set and solve articulates what people should do and how they should make sense of their actions. They can thus approach specific projects more systematically because they think about the overall process that produces the problem, not just the unique aspects of particular situations. The strategic articulation of practice standardizes people's understanding of what we do, how and why, providing common, sensible frames for the practice (Fiol, 1994)The second principle is to formally include the three activities of practice in everyone's job. This organizing keeps everyone in the know because they can enact similar knowledge in their everyday work, which provides a common ground for knowledge creation and sharing across boundaries. The third new principle is to formally organize corporate R&D around the practice, not on basic science or technologies. Together, these organizing principles articulate the practices themselves and the

relationships among the activities in the practices (Obsfeld, 2003).

Further, a range of internal and external factors were found to be related to the innovative performance of knowledge intensive firms that were analyzed in this paper. The importance of internal linkages, caring out internal R&D, technological exploration, internal systems and process stands out. A prevalence of staff with expertise and skills was also found to have strong impact on innovative performance. The analysis support finding from earlier research concerning the importance of above factors as a means of boosting innovation. However in Sri Lanka few service organizations had been able to earmark sufficient internal funds for R & D on an ongoing basis. Among the external factors, institutional support, external linkage (with customers and other institutions), nature of the home market and mentality of customers stands out. The results points towards the importance of both specialized knowledge and practice based knowledge as a pre condition for achievement of service innovation.

Conclusion

Three organizing principles together provide a relational infrastructure through which people generate practice-based knowledge organization- wide, capturing both the horizontal flow of designing and using and the vertical flow of strategic focus and situated application. First, strategic articulation of the firm's practices as actual problems of value creation for customers, to be set and solved in specific situations, provides a vivid, understandable and shareable frame for the practices of the firm, the frame that is missing when legitimate occupational frames do not operate. Second, redesigning work to include the three activities of practice (interweaving problem setting and problem solving, participating fully in that process and reflecting in action on the practice) keeps everyone in the know because they enact similar knowledge as they go about their work. New insights from any situation can make sense to others. Third, organizing corporate R&D to focus on the practice, not only on basic science or technologies, enables people to reflect in action on practices. These principles keep the ongoing integration of problem setting and problem solving

grounded in actual value creation, coherent through linking the various activities of practice, open to engaged participation and reflective. The activities of practice are collectively salient, legitimate and sensible, so the practice-based knowledge generated by them has the same attributes. This study suggests that practice-based knowledge has strategic value for service organizations, because it captures the designing and using knowledge necessary for innovation. However, the anti-practice approaches to organizing were deeply institutionalized, and many managers in this study apparently did not recognize knowledge in practice, and created strategies and organizations that routinely destroyed this resource.

References

Annual Report, Central Bank of Sri Lanka, 2012

Brown, J. S. and Duguid, P. (1991) 'Organizational Learning and Communities of Practice', *Organization Science* 2(1): 40–57.

Brown, J. S. and Duguid, P. (2001) 'Knowledge and Organization: A Social Practice Perspective', *Organization Science* 12(2): 198–213.

Carlile, P. (2002) 'A Pragmatic View of Knowledge and Boundaries: Boundary Objects in New Product Development', *Organization Science* 13(4): 442–55.

Cook, S. D. and Brown J. S. (1999) 'Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing', *Organization Science* 10(4): 381–400.

Das S.R and Canel,C "Designing service processes: a design factor based process model," *International Journal of Services Technology and Management*, vol. 7, no. 1, pp. 85-107, 2006.

De Jong, J., Bruins, A., Dolfsma, W., Meijaard, J. (2003*), "Innovation in services firms explored: what, how and why?",* EIM, Business and Policy Research, Zoetermeer

Dougherty, D. (2002) 'Building Grounded Theory: Some Principles and Practices', in Joel A.C. Baum (ed.) *Companion to Organizations*, pp. 849–67. Oxford: Blackwell.

Dougherty, D.(2004) 'Organizing practices in services' Journal of strategic Organization,vol2(1):pp 35-64.Sage

Dutta S, Global Innovation Index, World, Intellectual Property Organization, 2012

Fielding, N. and Fielding, J. (1986) *Linking Data, Qualitative Research Methods,* Series 4. Beverly Hills, CA: Sage.

Fiol, C. M. (1994) 'Consensus, Diversity, and Learning in Organizations', *Organization Science* 5(3): 403–21.

Fontana, A. and Frey, J. (1998) 'Interviewing; The Art of Science', in N. Denzin and Y. Lincoln, *Collecting and Interpreting Qualitative Materials,* pp. 47–78. Thousand Oaks, CA: Sage Publications.

Itami, H. (1987) *Mobilizing Invisible Assets.* Boston, MA: Harvard Business School Press.

Lowendahl, B. (2000) *Strategic Management of Professional Service Firms,* 2nd edn. Copenhagen: Copenhagen Business School Press.

Meyer, M. and DeTore, A. (2001) 'Creating a Platform-Based Approach for Developing New Services', *Journal of Product Innovation Management* 18(3): 188–204.

Obsfeld, D. (2003) 'Engineering Knowledge: Innovation as Knowledge Creation and Social Movement'. Working paper. San Francisco, CA: University of California.

Orlikowski, W. (2000) 'Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations', *Organization Science* 11(4): 404–28.

Orlikowski, W. (2002) 'Knowing in Practice: Enacting a Collective Capability in Distributed Organizing', *Organization Science* 13(3): 249–73.

Schwab , The Global Competitiveness Report, World Economic Forum, 2012

Spohrer, J., Vargo, S.L., Caswell, N. and Maglio, P.P. (2008), "The service system is the basic abstraction of service science", Proceedings of the 41st Annual Hawaii International Conference on System Science, 7-10 January, Hilton Waikoloa Village Resort, Waikoloa, Big
Island, Hawaii, available at:
www.hicss.hawaii.edu/hicss_41/apahome41.html

Strauss, A. (1987) *Qualitative Analysis for Social Scientists.* New York: Cambridge University Press. Tsoukas, H. and Vladimirou, E. (2001) 'What is Organizational Knowledge?', *Journal of Management Studies* 38: 973–93.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, 43*(2/3), 172-194. Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation: Integrating technological, market and organizational change.* Chichester, UK: Wiley.

Menor, L., Tatikonda, M., Sampson, S. (2002). "New service development: areas for exploitation and exploration". *Journal of Operations Management,* 20, p. 135-157.

Miles, I. (2005), *"Innovation in services",* in Fagerberg, J., Mowery, R., Nelson, R., The Oxford Handbook of Innovation, Oxford: Oxford University Press, 433-458

Miles, I. (2008). *"Patterns of innovation in service industries".* IBM Systems Journal, Vol. 47, N .1, pp. 115-128.