AN INSTITUTIONAL THEORY PERSPECTIVE ON INNOVATION BEHAVIOR OF KNOWLEDGE INTENSIVE SERVICE INDUSTRIES: LESSONS LEARNED FROM TAIWANESE BANK INDUSTRY*

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Abstract

This paper focuses on the innovation management of knowledge intensive service industries in terms of institutional theories. It first examines the current literature of innovation studies and suggests that the under-emphasis of social perspective of innovations needs to be taken into account. An industrial-historical analysis of the role of institution and the patterns of innovation behavior of Taiwanese bank industry since the 19th century examines the interaction and dialogue of institutional context, structure and agent’s forces. Empirical analysis is based on collected cases of 24 banks from Taiwan. The implications of findings for the measurement of innovation and the effects of policy making for knowledge intensive service industries are discussed.

Keywords: Innovation management, Knowledge intensive service industry, Institutional theory, Bank industry

1. Introduction

Innovation can be defined as the creative process through which new products, services or production processes are developed for a business unit (Tushman and Nadler, 1986), and therefore creates competitive advantage. This is especially true in light of managerial trends that advocate focusing on innovation and knowledge in order to gain and retain competitiveness in a complex and turbulent business environment. Meanwhile, the importance of knowledge intensive service industries (KISI) is now well recognized. Knowledge intensive is one of the distinct features of contemporary economic systems (Archibugi and Michie, 1995), and can be defined as the extent to which a firm depends on the knowledge inherent in its activities and out as a source of competitive advantage (Autio et al., 2000). More precisely, the OECD defines KISI as an industry where technologies, manpower and capitals are invested intensively, and also regards knowledge intensive services as one of the knowledge intensive industries, covering transportation and storage, as well as communication, financial insurance, industrial and commercial, social and individual services. These industries have characterized by their intangibility, customer participation in service operations, and a higher demand of knowledge is growing at an explosive rate. Accordingly, the management of innovation of KISI is now of a critical important issue when we move into knowledge-based society (Drucker, 1993).

Obviously, knowledge is essentially a critical resource and innovation process can be deemed as a process of resource mining. However, a number of phenomena show the problematic nature of innovation studies in knowledge intensive service industries. Firstly, the knowledge life cycle is getting shorter and more innovative efforts are needed. But, to identify an innovation activity and define it as an innovation may not be easy and quite subjective. Innovation may call for the complex knowledge that only a broad network of specialists can offer (Quinn, 2000). Alternatively, it may be defined as something new to a firm rather than to the world (Hegarty and Hoffman, 1990). Secondly, to a large extent, the innovation theories developed in the manufacturing industries are embraced by services industries as well. (Gallouj &Weinstein, 1997). However, innovative developments focused on technological innovations in service industries seem to be difficult to explain in terms of traditional innovation theories and typologies.

The distinct industrial features of innovative content, context, and process should be well recognized and taken into account. For example, compared to manufacturers, successful services firms must place greater emphasis on the selection, development, and management of employees who work directly with the customer (Atuahene-Gima, 1996). The management of new service development (NSD) rather than new product development (NPD) has become an important competitive concern in many service industries (Johnson et al., 2000).

The main focus of this paper is not only on how innovation activities are happened, but also on why organizations need to innovate themselves. Traditionally, from the perspective of strategy management, the plausible answers are to create competitive advantage or simply to survive. The paper argues that previous innovation theories have under-emphasized the institutional perspective of innovation behavior and processes. According to the institutional perspective, organizations must accommodate institutional expectations to survive, even though these expectations may have little to do with technical notions of performance accomplishment (GreenWood & Hinings, 1996). Institutional theory shows how organizational behaviors are responses not solely to market pressures, but also to institutional pressures (e.g., pressures from regulatory agencies, such as the state and the professions, and pressures from general social expectation and the actions of leading organizations). For example, the adoption of electronic commerce (EC) is one form of administrative innovation (based on Daft’s (1978) dual core model) in today digital economy. Too often, the business is surfing in prevailing views enthusiastically such as the adoption of EC for new form of business model without asking: “why EC.”

Accordingly, the innovation behavior of knowledge intensive industries has not yet been convincingly demonstrated. Burns and Stalker (1961) identified the importance of organizational context to researchers have studied the many ways in which different organizational features can facilitate innovation. To take contextual issue into account, several important trends redirect attention to a more contextualized approach in the study of organizations (e.g., Zukin & DiMaggio, 1990). The effort here is not to present considerable skepticism to the benefits of innovation activities, but to understand the force of institutional pressures. Institutional pressures operate in concert with other forces, such as competitive or market pressures, to influence ecological dynamics. In fact, a more complete view of organizational action reinforces the notion that organizations are inextricably embedded in a dynamic system of interrelated economic, institutional and ecological processes (Granovetter, 1985; Oliver, 1996; Zukin & DiMaggio, 1990; Dacin, 1997). To address the pluralistic and dynamic nature of innovation process of knowledge intensive service industries, this paper adopts institutional theories to explore the influence of institution on innovation behavior. The analysis draws on empirical data collected from twenty-four Taiwanese banks. Since the traditional government-owned banks have a longer history than new established banks, the major focus of our analysis will be on those traditional banks. The implications of the analysis for the measurement and management of innovation, and an agenda for further research into the innovation of KISI are discussed.

2. Theoretical Background

2.1 Innovation Studies

Research relating to innovation can be categorized into three groups. The first is concerned with innovation process and focuses on the process of diffusion of an innovation in organizations and industries. The second is concerned with innovation variance and focuses on understanding the nature of the relationships between adoption of innovations by organizations, organizations’ external environments, their internal characteristics, and their performance (van de Ven & Rogers, 1988; Subramanian & Nilakanta, 1996). The third is concerned with the form of innovation. For example, a comprehensive forms of innovations for services suggested by Hauknes (1998) including product characteristics (product innovation), production and distribution process capability (process innovation), administration process capability (organizational innovation), innovative business capabilities (structural innovation), and relations management (market innovation) is employed. The “Oslo Manual” adopts various innovative activities: R&D, design, the acquisition of know-how, the acquisition and development of new software, training activities necessary to introduce innovations, the purchase of new equipment and machinery (Evangelista & Sirilli, 1998). Obviously, characteristics of particular innovations clearly affect their adoption in organizations (Rogers, 1983). From another perspective, innovations represent change
associated with unexpected uncertainty; change is usually resisted especially by those most affected by the change (Huber and Glick, 1992). Researchers still cannot identify with certainty the causes and effects of organizational innovations (Damanpour and Gopalakrishnan, 1998).

A central theme of previous studies is the perturbation caused by “newness.” In organizational inquiry, the newness is often the product and process of innovations (e.g., Quinn et al., 1986), and innovative behavior is a strategic activity by which organizations gain or lose competitive advantage (von Hippel, 1988; Jelinek and Schoonhove, 1990). Evangelista and Sirilli (1998) show (1) the sources of information for innovation including internal (e.g., production/delivery, marketing, R&D) and external (e.g., suppliers, conference, consultancy firms, competitor, customers), (2) the objective of the innovations (e.g., improving service quality, improving work conditions, lower production costs, align the firm’s technology to other firms’, increase market share, extend the service range, improve production flexibility, modify the service range, maintain market share, enter in new markets, develop environment friendly products), and (3) factors hampering innovation (e.g., Innovation costs too high, resistance to change within the firm, pay-off period of innovation too long, lack of skilled personnel, innovation costs hard to control, lack of customer responsiveness to new services). The capacity to innovate which is defined by Burns and Stalker (1961) is the ability of organization to adopt or implement new ideas, processes, or products successfully. Then, innovativeness is most frequently used as a measure of the degree of newness of an innovation (Garcia & Calantone, 2002).

2.2 Innovation in Knowledge intensive service industry

Sveiby (1997) defines knowledge-intensive companies as most employees of knowledge companies are highly qualified educated professionals and their work consists largely of converting information to knowledge, using their own competencies for the most part, sometimes with the assistance of suppliers of information or specialized knowledge. While industry and services are constantly becoming more interwoven, it must be noted that innovation processes in industry differ fundamentally from those in the services sector (den Hertog et al., 1998). The marketing literature identifies four characteristics the differentiate service form products including intangibility, inseparability, heterogeneity and perishability (Atuahene-Gima, 1996). Intangibility refers to the service are experiences, and unlike products, cannot be easily assessed before purchased. Inseparability emphasizes the concurrent production and consumption of services. Heterogeneity refers to the variability in the quality of service delivered. Perishability reflects the fact that services, unlike products, cannot be stored leading to problems of matching demand and supply. Apart from the question of what the major differences are between innovation in services and innovation in the industrial sector, the question which role knowledge-intensive (business) services can play in innovation processes in other sectors, plays an ever more important part (Smits, 2002). These companies have few tangible assets. Their intangible assets are much more valuable than their tangible assets”. However, as criticized by Fruin (1997), management is mostly concerned with efficient use of tangible resources.

2.3 Innovations and Institution

In reviewing the literature, studies (e.g., Edwards, 2000; and Jones et al. 2000) offer an analysis of organizational innovation in terms of institutional theories such as Giddens’ structuration theory (Giddens, 1984). In institutional theory, survival arises out the conformity to external rules and norms, while in resource dependence theory, control of scarce resources and managing interdependencies is essential for survival (McKay, 2001). Institutions and social practices are regarded as structures. Structures have been viewed as having persistence over time, which indicates that the social system is highly complex in which structures have been considered as “both means to and a result of actors’ actions” (Kaspersen, 2000: 4). That is, innovation requires that backbone of a strong supportive organizational structure and structure is the production of human images of what reality is. DiMaggio and Powell (1983) propose three mechanisms through which institutional isomorphism occurs: coercive, mimetic, and normative. Coercive isomorphism is driven by forces: pressures form other organizations on which a focal organization is dependent and an organization’s pressure to conform to the cultural expectations of the large society. They viewed mimetic isomorphism as a response to uncertainty and normative isomorphism as a result of professionalization.
As Whitely (2000) argues that an important source of normative prescriptions in the broader sociocultural environment and suggest that the power with which these prescriptions influence organizations can vary over time, across level of analysis, and as a function of the interplay of ecological, economic, and more proximal sources of institutional expectations. On the one hand, an organization conforming to norms of strategic behavior demonstrates that is acting in an acceptable manner and social actors should evaluate it as legitimate (Meyer & Rowan, 1977). On the other hand, organizations that innovate or have unique strategies suffer in terms of legitimacy- such behavior is question or even deemed unacceptable by external actor (Meyer & Rowan, 1977). This paper focuses on the interaction between structures and their various contexts in one dimension, and the agents’ (banks) preferences and appropriate solutions of innovation behavior in the other.

3. Method

An industrial-historical analysis of the role of institution and the patterns of innovation behavior of Taiwanese bank industry since the 19th century examines the interaction and dialogue of institutional context, structure and agent’s forces. Empirical analysis is based on the collected cases of 24 banks from Taiwan. These research data were gathered from interviews, field notes, and archives. The unit of analysis was the public and private banks rather than branches of these banks that were responding to the adoption of innovation. Data gather centered upon how these banks was responding independently and as a community of organization to the implementation and application of the innovation such as EC over time. Twenty-four EMBA students in Department of Financial Operations of National Kaohsiung First University of Science and Technology, Taiwan help to collect data from Taiwanese public and private banks. All these EMBA students are now all working in bank industry and in high-level positions. They were asked to collect, scrutinize, report carefully to ensure the quality of collected data.

The collected data analyzes according to the principles of grounded theory. Grounded theory contends that data ought to dictate analytical categories so that themes and linkages become apparent through their repetition and apparent meaning in observation, rather than through researchers deliberately looking for them (Glaser and Strauss, 1967). At the heart of the grounded theory, there are three coding procedures that Strauss and Corbin (1998) refer to as open coding, axial coding, and selective coding. Data will examined line by line to identify the informants’ descriptions of thought patterns, feelings and actions related to the key research themes and issues. The focus of sampling changes according to the type of coding one is doing (open, axial or selective), and sampling continues until all categories are saturated, i.e. until no new or significant data emerge and categories are well developed in terms of properties and dimensions (Strauss and Corbin, 1998).

However, there are still some remaining questions concerning the use of grounded theory. Scholars have different viewpoints on the use of existing theory to guide the research. For example, Strauss and Corbin’s (1998) approach to grounded theory allows the use of pre-existing ideas or a pre-existing framework to guide the research. Accordingly, with the collected data and analysis being carried out, an analytical framework of innovation and institution of Taiwanese bank industry is proposed in Figure 1 and will be served as analysis paradigm for the collected data. This means that in order to understand these diverse patterns of innovation activities, one must refer to the social structures and the individual agents with which they interact over time under a specific industrial context. Accordingly, the presentation of data analysis follows the sequence: (1) The context of Taiwanese bank industry, (2) industrial context and agent, (3) industrial context and structure, (4) dialogue between agents values and structure, (5) patterns of innovation under the dialogue. In figure 1, in order to make the analysis much more systematically, the time frame is denoted as T1, T2, and T3, which represents as a sequential evolution of innovation patterns. Following grounded theory, all terms in the proposed framework are categorized and labeled by authors. The procedure to do so is similar to perform the factor analysis in a quantitative data analysis by human beings rather than computer software. A detailed description of the proposed framework is giving in the following section.
4. Case analysis

4.1 Innovation pattern before the late 1980s’ (T1)

The innovation of Taiwanese bank industry is still going on. Based on the statistical data of Bureau of Monetary Affairs, Ministry of Finance, in 2003, there are fifty-two domestic banks in Taiwan. Obviously, the innovation patterns of distinct types of banks are different. Before 1980, the most of Taiwanese banks (e.g., The Bank of Taiwan, Chiao Tung Bank) are government-owned. Some other them were established following the Taiwan restoration to the Republic of China in 1945. Under this context, the context is mainly ‘policy orientation.’ As discussed by Hung and Whittington (1997), the notion of ‘policy-style’ has been proposed to describe the ‘standard operating procedures’ that govern policymaking and policy implementation in particular states. ‘Political networks’ were the most valuable resources for government-owned banks. From structure perspective, business resources and opportunities are embedded in the policy network with public sectors. Government bureaucrats pursue political goals through the way of business. For example, the purpose of establishment of foreign branches may mainly to support diplomacy policy resulting a less domestic competition. From agent perspective, unlike regular bank systems, they felt they were social service organizations rather than commercial organizations. The bureaucratic systems not only leaded to a more conservative and inert organization but also influence the transparency of information flows. The policy orientation and political network, therefore, leaded to the situation of limited rationality and the surface level of innovation activities, which implies the high possibility of seeking innovation activities only with ‘symbolic efficiency.’

4.2 Innovation pattern after the late 1980s’ to 2000 (T2)

In the late 1980s’, the trend of financial liberalization and de-regulation impacted on the government-owned banks heavily. Some scholars used the term “financial hegemony” to indicate the ruling power of government on the banking systems. However, the external pressures of financial liberalization and the internal pressures of local business systems force the government to open the bank market. Fifteen private banks established almost at the same time. All these new banks supported by domestic business groups, resulting a reform of local business systems. Obviously, those new banks not only supported by their host groups, they were characterized as flexible organizational structure, image-builders, and low historical burden. Of course, they had the obligation to follow governmental policies, but unlike government-owned banks, they are policy supporters rather than policy executers. Those traditional government-owned banks lost the supports from both state and business systems. They used to be part of government and with undoable legitimacy. However, they felt the crisis of losing the legitimacy. The social expectations became a huge force asking government-owned banks to reform toward privatization. Under the circumstance, the innovation strategy and the process of privatization were a form of seeking functional equivalent (i.e., the same as private banks). The traditional banks tried to build an image that “a trusted old
friend was reopen and totally business orientated.” However, as many public sectors, many studies (e.g., Barton, 1980) find that administrators in public bureaucracy find change difficult to carry out. There are a bunch of reasons to resist change. Rainey (1999) summarizes common assertions about resistance to change in public bureaucracies including absence of economic markets for outputs, diffuse goals and performance measures, external government authorities and political influences, public scrutiny, top-down and system-wide reforms, rapid turnover of political officials and administrative executives, weak leadership and administrative authority, bureaucratic structure and configuration, bureaucratic culture and administrative orthodoxy, individual caution and slothfulness. Apparently, they were forced toward privatization, but intrinsic value of these banks remains.

4.3 Innovation pattern after 2000 (T3)

For recent years, aspects of change are the increasingly global character of this industry, the digitalization of its technologies. Specially, to make Taiwan an Asian financial center, the government endeavors in continue to strive to liberalize and globalize the banking system and overhaul the capital market. In order to cope with such financial investment models as share exchange and exchange of loans for stock as deriving from the Banking Holding Company Act and the Enterprise Merge and Acquisition Act, the Ministry of Economic Affairs decided to relax the limitation on the investment by Overseas Chinese in Taiwan, approving that foreign companies may invest in Taiwan-based companies by means of exchange of loan for stock and share exchange and may transfer their shareholding in the Taiwan-based companies to others freely in foreign countries without applying for prior approval. Another critical development is Banks need to manage all the core services of its business operation through the Internet. The concept of Web Services has been closely watched and enthusiastically explored by many in the bank industry. Every organization is challenged with managing the rapid evolution of their business and technology environment against the constraints of resources and time.

Following the globalization and diversification of the financial-services industry and the development of the domestic regulations regarding merger & acquisition, the first financial group establishes its presence in Taiwan in 2001. Composed of industries such as insurance, securities, banking and other diversified financial institutions, financial holdings has become a full-functioning financial platform, which develop its cross-selling strategy and provide a one-stop shopping convenience for its customers. Now, the banks in Taiwan post themselves in a global competitive context and globalization becomes the critical organization innovation for all banks. The business systems are more open and the role of government change from a dominator to a supporter. Those prior government banks disembed from policy orientation and political network. Banks are enlightening of their autonomy and taking the risk of running their bank like a business. However, when the environmental changes are rapid enough to be considered discontinuous, rapid and flexible organizational response becomes essential. Banks recognize the need for ‘strategic flexibility’ to manage strategic change in organizations (Sanchez, 1995). Strategic flexibility may be defined as the ability of the organization to adapt to substantial, uncertain and fast-occurring (relative to required reaction time) environmental changes that have a meaningful impact on the organizational performance (Aaker and Mascarenhas, 1984). The definition of flexibility of innovation includes the words ‘adapt’ and ‘change’. The former emphasizes the innovation ability to maintain a status quo despite a change that may be internal or external to the firm. The latter emphasizes the innovation ability to instigate change rather than simply to react to it.

5. Implications for Our Understanding of Innovation

In previous section, the industrial-historical analysis of the role of institution and the patterns of innovation behavior of Taiwanese bank industry has been examined. The proposed framework has several implications for our thoughts about innovation of bank industry in particularly, and knowledge intensive service industries in general. First, previous studies ignore that innovative behavior is a context-specific phenomenon in which drive forces and outcomes of innovative activities only meaningful under focal organizational boundaries. As suggested by Pettigrew (1990), content (here refers to innovation) represents one of the three critical dimensions of change, along with context and process. Burns and Stalker (1961) also identified the importance of organizational context to researchers have studied the many ways in which different organizational features can facilitate innovation. Granovetter (1985) presents embeddedness as the contextualization of economic activity in on-going patterns of social relations. We found, in the early
age, innovations of Taiwanese bank industry were embedded in policies of government. Intrinsically, the innovation behavior it to fit with government policies and keep good relationship networks with public agents, rather than innovation itself. We show that banks are now trying to disembed from political networks. But, political networks still play a critical role in studying the effects of governmental policies.

Second, the effect of conformity should be well recognized. In studying the importance of historical condition in shaping organizational characteristics, Whitley (2000) argues that the conformity of institutional norms creates structural similarities, or isomorphism, across organizations. Obviously, it seems that not only are organizations doing more than mimicking innovation but that most of the activity occurring is not innovation but more traditional strategic and operating changes (Greve, & Taylor, 2000). From another perspective, Hung & Whittington (1997) propose a plural systems framework (business, technology and political) rather than only on national system to access the diversity of individual firm. That is, conformity and diversity are two co-exist forces influence organizations, and can be used in explaining innovative behavior. Although, in institutional theory, survival arises out the conformity to external rules and norms, it also leads to reactive organizations that tend to mimic innovation. As mentioned in literature section, organizations that innovate or have unique strategies suffer in terms of legitimacy- such behavior is question or even deemed unacceptable by external actor (Meyer & Rowan, 1977). Policies and efforts should be made to encourage organizations to take the growing pain and to adopt proactive strategies in turn innovating themselves.

Third, social expectation plays a critical role in future business environment. In studying new service development project in consumer banking in the UK, Harborne & Johne (2002) suggest that empowerment and top management involvement are of critical important of innovation projects. Also, Greve & Taylor (2000) suggest that the importance of innovations varies depending on how managers process them cognitively, and their effect is due to their influence on managerial cognitions about organizational opportunities. Apparently, from our analysis, the social expectation such as toward e-Banking has become a more critical force for management to adopt IT and organizational change for new business models. That is, the institutional pressure has changed from regulation to social expectation. How banks’ top management hears the voice from public challenges the success of innovation projects. However, banks should make clear of the intrinsic value of innovation and avoid the conformity logic of pressure-mimicking innovation, which may lead to the vicious circle of innovation.

Fourth, innovation is pluralistic and dynamic in its nature than ever. Obviously, many organizations find themselves in a “catch 22” position and fall into the “productive paradox” problem of failing to identify benefits and productivity from a specific innovation activity. For competitive reasons they cannot afford not to invest in innovation, but economically they cannot find sufficient justification, and evaluation practice cannot provide enough underpinning, for making such an investment. Moreover, innovation is not universally useful, but can be dangerous and affect a business area negatively (Keegan and Turner, 2002). This study suggest to view innovation as (1) a collective phenomenon to which different innovative activities can contribute in different forms, (2) a dynamic process in which drive force, generating mechanism, and outcomes evolve over time, and (3) a context-bounded phenomenon in which drive force and outcomes of innovation only meaningful under focal industrial boundaries. Accordingly, in selecting indicators to measure innovation, we need to integrate indicators systematically from multi-dimensions.

Finally, the dialogue of agent and structure is an issue. The post structuralism (e.g., Giddens, 1984) argues that humans are social constructs and that institutions should be viewed as structures upheld by actors; structure is the production of human images of what reality is. Structures are composed of generative rules and resources, e.g., group norms. Rules and resources are the contextual constraints individuals draw on when acting and interacting. This is what Giddens asserts the duality of structure that structure is the medium (directs, guides and influences) and outcome of human action. The interplay of structure and action produces and reproduces social systems, and it is this process, which is called structuration. In seeking a better innovation policy or innovative business environment, we should pay attentions to questions such as “where do new institutions come from?” “What are the drivers of institutional evolution and change?” Obviously, interdependency between context and innovation behavior of Taiwanese bank industry can also be seen as duality and successful adoption of innovations requires backbone of a strong supportive organizational and industry structure.
6. Conclusions and Future directions

The institutional arena contains a number of exogenous pressures developed under institutional context that influence the structure and innovation behavior of organizations. These include institutional pressures arising from broadly based sociocultural norms as well as pressures arising from connections among organizations, such as dependency and political pressures (Dacin, 1997). Although, government policy is a key factor that affects the development of knowledge-intensive industries, what we learn from the Taiwanese bank industry is the political influence may harmful for the development of innovation, if the governmental policies ignore the industrial institutional context. When efforts are made to keep a better measurement of innovation or policy, we need to examine the industrial context and institution first. After all, it is industrial to be innovated, not policies.

This paper aims to make contributions to the innovation management of Taiwanese knowledge intensive service industries in terms of institutional theories. From theoretical perspective, there are many studies adopt social theory in studying managerial issues. For example, Huang and Whittington (1997) employ the theory to examine nine Taiwanese computer firms during the 1980s and early 1990s; Miranda and Bostrom (1999) use the concept of structuration theory to study group-meeting systems. Our efforts can contribute to management understanding of their organizations. A better understanding of the recursive nature of structure and agents can help policy makers’ attention not only on the visible innovation process but the effects of implicit structure. That is, institutional theory can provide an in-depth scrutiny of the patterns of innovation behavior of Taiwanese bank industry. Therefore, it contributes to the study of business management and public administration as well. Following this, the future study can progress into how can government tailors its policy-making process to achieve a better innovation business environment.

References


