



Success factors of innovation management in the banking industry using the grounded theory approach

S. Farid Mousavi^{1,*}, Adel Azar², S. Hamid Khodadad³

Abstract

Considering the role and importance of innovation in the performance of organizations in general and banking institutions in particular, the current work aims at identifying effective factors in the success of innovation management system in Iranian Banks, about which exists a scarcity of research in comprehensively identifying these organizational factors. Having examined several potentially suitable research methodologies, the Grounded Theory is chosen as a suitable approach to determine a comprehensive understanding of the main drivers of innovation management success in Iranian Banks. Theoretical and snowball sampling are used to recruit fifteen participants from across the country. The result of this study is a theory that explains the main drivers of innovation management success in Iranian banks. Innovation supportive leadership, market and customer orientation, information technology management, intellectual opportunities, as well as innovation opportunities and process management are the main factors for innovation management success in Iran's banking industry. These factors contribute to the common factors mentioned by other studies, including communication, cost, and HR management, and offer a more specific approach to innovation management. Findings can help banks in the evaluation of effective factors in innovation management and provide the necessary ground for designing practices for improvement.

Keywords: innovation management; service innovation; banking and monetary institutions; grounded theory.

Received: January 2021-14

Revised: June 2021-21

Accepted: July 2021-17

1. Introduction

The survival of any organization depends on its ability to manage and develop itself in terms of innovation. The dominant companies in various industries, ranging from aerospace to pharmaceutical and from banking to computer, were ones that demonstrated an ability to innovate. Without doubt, the industrial revolution of the 19th century was powered with the help of innovation in technology. The latter has also been a significant element in the growth of human societies.

* Corresponding author; mousavifarid@khu.ac.ir

¹ Faculty of Management, Kharazmi University, Tehran, Iran.

² Department of Management, Tarbiat Modarres University, Tehran, Iran.

³ Faculty of Management and Economics, Tarbiat Modares University, Tehran, Iran.

The capacity of a firm to manage innovation and bring about transformations will determine the degree to which the firm will enter the industry and the economy. Innovations that need to be managed include organizational innovation, management innovation, commercial or marketing innovation, as well as service innovation (Pearson, 1991). Any organization that can effectively manage its innovations and changes, meet the needs of its customers, accomplish survival, and set itself as a head of its industry should have its management skills and horizons expanded.

The Service sector plays a major role in the economies and it is considered as the most important effective factor in nations' economic growth promotion (Lovelock and Wirtz, 2004). According to Mention (2010), 70 percent of the added value of Organizations for Economic Cooperation and Development (OECD) member countries result from the actions of the service sector. However, banking sector is especially important in service sub-sectors and it is regarded as the engine of the total national economy for national development (Wang et al., 2008). Not only in Iran, but throughout the world, as an important part of the financial system, banks and banking industry, plays a fundamental role in the economic growth and development of a country (Haghnejad et al., 2019). To this end, and due to the lack of development of the stock market and the insurance industry in Iran, Banking is of particular importance in the Iranian economy (Kashefi and Abounoori, 2018). Therefore, it is important to pay attention to the factors that improve their performance.

Most of the literature studies indicate that the innovation has a significant positive relationship with the performance of banking institutions (Kwateng et al., 2013; Uzokurt et al., 2013; Rega, 2017; Tahir et al., 2018). Banks have been turned into dynamic organizations from conservative and constant organizations, and innovation has become especially important in such organizations (Vermeulen, 2004; Iren and Tee, 2018).

There is evidence that the adoption of innovations varies widely across firms and that many organizations do not adopt innovative techniques despite their apparent benefit (Naranjo-Gil, 2009), Banks are no exception (Mare and McKenzie, 2015; Taherparvar et al., 2014). The success of new service development and innovation in banking institutions is not stochastic and success results from integrated management of organizational effective factors (de Brentani, 1993). Banks should meet organization requirements for preserving competitive advantage and ensure continuity of innovative activities in all organizational levels (Drew, 2005). While financial services are globally connected, countries differ about both the way banks operate and market their services and about the consumers who use these services (Nejad, 2016 and Singer et al., 2008). Therefore, we need academic research to provide us with a comprehensive picture. Consequently, a comprehensive understanding of the drivers of innovation remains. The research tries to answer that which drivers are important for innovation success in the banking industry. This study is important to both academics and practitioners. The answer can provide some insight into the gaps between what managers do and what they ought to do to be successful in an innovation management implementation.

The paper is structured as follows: in the next section, the literature review of effective factors of innovation management success in financial institutions is presented. The third section outlines the methodology. The fourth section provides a brief description of the findings and the final section contains a brief conclusion.

2. Literature review

2.1. Innovation management and competitive advantage

Innovation management include managerial activities which organizations perform innovation under a controlled cycle of unpredictable and complex structures to adjust to the progressions in the internal and external setting. According to Drucker (2003), the notion of innovation signifies “process” when utilized on its own but it implies the control and management of innovation in executions when the notion is utilized as innovation management.

Competitive advantage portrays an organization’s advantage taking among its competitors by building better value for customers. To create competitive advantage, there are several ways such as achieving price and quality advantages against competitors, immediately responding to fluctuating customer needs and gaining new market opportunities maintaining customer value before competitors (Şimşek & Akin, 2003). Building about new market opportunities and manufacturing new goods and services is achieved by making and executing innovation. To attain this objective, the process from rise of innovation as a notion to commercialization and marketing needs to be managed both accurately and efficiently. The techniques for this have to be executed in accordance with a plan and they need to be updated with fluctuating circumstances.

There are principles for organizations to gain competitive advantage in a global competition. Firstly, all the value systems have to be managed. Also, the resources need to be continually developed and research, innovation, and change must be sustainable. Also, innovative firms need to embrace the rules known as Seven Innovation Rules to gain advantages from the process of innovation: form a solid leadership on innovation strategy and portfolio decisions, incorporate innovation in companies’ business attitude, choose the amount and form of innovation suited for companies’ business, oversee the relation between creativity and value capture, acknowledge knowledge and people network as the fundamental unit for inside and outside the organization, and build the metrics and prizes (Davila & Epstein, 2006).

Integrity and coherence in many areas need to exist for innovation management. Factors including organizational culture, current technology, human factor, team management, productivity as well as research and development must be contemplated synchronously. The main drive for innovation and change is technology. Theoretical and empirical studies uncover that it plays a significant role in the manufacturing of new products and process and it reformulates the rules of competition by altering foundations of industrial structure. Through research and development, companies create new strategies for innovation and increase their market share. The human factor creates the foundation of organizational success in innovation; hence, the orientation and interest of people to the innovation needs to be encouraged. By creating environmental circumstances, innovation could be created. Nonetheless, successful innovation needs the support and execution of high-level management. In places where innovation leads to great changes, leadership requires a dangerous, risky, and expensive learning and change level. Management must sustain a high-quality business environment that meets employees’ needs, builds their talents, and supports their professions. Through empowerment and involvement practices, innovative conduct must be supported. Moreover, by cross-functional teamwork, being one of the most significant channels for communication, varying perspectives can be brought together and creativity can be triggered. Acknowledging the value of new information and knowledge, absorbing and implementing them portrays the ability of an organization at identifying innovative output (Prajogo & Ahmed, 2006).

2.2. Innovation management in the banking industry

From a resource-based view, an enterprise must have the asset, capability, and motivation needed to successfully carry out innovations and corresponding changes (Zhang, 2020). According to Easingwood and Storey (1991), rarely is it possible to explain the success of new services in financial institutions by an index and various factors explain new service success. Identification of target market and creating a constructive relationship with it, organization's communicative strategy, product support network design, market research, comprehensive quality (including product characteristics, service delivery conditions, etc.), consistency with other products and support from staff, IT management and low costs are among the most important factors in the success of modern banking services. Oldenboom and Abratt (2000), investigated banking and insurance system in Africa and identified following factors as the success factors in delivery of new products: resources and skills (including skills in information technology, advertising and promoting the products, research and development, market research, financial resources, commitment of the organization's management, delivery of new services), product advantages (including product and service quality, high value compared to the cost, way of service delivery), attempt for making culture for using new products, participation and interaction between employees and organizational units, accurate planning and defining of new products and services development process, understanding customer needs, initial tests of new products prior to their bulk offer, accuracy in predicting the actions in product development and post-development phases including appropriate time to introduce the product, product introduction requirements, and instructions and etc. Avlonitis et al. (2001), stated effective organizational factors in promoting novel banking service development within three classes: actions of novel services development process, the formality of novel services development process including documentation of practices, clearly assigned responsibilities and systematic conduct and compilation of bylaws and guidelines, and staff participation from different organizational units in delivery of new services. They classified innovations in banking institutions in six categories, and specified current practices in the above three enabler groups for success in every innovation classes. Menor and Roth (2007), mentioned the following success factors of novel service innovation in banking institutions: new services development process, market management, new service development strategy, organizational culture supportive of new services development and organization's information technology experience. Tipu (2011), reviewed academic publications on innovation management in banks and found out following factors as effective factors in innovation management in monetary organizations: Communication management, cost management, human resource management, information security, considering the legal issues and confidence making for the organization and stakeholders, technology, organization's policy, structure, leadership, competitors and organizational culture. Nekrep (2013), examines innovation activities in banks and insurance companies in Slovenia. The efficient new financial services development process and the impact of three core factors (i.e., marketing synergy, organizational culture, and market characteristics) on the success of the service are stressed. Mahmoud et al. (2016), demonstrate that market orientation has a significant association with innovation while learning orientation has a significant impact on innovation using a developing country (i.e. the Ghanaian banking domain) as a study context. Das et al. (2018), explore internal barriers that influence the effectiveness of projects within large European bank focusing on potentially disruptive and radical innovations. a restrictive mindset (overzealous risk management), an unsupportive organizational structure inertia caused by local systems architecture, a lack of exploiting new ideas by the firm, the not-invented-here syndrome, and a lack of fundamental internal R and D, are perceived as key barriers to potentially disruptive and radical innovation of financial services firms. Finally, Chaudhry et al. (2020), identify barriers to financial product innovation

in the Islamic banks (IBs) of Pakistan. They classify the nine most important barriers to product innovation in the IBs in Pakistan, including high innovation cost; lack of customer awareness; the difference of school of thoughts between members of Shari'ah board; non-compatibility between product design department and members of Shari'ah board; lack of research and development; non-acceptability of the concept of Islamic banking; lack of training regarding a new product; imitation of a new product by competitors; and the limited use of new product development tools. In Table 1, a summary of the aforementioned effective factors in innovation management in the banking industry is outlined and compared with the six factors determined in our study.

Table 1. Summary of other studies' and current study's success factors in innovation management

Other Studies	Current Study
Organizational Culture Supportive of New services Development	Leadership
Market Management	IT Management
Communication Management	Intellectual Capital Management
Cost Management	Market & Customer Management
HR Management	Innovation Opportunities Management
Information Security	Innovation Process Management

Some other articles have also evaluated and report the impact of individual criteria on bank innovation, such as: An efficient new service development process (Menor et al., 2002 ; Martovoy and Mention 2016), Leadership (Johne and Harborne, 2003), Organizational Culture (Uzkurt et al., 2013), organizational learning (Blazevic and Lievens, 2004) employees' involvement (Tipu, 2014), Intellectual capital (Al-Khalil et al., 2014), Customer knowledge management (Taherparvar et al., 2014 and Taghizadeh et al., 2018), Organizational Learning Capability (Kiziloglu, 2015).

In all, in the literature, most scholars have so far accepted that innovation in banks is a complex phenomenon and Although some drivers reported in the literature as an innovation success factor in the banks and banking industry, to date, there is a scarcity of research comprehensive identifying organizational factors, as well as how they interact and communicate, thus the concept remains fuzzy and poorly defined, especially in countries like Iran. The manuscript tries to fulfill this gap.

3. Research method

Given the limited research and theory regarding a comprehensive understanding of the main drivers of innovation management success in Iranian Banks, a qualitative research approach has chosen, following Strauss and Corbin (1990). A grounded theory (GT) approach was employed to determine the main drivers of innovation management success in Iranian banks, as well as found how they responded to the innovation success of the organization. GT is a systematic qualitative research method introduced by Glaser and Strauss in 1967 (Charmaz, 2000). Bryman (2004), argues that what makes grounded theory distinctive from other inductive methods is that this approach is very strong in generating theories out of data. GT study allows researchers to explore a phenomenon from a new perspective and therefore derive conceptual and theoretical bases for behavioral processes from the collected data (Strauss and Corbin, 1990). Grounded approach is used for introduction, exploration, and descriptive studies for the phenomena – where there is limited research (Aldiabat and Le Navenec, 2011).

Grounded theory is a method in which theories; concepts, hypotheses, and propositions are derived directly from data, instead of deriving from the previous assumptions, other research or existing theoretical frameworks (Powell, 1999). Overall, this approach turns data obtained from data sources to a set of codes, common codes to the categories and categories to the

theory. To this end, Strauss and Corbin (1990), consider the theory resulting from such a process as a product of an inductive approach obtained from the study of a phenomenon. An important point to note is that after Glaser and Strauss separated their way into developing grounded theory, two main schools emerged (Glaser, 1978, 1992; Strauss and Corbin, 1990, 1998). According to Jantunen and Gause (2014); Goulding (2001) summarizes the key differences between these two approaches as follows: “Glaser’s approach may be seen as risky and unfocused by many who are reluctant to give themselves up to the data and wallow in the creative process. Strauss and Corbin, on the other hand have been accused of stifling creativity by making the methodology overly mechanistic, highly formalistic and inflexible”. To avoid confusion over terminology and procedures, it is hence important to recognize the differences between these two approaches. Though acknowledging and recognizing the spirit of Glaser’s original version, the data analysis of this study has followed Straussian and Corbin’s coding procedures in which the researcher is active and having a general idea of where to begin (Parker and Roffey, 1997).

3.1. Subjects and data collection

The main idea of grounded theory is that the theorizing is not caused by data available, rather it is conceptualized based on data from the participants who experienced the process (Strauss and Corbin, 1998). The statistical population comprised all Bank managers and staff with at least 10 years’ experience in banking industry and has been actively participating in innovation projects, which previously implemented in Iranian banks and tended to disseminate and provide their experiences. Interviewed participants were selected based on two sampling techniques: theoretical and snowball sampling. Theoretical sampling is a core process of grounded theory (Butler et al., 2018). The focus in theoretical sampling is not on the sample but on what that sample has to say which will be helpful in the theory-building process (Qureshi, 2018). In this sampling method, the authors attempt to explore the respective event and phenomenon using ideas and knowledge of the most aware people on the research subject. In other words, sampling type is not random, rather it is deliberately and judging. In addition, Snowball sampling was used in adjunct to theoretical sampling, because of low accessibility to members of a special population (Babbie, 2008). In this case, initially, though a group of participants was selected based on theoretical sampling, due to several problems, some of them opted out of the study and only 5 participants remained. Snowball sampling provided the additional participants for the study. Finally, data were collected through interviews with 15 experts. In GT, methodology there is no rule on how many interviews are adequate; this number depends on the research (Patton, 2002). Many scholars have suggested that researchers should continue until saturation (Guest et al., 2006). Bertaux (1981), defines the saturation of knowledge as gaining the majority of data from the first few interviews and identifying a pattern in answers. From a certain point, other data confirm what the researcher already knows. It should be noted sampling was continued until theoretical saturation. Theoretical saturation is when no new data has emerged with the category, the category finds an appropriate scope, and the relationship between categories is established and confirmed (Strauss and Corbin, 1998). Guest et al. (2006), suggests that 12 interviews are enough to reach saturation.

To ensure research participants were fully informed about the implications of their involvement in the project, each potential interviewee was provided with a project information sheet. In addition, each person who agreed to participate in the research as an interviewee was asked to sign a consent form that confirmed that they had understood the implications of their involvement and that they were willing to participate. Before the interview, each research participant was sent a form to complete with the details of their innovation-related activities experience.

The participant details form requested information concerning the participant's total years of experience in the banking industry, the roles that they had performed. The purpose of the collection of this data was to provide a context within which results of the research may be interpreted. Table A1 (see Appendix) provides a summary of these participant details. More data presented in this table shows that the group interviewed possessed a significant depth and breadth of experience.

Interviews were done individually, face to face and deeply and Data were collected through 15 semi-structured in-depth interviews and each interview time varied between one to three hours and was primarily conducted in Persian. The voice for each interview was recorded for detailed analysis, utilized for coding, modification and taking feedback. A semi-structured questionnaire provides necessary flexibility with open questions for the extraction of facts and it creates order in data collection. Adolph et al. (2012), suggested a literature review in data collection should be done with a delay so that influence of previous concepts on the theory developed from the data is prevented. Thus, the author considered broad literature reviewed after the sixth interview and respective categories were used during the research process. It should be noted theoretical sampling was continued until theoretical saturation. Theoretical saturation is when no new data has emerged with the category, the category finds an appropriate scope, and the relationship between categories is established and confirmed (Strauss and Corbin, 1998). In this case, no new information was obtained from interview 12, but to ensure, the interview continued until 15.

3.2. Research reliability and validity

The concepts of reliability and validity are inappropriate for grounded theory (Brown et al., 2002). In studies that are based on grounded theory some other terms are used to refer to the quality of a study (Takhar, and Ghorbani, 2014). Eight verification methods or strategies are mainly used to validate qualitative findings. It is recommended to utilize at least two such strategies in any study (Creswell, 2007). In addition to observing the necessary steps and phases for grounded theory-based research which ensures the reliability of the results (Creswell and Miller, 2000; Yin, 2003), the following methods were also used in the current work for ensuring the validity of results.

- **Triangulation:** There are some forms of triangulation (Denzin, 1978). Data triangulation is used in this research. According Crawford et al. (2020), triangulation can be carried out in three ways, using information from multiple sources: literature, collecting data from multiple sources or using multiple methods, and sharing data analysis and interpretation with multiple coders. They further states, although all three forms of triangulation are not required for every conclusion, the more the better. For this purpose, in this case interview was done with managers and staffs of different banks and also with individuals at different organizational levels. And also information from multiple sources in the literature was used, and multiple coders were used to code, some of them, and interpret the data.
- **Peer Review:** Ideas, the model, and categories were shared with 5 professors and 6 Ph.D. students in Industrial Engineering and Management disciplines who were familiar with the concepts of innovation management and banking industry.
- **Member Checking:** According to Jonsen, and Jehn (2009), validation through informant feedback (member checking), to ensure the credibility and consistency of the interpretation, is important and well recognized in the literature. After all, an alert and observant actor in the setting is bound to know more than the researcher about the realities under investigation. In this research some participants offered their opinions

on the research report and categories and results were reviewed and modified in terms of the received feedbacks.

3.3. Grounded theory

Grounded theory strategy includes three phases: open coding, axial coding, and focused coding. Of course, three types of coding should not be considered distinctive or timely separate phases in the interpretation process (Flick, 2014).

3.3.1. Open coding

Since the concepts are the main bases for theory making, it is necessary to consider a mechanism so that the concepts are identified and developed in terms of the characteristics and dimensions. This mechanism is done in open coding in grounded theory. The data coding is the most important process in grounded theory (Bryman, 2004). Coding is an operation “by which data are broken down, conceptualized, and put back together in new ways” (Strauss and Corbin, 1990). By initiation of the data collection phase (through interview and review of research literature) coding is started. As mentioned above open coding is the process of breaking data into separate semantic units (Goulding, 1999). This trend is started from the concepts and it ultimately leads to category explorations (Strauss and Corbin, 1998). The concepts are separate mental labels that are attributed to the events and phenomena by the researcher. These labels which are formed through the abstraction process are similar to empty baskets that are filled by the researcher’s experience and meanings (Hatch, 2018). Category is a concept which is more abstract than other concepts. Preliminary categories related to the phenomenon under study is extracted from initial concepts, through asking about data, comparison of cases, events, and other phenomena states, for obtaining similarities and differences (Strauss and Cobin, 1998). It is called open phase since the researcher names categories without any limitations. In other words, in open coding, the researcher names categories with an open mind and considers no limitation for the number of codes and categories (Goulding, 2002).

At first more than 150 codes were coded but through the coding phase and considering the subject and the aim of the study, several irrelevant codes were dismissed. At the end of the process 87 codes were selected. Codes extracted from interviews and literature review converted to concepts. Some concepts came together to form the main categories. The result of this phase is the summarization of the bulk of data obtained from interviews and documents into concepts and categories.

It should be noted considering "qualitative content analysis" methodology, six categories were selected as the main categories by open coding and data analysis, categories included: leadership, IT management, intellectual capital management, market and customer management, innovation opportunities management, and innovation process management. Output of this theoretical coding phase are given in Tables 3 and 4 considering above mentioned cases and interviews and for summary, it is provided only for one of the categories.

Table 3. Introduction processes categories

Core Categories	concepts	Extracted code from interview and literature	References
Processes	Developing systematic processes, procedures and methods of innovation development process management	Monitoring of ideas based on technical, legislative, economical, organizational and marketing analysis	(Lievens et al., 1999); (Johne and Storey, 1998); (Blazevic and Lievens, 2004); (Alam and Perry, 2002); (Edgett S. J., 1996); (Kahn, Barczak, and Moss, 2006); (Froehle and Roth, 2007); (Hertogand de Jong, 2010); (Storey and Easingwood, 1996); (Jong and Vermeulen, 2003). Interviews Subject No. (1-2-3-4-7-8-10-12)
		Detailed description of the objectives and desired outcomes of development based on organization's innovation strategy	(Johne and Storey, 1998); (Drew, 1995); (Alam and Perry, 2002); (Kahn et al., 2006); (Froehle and Roth, 2007); (Song, Song, and Di Benedetto, 2009). Interviews Subject No. (1-4-6-10)
		Gathering working teams from various operational sectors specially from line employees	(Lievens et al., 1999); (Johne and Storey, 1998); (Blazevic and Lievens, 2004); (Bouwen and Fry, 1991); (Alam and Perry, 2002). Interviews Subject No. (1-2-3-4-6-7-9-10-11-12)
	Formulating processes, phases, and systematic methods for innovation utilization process management	Preliminary and limited testing of the plan and ensuring compatibility of the plan with the requirements	(Lievens et al., 1999); (Johne and Storey, 1998); (Blazevic and Lievens, 2004); (Wang and Lin, 2012); (Alam and Perry, 2002); (Froehle and Roth, 2007); (Jong and Vermeulen, 2003); (Melton and Hartline, 2010); (Song, Song, and Di Benedetto, 2009). Interviews Subject No.(4-7-11-12)
		Formulating comprehensive executive bylaws and instructions related to plan implementation	(Alam and Perry, 2002); (Froehle and Roth, 2007); (Song, Song, and Di Benedetto, 2009). Interviews Subject No.(1-3-8-10-11-12)
		Investigation of new plan compatibility with legal, social, and organizational infrastructures and provision of plan implementation requirements	(Froehle and Roth, 2007); (Damanpour and Aravind, 2011); (Storey and Easingwood, 1996); (Jong and Vermeulen, 2003) Interviews Subject No. (1-4-6-7-8-11-12)
	Continuous improvement of processes and structures of innovation management in the organization	Developing a systematic innovation process in the organization	(Froehle et al., 2000); (Easingwood and Storey, 1991); (Meyer and DeTore, 1999); (Alam and Perry, 2002); (Kahn, et al., 2006); (Menor and Roth, 2007) (Edgett, 1996); (Jin et al., 2010); (Storey and Easingwood, 1996), Interviews Subject No. (3-4-8-11),
		Developing appropriate procedures to assess the effectiveness and efficiency of the plan development process.	(Dobni, 2008); (de Brentani, 1991); (Seegy et al., 2008); (Edgett, 1996). Interviews Subject No. (6-8-10-12)
		Reviewing and updating the innovation process through revision after development of plans, comparison with the best and similar methods	(Alam and Perry, 2002); (Menor and Roth, 2007); (Seegy et al., 2008); (Hertog and de Jong, 2010); (Cheng et al., 2012). Interviews Subject No.(4-6-8-9-11)

Table 4. Coding output for other main categories

Core categories	Concepts
Innovation supportive leadership	Providing supportive organizational climate and culture for innovation
	Understanding changes in internal and external environment of the bank and supporting improvement and organizational change initiatives
	Systematically communicate with stakeholders and influencing them
	Prioritizing, reviewing, updating, and implement innovation strategy in the bank
Market and customer	Identification of customer groups and their needs
	Maintaining and developing relationships with customers
	Analyzing and understanding of customers and markets
Information technology management	Developing and improving the bank's information technology operational benefits
	Developing and strengthening guidance, supervision and information technology management systems of the bank
Intellectual capital management	Align human capital management functions with the innovation strategy
	Employee competency development
	Improving organizational communication system
	Manage the organization's information and knowledge
Innovation opportunities	Diversification of channels for identifying innovation opportunities inside the bank
	Diversification of channels for identifying innovation opportunities outside the bank
Innovation process management	Developing systematic processes, procedures and methods for innovation development process management
	Developing systematic processes, procedures and methods for innovation utilization process management
	Continuous improvement of processes and structures of innovation management in the organization

3.3.2. Axial coding

Axial coding is the second phase of analysis in grounded theorizing, the aim of which is establishing a relationship between generated categories (in open coding phase). Since this coding is described around the category axis it is known as axial coding (Strauss and Corbin, 1998). It is done based on the coding paradigm and it helps easily perform the theory process. The coding paradigm is an obligatory element of a grounded theory, if the coding paradigm was not used in theory development, the theory would miss density and precision (Vollstedt, Rezat, 2019). Compared to more descriptive open coding (the first phase of constant comparative analysis), axial coding involves a greater degree of theoretical inference and analytic induction. During open coding, researchers fracture data into discrete parts and closely examine each part to identify concepts and respective properties and dimensions of emergent phenomena. In contrast, axial coding involves reassembling large amounts of open coded data into more abstract conceptual categories (Scott and Medaugh, 2017). Basis of the relating process in axial coding is the development and expansion of one of the categories. In this phase, one category is considered as the main category and then other categories are related to it theoretically. Through axial coding, the researchers will be able to answer when, where, why, who, how and with what consequences questions (Saldana, 2013). According to the systematic approach of Strauss and Corbin (1998), in axial coding phase, considering the role of obtained concepts in describing innovation components identification process in banks, all categories extracted from raw data are related in the form of causal conditions (causes of the emergence of the main phenomenon), strategy (actions or reactions for control, confrontation, and response to the main phenomenon), core category (effective underlying conditions in the strategy), intervening conditions (effective general conditions in strategies), and consequences (results of utilizing strategies). They are related theoretically through a coding paradigm (figure, number, etc.).

The question proposed in the axial coding phase is: “Is it possible to organize different categories within one sequence?” Based on the obtained answer, the relationship between the main components resulting from axial coding is provided in Figure 1.

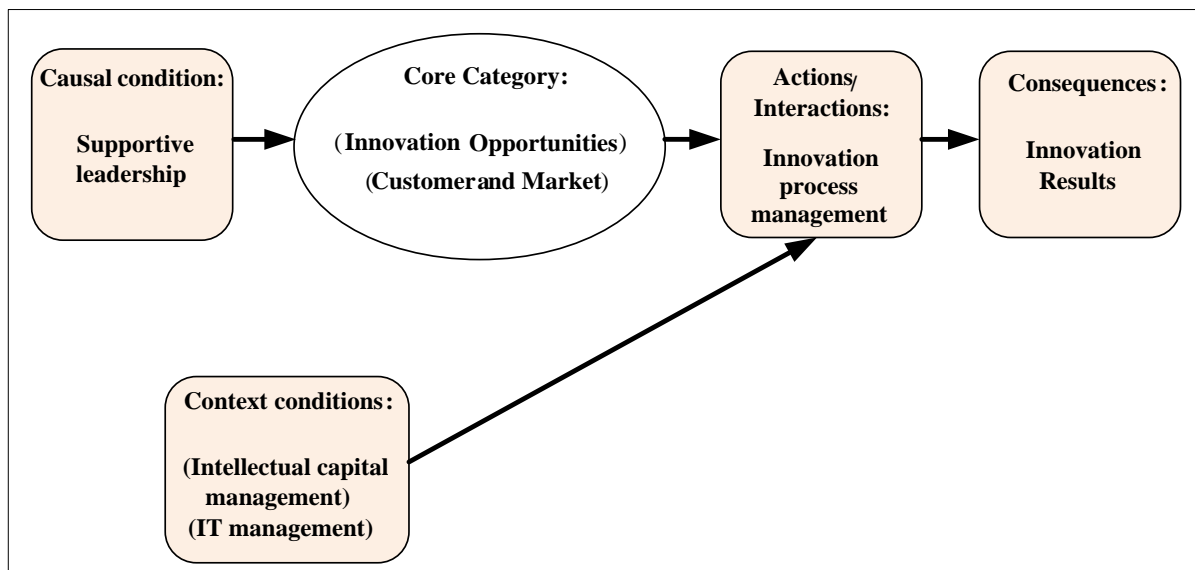


Figure 1. Relationship between main components resulting from axial coding

The core category or central experience discussed by all participants who had taken part in the course was the “innovation opportunities” and “customer and market management”. This selection based on several factors, such as their relationship to other categories, their frequency of occurrence, their quick and easy saturation, and their clear implications for development of theory (Glaser, 1978). Banks have to diversify the channels to identify the best internal and external Innovation Opportunities. In addition, to improve the banks’ innovation performance, they have focus on customer and market.

The establishment of a supportive leadership was identified as necessary (a causal condition) to set the stage for opportunity identification and market oriented bank. Bank’s Leaders participates in this process by creating a supportive culture for innovation in the bank, detecting environmental changes and communicate appropriately with the stakeholders. The leaders also have to implement the bank’s innovation strategy.

Participants described innovation process management success that encourages new ideas for workflows, methodologies and services is the specific action result from the core category (innovation opportunities” and “customer and market management). And also they indicated that the quality of bank’s intellectual capital management and information management influence the performance of innovation process management. Therefore they categorized as context in coding paradigm.

3.3.3. Focused Coding

The last phase of coding is allocated to theorizing. Theory is a set of concepts and their relationship for explanation and description of the phenomenon under study (Hatch, 2018). Focused coding is the process of integrating and improving categories (Strauss and Corbin, 1998). This process associates categories by writing a storyline. Focused coding is the main phase of theorizing in which the researcher relates axial categories to other categories, and confirms their relationship and modifies categories which need improvement or review. The researcher by relating categories and based on these relationships attempts to create an image or, in other words, to tell a story (Birks and Mills, 2015). Birks and Mills (2015), define the

storyline as ‘a strategy for facilitating integration, construction, formulation, and presentation of research findings through the production of a coherent grounded theory’.

In focused coding, research theory about antecedents of innovation management systems in the banking industry is narrated. Focused coding provides an expression of the research process and research story trend.

“In Iranian Banks, CEO and member of the board act as innovation supportive leaders and provide necessary culture for innovation initiatives. According to their conduct and character, the organization put in its agenda identification of innovation opportunities and they will be market oriented as the main priority of practices in all organizational levels. Along with the evolution of organizational capabilities in their intellectual capital management and information technology, the banks provide appropriate innovation processes management to maximize the innovation related results.”

4. Research findings

Factors identified for the success of innovation management in Iranian Banks are compared with findings by other works in the field in the following section.

4.1. Leadership

Leadership is regarded as the most salient component in organizational innovation in the banking institutions. In banking industry, managers are initiators of innovative plans in the organization and they support innovations in the organization by their appropriate conduct. If innovation is not supported, no activity on the achievement of the innovation would be conducted in the organization, since it is managers who have the right for decision making; they specify general directions and allocate resources to various activities (Chen and Lin, 2009). Based on the results in the innovated bank, the leaders design the bank’s innovation strategy and provide supportive culture to implement it. Moreover, they recognize and comprehend the changes that take place in the internal and external environment of the bank and bring about not only supporting improvement but also organizational change initiatives. They also have the role of interacting systematically with stakeholders to influence them in terms of triggering innovation. Finally, leaders are responsible for prioritizing, reviewing, updating, and implementing innovation strategies in the bank. All mentioned points reflect the importance of leadership in terms of innovation management.

A review of the literature indicates the important role of leadership in innovation in the service industry, too. Studies by Ros and Sintes (2012), stress this fact as well as John and Harborne (2003).

4.2. Information technology management

Information technology is a generic term that refers to programs, computers and telecommunications while IT capability is a broader term and refers to the use of these technologies in order to meet the information needs of the company (Chakravarty et al., 2013) IT capability is one of the major criteria in innovation management (Turulja and Bajgorić, 2016). Greater IT capability would lead to a higher degree of service innovation. All around the world, banks have great investments in IT and application of competent management for it and through which they develop and introduce innovative banking services (Scornavacca and Hoehle, 2007). E-banking is one example of IT-based innovation in banks (Caceres and Pappadopoulos, 2007). On the other hand, Banks nowadays have found that for preserving customers with their new needs they should implement innovative practices and develop appropriate and secure services by updating technical systems. It is achievable through

information and internet technology (Tan and Teo, 2000). Iranian banks have taken effective steps recently for achieving e-banking services and most traditional methods for banking services have been replaced by IT tools. Importance of IT management for the success of innovation in service and financial organizations have been cited in such works as those by Easingwood and Storey (1991), Oldenboom and Abratt (2000), Froehle et al. (2000), Menor and Roth (2007), Tipu (2011), Chen and Tsou (2012). In this regard, through the development of organizational infrastructure and integration of various information systems of the bank, the operational advantage of information technology should be developed.

4.3. Intellectual capital management

Human resources are the main capital of the organization and the organization's productivity depends on its staff conduct and performance. The initial point of the innovation is highly dependent on the knowledge, expertise, and commitment of human resources as the major inputs in value creation and innovation process (Youndt et al., 1996). Thus, organizations should provide motivation and the ability for human resources to create creative ideas and develop innovative methods, which are achieved through the strategic management of human resources (Scarbrough, 2003). And also the results showed that the Knowledge Management processes are contributing to the enhancement of innovation in the banking industry. Current work's findings are consistent with those by Jimenez and Sanz-Valle (2011), Chen and Huang (2009), Winne and Sels (2010), Jiang et al. (2012), Al- Khalil et al. (2014). Findings showed that human capital management functions need to be aligned with the innovation strategy in question. In other words, there should be compatibility between the two for innovation to be properly stimulated. Also, under this category, the competence of employees must be developed and the organizational communication system needs to be improved to contribute to innovation. Lastly, this category involves the management and overseeing of both the organization's information and knowledge that would ensure a sustained innovation management.

4.4. Market and customer management

Organizations today broadly consider customers the best capital and regard relationships with customers as useful and mutual exchange and opportunity, which needs management (Plakoyiannaki, 2005). Service firms depend on maintaining a close relationship with their customers, often based on person-to-person interactions, and their marketing activities are spread throughout the firm (Storey et al., (2016) adapted from Grönroos, 1983). In the current work also it was found the market and customer orientation are positively related to innovation in banks and they have an essential role in optimal innovation results. There should be intelligence in the whole organization concerning current and future needs of the market, customer and a common responding to the needs (Kohli and Jaworski, 1990), as well as Customer interaction in new service development as a key success factor for new services (Alam, 2013). Current work's findings are consistent with those by Alam and Perry (2002), Hartline et al. (2000), Wang et al. (2016). According to our findings, it is crucial to not only identify customer groups and their needs, but also to maintain and develop relationships with them for the sake of innovation. Without doubt, innovation cannot be brought about without proper insight on market target and the fluctuating needs of customers. Moreover, it is crucial to constantly be updated with regard to customers to ensure successful and effective innovation. By analyzing and understanding customers and markets, innovation management is rendered more feasible and promising.

4.5. Identifying innovation opportunities

Diversifying channels for receiving innovation ideas leads to achieving more creative ideas in the organization and opportunities for organizational improvement and change. Considering this fact, the obtained results also emphasize the importance of diversifying internal and external channels for receiving ideas. McAdam and McClelland (2002), stressed the attention and management of channels for receiving ideas in the organizations for increased expected innovation. Considering the necessity for the utilization of more resources in innovation, open innovation concepts have been developed today. Chesbrough (2003), provided open innovation model, in which organizations commercialize ideas generated inside and outside of the organization using internal and external paths leading to the market. Unlike traditional innovation models, the basis in open innovation is the utilization of the ideas both inside and outside of the organization, it is not limited to the R and D department, inside the organization. Storey et al. (2016), indicated that for service firms, the idea of working with entities outside of the firm to develop and deliver innovations is crucial in today's economy. Diversification of channels receiving innovation ideas in banking institutions have been emphasized by Vermeulen (2004), Thomke (2003), and Martovoy et al. (2012).

4.6. Innovation process management

A service innovation process is a complex process requiring management and coordination of a large number of inter-organizational activities and interactions at different levels in organizations (Singh and Markeset, 2008). Formulation and application of a structured set of processes for control and management of innovation process-related activities as well as control and review of actions taken in the form of process management criterion are especially important. It is emphasized by Cooper and Edgett (1996), Alam and Perry (2002), Alam (2006), Menor and Roth (2007) and they stress the necessity for designing innovation process in a service organization and financial institutions and presented relatively similar phases, steps, and activities for introducing a successful innovation practice. According to the results, the development of systematic processes, procedures and methods is crucial for innovation development process management as well as for innovation utilization process management. Certainly, similar to any other organization, the banking industry is subject to fluctuating changes. Therefore, the continuous improvement of processes and structures of innovation management is required in the organization for the sustenance of said innovation management.

5. Conclusion

The findings of this manuscript provide a fruitful avenue for improving our understanding of organizational antecedents of innovation success in banks with ground theory. According to the obtained results, leadership, intellectual capital management, IT management, market and customer management, identifying innovation opportunities, and innovation process management are the main components for innovation management system in banks. In the banking industry, the results of this study could lead to the effective management of innovation capability, which helps to deliver innovations that are more effective outcomes to generate better performance.

This study has found several significant implications for management. Banks should pay attention to the current status in inter-organizational factors and notice that innovation would not be realized without appropriate grounds and success should not be expected in a vacuum. Considering the crucial role of top management of banks in the realization of innovation management system, necessary actions regarding creating an appropriate organizational climate for innovation should be provided in all organizational units and organizations should

accurately investigate the current status of leadership styles and organizational culture and improve current status. Based on results managers obtain recommendations for selecting customers and communication channels to enhance the success of their innovation management initiatives. Banks can improve their innovation success by improving their proactive market orientation, by investing resources in exploring customer explicit and latent needs, as well as customer problems with existing products. According to the results, the bank's human capital also plays an important role in the realization of innovation goals and banks should take necessary actions for improvement of current status and changing current approaches. IT is the other factor that its efficacy and updating should be considered strategically.

This paper also has certain limitations and shortcomings. Because of this we have proposed several studies that are based on improving this research in the future. This paper has only determined basic relationships between the influencing factors. However, these results are limited to a certain extent by the subjectivity of the experts who were interviewed, and its general significance was insufficient. Therefore, future research needs to use structural equation modeling to verify the path between the influencing factors and the creation of innovation in banks and their impacts on bank overall performance. In addition, this study provides comprehensive factors affecting successful innovation implementation, which practitioners need to identify, understand, and address to increase the probability of success of the implementation, thus it is necessary to examine environmental factors that may explain the success of innovations in the banking industry. Future research encouraged into these potentially fruitful areas.

References

- Adolph, S., Kruchten Ph., Hall W., (2012). "Reconciling perspectives: A grounded theory of how people manage the process of software development", *The Journal of Systems and Software*, Vol. 85, pp. 1269–1286.
- Alam, I., (2006). "Service innovation strategy and process: a cross-national comparative analysis", *International Marketing Review*, Vol. 23, No. 3, pp. 234-54.
- Alam, I., (2013). "Customer interaction in service innovation:evidence from India", *International Journal of Emerging Markets*, Vol. 8, No. 1, pp. 41-64.
- Alam, I., and Perry, C., (2002). "A customer-oriented new service development process", *Journal of Service Marketing*, Vol. 16, No. 6, pp. 515-534.
- Aldiabat, K.M., and Le Navenec, C., (2011). "Philosophical Roots of Classical Grounded Theory: Its Foundations in Symbolic Interactionism", *The Qualitative Report*, Vol. 16, No. 4 , pp.1063-1080.
- Al-Khalil, S.S., Dahiyat, S.E., and Al-dalahmeh Mahmoud Ali., (2014). "Intellectual Capital Development and its Effect on Technical Innovation in Banks Operating in Jordan", *Journal of Management Research*, Vol. 6, No. 1, pp. 211-221.
- Avlonitis, G.J., Papastathopoulou, P.G., and Gounaris, S.P., (2001). "An empiricallybased typology of product innovativeness for new financial services: Successand failure scenarios", *Journal of Product Innovation Management*, Vol.18, pp. 324-342.
- Babatunde, B. O., & Adebisi, Y. S. (2011). Innovation Management and Organisation Development. Empirical Study of Nigeria Banking System. BRAND. Broad Research in Accounting, Negotiation, and Distribution, Vol. 2, No. 1, pp. 1-7.
- Babbie, E.R., (2008). "The basics of social research", Belmont, CA: Thomson/Wadsworth.
- Bertaux, D., (1981). "From the life-history approach to the transformation of sociological practice", *In Biography and society: The life history approach in the social sciences*, ed. by D. Bertaux, pp. 29–45, London: Sage.

- Birks, M., Mills J., (2015). "Grounded theory: a practical guide". 2nd ed. London: SAGE.
- Blazevic, V., and Lievens, A., (2004). "Learning during the new financial service innovation process - Antecedents and performance effects", *Journal of Business Research* , Vol. 57, pp. 374-391.
- Brown, S.C., Stevens, R.A., Troiano, P.F., and Schneider, M.K., (2002)."Exploring complex phenomena: Grounded theory in student affairs research", *Journal of College Student Development*, Vol.43, No. 2, pp.173–183.
- Bryman, A., (2004). "Social research methods", (2nd ed). Oxford: Oxford University Press.
- Bouwen, R., and Fry, R., (1991). "Organizational Innovation and Learning: Four Patterns of Dialog between the Dominant Logic and the New Logic", *International Studies of Management and Organization* , Vol. 21, No. 4, pp. 37-51.
- Butler, A.E., Copnell, B., and Hall, H., (2018). "The development of theoretical sampling in practice". *Collegian*.
- Caceres R.C., Paparoidamis N.G., (2007). "Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty". *European Journal of Marketing*, Vol. 41, No. 7, pp. 836–867.
- Chakravarty, A., Grewal, R., and Sambamurthy, V., (2013). "Information technology competencies, organizational agility, and firm performance: Enabling and facilitating roles", *Information Systems Research*, Vol. 24, No. 4, pp. 976-997.
- Charmaz, K., (2000). Constructivist and objectivist grounded theory. *Handbook of qualitative research*, Vol. 2, pp. 509-535.
- Chaudhry, N., Roomi, M. and Dar, S., (2020). "Barriers to financial product innovation in Islamic banks in Pakistan: An interpretive structural modeling approach", *Journal of Islamic Accounting and Business Research*, Vol. 11, No. 2, pp. 346-360.
- Chen, C.J., Huang, J.W., (2009). "Strategic human resource practices and innovation performance- The mediating role of knowledge management capacity", *Journal of Business Research*, Vol. 62, , pp. 104-114.
- Chen, H.J., and Lin, T.C., (2009). "Exploring source of the variety in organizational innovation adoption issues - An empirical study of managers' label on knowledge management project issues in Taiwan", *Expert Systems with Applications*, Vol. 36, No. 2, 1380-1390.
- Cheng, C.C., Chen, J.-S., and Tsou, H.T., (2012). "Market-creating service innovation: verification and its associations with new service development and customer involvement", *Journal of Service Marketing* , Vol. 26, No. 6, pp. 444-457.
- Chen, J.-S., and Tsou, H.-T., (2012). "Performance effects of IT capability, service process innovation, and the mediating role of customer service", *Journal of Engineering and Technology Management*, Vol. 29, No. 1, pp. 71–94.
- Chesbrough, H., (2003). "Open Innovation: The New Imperative for Creating and Profiting from Technology", Harvard University Press, Cambridge, Mass.
- Cooper, R.G. and Edgett, S.J., (1996). "Critical success factors for new financial services", *Marketing Management*, Vol. 5 No. 3, pp. 26-37.
- Crawford, A., Weber, M.R., and Lee, J., (2020). "Using a grounded theory approach to understand the process of teaching soft skills on the job so to apply it in the hospitality classroom", *Journal of Hospitality, Leisure, Sport and Tourism Education*, Vol. 26, pp.100-239.
- Creswell, J.W., (2007). "Qualitative inquiry and research design: Choosing among five approaches", (2nd ed.). Sage Publications, Inc.
- Creswell, J.W., and Miller, D.L., (2000). "Determining Validity in Qualitative Inquiry", *Theory into Practice*, Vol. 39, pp. 124-130.

- Damanpour, F., and Aravind, D., (2011). "Managerial Innovation: Conceptions, Processes, and Antecedents", *Management and Organization Review*, Vol. 8, No. 2, pp. 423-454.
- Das, P., Verburg, R., Verbraeck, A. and Bonebakker, L., (2018). "Barriers to innovation within large financial services firms: An in-depth study into disruptive and radical innovation projects at a bank", *European Journal of Innovation Management*, Vol. 21 No. 1, pp. 96-112.
- DAVILA, T., & EPSTEIN, M. (2006). J., SHELTON, R. Making Innovation Work: How to Manage It, Measure It, and Profit from It.
- de Brentani, U., (1991). "Success Factors in Developing New Business Services", *European Journal of Marketing*, Vol. 24, No. 2, pp. 33-59.
- de Brentani, U., (1993). "The new product process in financial services: strategy for success", *International Journal of Bank Marketing*, Vol. 11, pp. 15– 21.
- Denzin, N.K., (1978). "The Research Act: A Theoretical Introduction to Sociological Methods", New York: McGraw-Hill.
- Dereli, D.D., (2015). Innovation management in global competition and competitive advantage. *Procedia-Social and behavioral sciences*, 195, 1365-1370.
- Dobni, C.B., (2008). "Measuring innovation culture in organizations: The development of a generalized innovation culture construct using exploratory factor analysis", *Enterprise and Innovation*, Vol. 11, No. 4, pp. 539 - 559.
- Drew, S.A.W., (1995). "Accelerating innovation in financial services", *Long Range Planning*, Vol. 28, No. 4, pp. 11-21.
- Drucker, P.F., (2003). Yenilikçilik disiplini. Çev: Ahmet Kardam, Harvard Business Review Dergisinden Seçmeler: Yenilikçilik, 119-134.
- Easingwood, C.J., and Storey, C., (1991). "Success Factors for New Consumer Financial Services", *International Journal of Bank Marketing*, Vol. 9, No.1, pp. 3-10.
- Edgett, S.J., (1996). "The new product development process for commercial financial services", *Industrial Marketing Management*, Vol. 25, pp. 507-515.
- Flick, U., (2014). "An Introduction to Qualitative Research. 5th edition, SAGE Publications".
- Froehle, C.M., and Roth, A.V., (2007). "A resource-process framework of new service development", *Production and Operations Management*, Vol. 16, No. 2, pp. 169-188.
- Froehle, C.M., Roth, A.V., Chase, R.B., Voss, C.A., (2000). "Antecedents of New Service Development Effectiveness: An Exploratory Examination of Strategic Operations Choices", *Journal of Service Research*, Vol. 3, No. 1, pp. 3-17.
- Glaser, B., (1978). Theoretical Sensitivity. Sociology Press, Mill Valley, CA.
- Glaser, B. G., (1992). Basics of grounded theory analysis. Mill Valley, CA: Sociology Press.
- Qureshi, H., (2018). "Theoretical Sampling in Qualitative Research: A Multi-Layered Nested Sampling Scheme", *International Journal of Contemporary Research and Review*. Vol. 9.
- Goulding, C., (1999). "Grounded Theory: Some Reflections on Paradigm, Procedures and Misconceptions", Wolverhampton: Wolverhampton Business School, University of Wolverhampton.
- Goulding, C., (2001). "Grounded Theory: A Magical Formula or a Potential Nightmare", *The Marketing Review*, Vol. 2, pp. 21-34.
- Goulding, C., (2002). "Grounded Theory: A Practical Guide for Management, Business and Market Researchers", London: Sage Publications.
- Guest, G., Bunce, A., and Johnson, L., (2006). "How Many Interviews Are Enough? Field Methods", Vol. 18, No. 1, pp. 59–82.

- Hatch, M.J., (2018). "Organization theory: modern, symbolic, and postmodern perspectives", 4th edition, Oxford, Oxford University Press.
- Haghnejad, A., Samadi, S., Nasrollahi, Kh., Azarbayjani, k., Kazemi, I., (2019). "Market Power and Efficiency in the Iranian Banking Industry", *Emerging Markets Finance and Trade*.
- Hartline, M.D., Maxham III, J.G., McKee, D.O., (2000). "Corridors of influence in the dissemination of customer-oriented strategy to customer contact service employees", *Journal of Marketing*, Vol. 64, No. 2, pp. 35-50.
- Hertog, P.D., Aa, W.V., and de Jong, M.W., (2010). "Capabilities for managing service innovation:towards a conceptual framework", *Journal of service Management* , Vol. 21, No. 4, pp. 490-514.
- Iren, P., and Tee, K., (2018). "Boardroom diversity and innovation in the UAE banks", *International Journal of Innovation Management*, Vol. 22, No. 3, pp. 185-290.
- Jantunen, S., and Gause, D.C., (2014). "Using a grounded theory approach for exploring software product management challenges", *Journal of Systems and Software*, Vol. 95, pp. 32–51.
- Jiang, J. , Sh. , Zhao, Sh., (2012). "Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms", *The International Journal of Human Resource Management*, Vol. 23, No. 19, pp. 4025-4047.
- Jimenez-Jimenez, D., and Sanz-Valle, R., (2011). "Innovation, organizational learning, and performance", *Journal of Business Research* , Vol. 64, pp. 408-417.
- Jin, D., Chai, K., and Tan, K., (2010). "New service development success factors: A managerial perspective", *IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, pp. 2009 – 2013.
- Johne, A., and Harborne, P., (2003). "One leader is not enough for major new service development: Results of a consumer banking study", *The Service Industries Journal*, Vol. 23, No. 3, pp. 22–39.
- Jong, J., and Vermeulen, P.A., (2003). "Organizing successful new service development:a literature review", *Management Decision* , Vol. 41, No. 9, pp. 844-858.
- Jonsen, K., and Jehn, K.A., (2009). "Using triangulation to validate themes in qualitative studies", *Qualitative Research in Organizations and Management: An International Journal*, Vol. 4, No. 2, pp. 123–150.
- Johne, A. and Storey, C., (1998). "New service development: a review of the literature and an annotated bibliography". *European Journal of Marketing*, Vol. 32, No. 3/4, pp.184-251.
- Kahn, K.B., Barczak, G., and Moss, R., (2006). "Dialogue on Best Parctices in New Product Development, Establishing an NPD Best Practices Framework", *Journal of Product Innovation Management* , Vol. 23, pp.106-116.
- Kashefi, A., Abounoori, E., (2018). "Banking efficiency effect on economic growth of provinces in Iran", *International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2017)*.
- Kiziloglu, M., (2015). "The Effect of Organizational Learning on Firm Innovation Capability: An Investigation in the Banking Sector", *Global Business and Management Research: An International Journal*, Vol. 7, No. 3, pp. 17-33.
- Kohli A. K. and Jaworski B.J., (1990). "Market orientation: The construct, research propositions, and managerial implications", *Journal of Marketing*, Vol. 54, pp. 1 – 18.
- Kwateng, K.O., Obiri-Yeboah, K., Sarpong, F. N., (2013). "Emerging trends of Electronic Banking in Ghana", *Information and Knowledge Management*, Vol. 13, No. 6, pp. 47-54.
- Lievens, A., Moenaert, R., and Jegers, R., (1999). "Linking communication to innovation success in the financial services industry: a case study analysis", *Journal of Service Management* , Vol. 10 , No. 1, pp. 23 - 48.

- Lovelock, C., and Wirtz, J., (2004). *Services Marketing: People, Technology and Strategy*, (5th Ed.), Pearson Prentice Hall, New Jersey.
- Mahmoud, M., Blankson, C., Owusu-Frimpong, N., Nwankwo, S. and Trang, T., (2016). "Market orientation, learning orientation and business performance: The mediating role of innovation", *International Journal of Bank Marketing*, Vol. 34, No. 5, pp. 623-648.
- Maree, L., McKenzie, K., (2015). "Exploring the elements of strategic innovation drivers in South African banks", *Journal of Economic and Financial Sciences*, Vol. 8, No. 2, pp. 604-620.
- Martovoy, A., and Mention, A.-L., (2016). "Patterns of new service development processes in banking", *International Journal of Bank Marketing*, Vol. 34, No. 1, pp. 62-77.
- Martovoy, A., Mention, A.-L., and Torkkeli, M., (2012). "Role of the inbound open innovation in banking services", *Proceedings of the 2nd Innovation for Financial Services Summit*. Luxembourg.
- McAdam, R., McClelland, J., (2002). "Individual and team based idea generation within innovation management: organizational and research agendas", *European Journal of Innovation Management*, Vol. 5, No. 2, pp. 86-97.
- Melton, H.L., and Hartline, M.D., (2010). "Customer and Frontline Employee Influence on New Service Development Performance", *Journal of Service Research*, Vol. 13, No. 4, pp. 411-425.
- Menor, L.J. and Roth, A.V., (2007). "New service development competence in retail banking: construct development and measurement validation", *Journal of Operations Management*, Vol. 25, pp. 825-46.
- Menor, L.J., Tatikonda, M., and Sampson, S. E., (2002). "New service development: Areas for exploitation and exploration", *Journal of Operations Management*, Vol. 20, pp. 135-157.
- Mention, A.L., (2010). "Co-operation and co-opetition as open innovation practices in the service sector: Which influence on innovation novelty?", *Technovation*, Vol. 31, pp. 44-53.
- Meyer, M.H., and DeTore, A., (1999). "Product Development for Services. The Academy of Management Executive", Vol. 13, No. 3, pp. 64-76.
- Naranjo-Gil, D., (2009). "The influence of environmental and organizational factors on innovation adoptions: Consequences for performance in public sector organizations", *Technovation*, Vol. 29, No. 12, pp. 810-818.
- Nejad, M., (2016). "Research on financial services innovations. *International Journal of Bank Marketing*", Vol. 34, No. 7, pp. 1042-1068.
- Nekrep, M., (2013). "Innovativeness of banks and insurance companies in developing markets: Guidelines for success, *Our Economy*". Vol. 59, No. 3-4, pp. 39-49.
- Oldenboom, N., and Abratt, R., (2000). "Success and failure factors in developing new banking and insurance services in South Africa", *International Journal of Banking Marketing*, Vol. 18 No. 5, pp. 233-45.
- Parker, L. and Roffey, B., (1997). "Back to the Drawing Board: Revisiting Grounded Theory and the Everyday Accountant's And Manager's Reality." *Accounting, Auditing and Accountability Journal*, Vol. 10, No. 2, pp. 212-247.
- Patton, M.Q., (2002). *Qualitative Research and Evaluation Methods*, (3rd ed.). Thousand Oaks, CA, USA: Sage Publications.
- Pearson, A.W., (1991). *Managing innovation: an uncertainty reduction process*. Managing innovation, 18-27.
- Plakoyiannaki, E., (2005). "How Do Organizational Members Perceive CRM? Evidence from a U.K. Service Firm". *Journal of Marketing Management*, Vol. 21, No. 3/4, pp. 363-392.
- Powell, R., (1999). "Recent trends in research: a methodological essay", *Library and Information Science Research*, Vol. 21, No. 1, pp. 91-119.

- Prajogo, D. I., and Ahmed, P. K. (2006). "Relationships between innovation stimulus, innovation capacity, and innovation performance", *R&D Management*, Vol. 36, No. 5, pp. 499-515.
- Qureshi, H., (2018). "Theoretical Sampling in Qualitative Research: A Multi-Layered Nested Sampling Scheme". *International Journal of Contemporary Research and Review*. Vol. 9.
- Rega, F. Gi., (2017). "The bank of the future, the future of banking - An empirical analysis of European banks", *SSRN Electronic Journal*.
- Ros, E.M., and Sintes, F.O., (2012). "Training plans, manager's characteristics and innovation in the accommodation industry", *International Journal of Hospitality Management*, Vol. 31, No. 3, pp. 686-694.
- Saldana, J., (2013). *The coding manual for qualitative researchers*, 2nd edition., Sage, London.
- Scarborough, H., (2003). "Knowledge management, HRM and the innovation process", *International Journal of Manpower*, Vol. 24, No. 5, pp. 501-516.
- Scornavacca, E., and Hoehle, H., (2007). "Mobile banking in Germany: a strategic perspective", *Int. J. Electronic Finance*, Vol. 1, No. 3, pp. 304-320.
- Scott, C., and Medaugh, M., (2017). "Axial Coding. The International Encyclopedia of Communication Research Methods", pp. 1-2.
- Seegy, U., Gleich, R., Wald, A., Mudde, P., and Motwani, J., (2008). "The management of service innovation: an empirical investigation", *International Journal of Service and operations Management*, Vol. 4, No. 6, pp. 672-686.
- Şimşek, M. Ş., and Akin, H.B., (2003). *Teknoloji yönetimi ve örgütsel değişim*. Ankara: Çizgi Kitabevi.
- Singer, D., Avery, A., and Baradwaj, B., (2008). "Management innovation and cultural adaptivity in international online banking", *Management Research News*, Vol. 31, No. 4, pp. 258-272.
- Singh Panesar, S., and Markeset, T., (2008). "Development of a framework for industrial service innovation management and coordination", *Journal of Quality in Maintenance Engineering*, Vol. 14, No. 2, pp. 177-193.
- Song, L.Z., Song, M., and Di Benedetto, C.A., (2009). "A Staged Service Innovation Model", *Decision Sciences*, Vol. 40, No. 3, pp. 571-599.
- Storey, C.D., and Easingwood, C.J., (1996). "Determinants of new product performance: A study in the financial service sector", *International Journal of Service Industry Management*, Vol. 7, No.1, pp. 32-55.
- Storey, C., Cankurtaran, P., Papasthopoulou, P., and Hultink, E.J., (2016). "Success factors for service innovation: a meta-analysis", *Journal of Product Innovation Management*, Vol. 33, No. 5, pp. 527-548.
- Strauss, A., Corbin, J.M., (1990). *Basics of qualitative research, Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Strauss, A., and Corbin, J., (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. London: Sage Publications.
- Takhar, and Ghorbani, A., (2014). *Market Research Methodologies: Multi-Method and Qualitative Amandeep Approaches* A volume in the *Advances in Marketing, Customer Relationship Management, and E-Services (AMCRMES) Book Series*.
- Tan, M. and Teo, T.S.H., (2000). "Factors influencing the Adoption of Internet Banking", *Journal of Association for Information Systems*: Vol. 1, No. 1.
- Taghizadeh, S., Rahman, S. and Hossain, M., (2018). "Knowledge from customer, for customer or about customer: which triggers innovation capability the most?", *Journal of Knowledge Management*, Vol. 22 No. 1, pp. 162-182.

- Taherparvar, N., Esmailpour, R., and Dostar, M., (2014). "Customer knowledge management, innovation capability and business performance: a case study of the banking industry", *Journal of Knowledge Management*, Vol. 18, No. 3, pp. 591–610.
- Tahir, S., Shah, S., Arif, F., Ahmad, G., Aziz, Q., and Ullah, M., (2018). "Does financial innovation improve performance? An analysis of process innovation used in Pakistan", *Journal of Innovation Economics and Management*, Vol. 27, No. 3, pp. 195-214.
- Thomke, S., (2003). "R and D comes to services: Bank of America's pathbreaking experiments", *Harvard Business Review*, Vol. 81 No. 4, pp. 70-79.
- Tipu, S., (2011). "Academic publications on innovation management in banks 1998-2008 research note", *Innovation: Management, Policy and Practice*, Vol. 13, No. 2, pp. 236 -260.
- Tipu, Awais Ahmad, S., (2014). "Employees' involvement in developing service product innovations in Islamic banks: An extension of a concurrent staged model", *International Journal of Commerce and Management*, Vol. 24 No. 1, pp. 85-108.
- Turulja, L., and Bajgorić, N., (2016). "Innovation and information technology capability as antecedents of firms' success", *Interdisciplinary Description of Complex Systems*, Vol. 14, No. 2, pp.148-156.
- Uzkurt, C., Kumar, R., Kimzn, H. S., and Eminoglu, G., (2013). "Role of innovation in the relationship between organizational culture and firm performance: A study of the banking sector", *European Journal of Innovaton Management* , Vol. 16, No. 1, pp. 92-117.
- Vermeulen, M., (2004). "Managing product innovation in financial services firms", *Scandinavian Journal of Management*, Vol. 18, pp. 155-71.
- Vollstedt, M. , Rezat, S., (2019). *An Introduction to Grounded Theory with a Special Focus on Axial Coding and the Coding Paradigm*.
- Wang, R.-T., and Lin, C.-P., (2012). "Understanding innovation performance and its antecedents: A socio-cognitive model", *Journal of Engineering and Technology Management* , Vol. 29, 2pp. 10-225.
- Wang, H., Yen, Y., Tsai, Ch., Lin Y., (2008). "An empirical research on the relationship between human capital and innovative capability: A study on Taiwan's commercial banks", *Total Quality Management*, Vol. 19, No. 11, pp. 1189–1205.
- Wang, Q., Zhao, X., and Voss, C., (2016). "Customer orientation and innovation: A comparative study of manufacturing and service firms", *International Journal of Production Economics*, Vol. 171, pp. 221–230.
- Winne, S.D., Sels, L., (2010). "Interrelationships between human capital, HRM and innovation in Belgian start-ups aiming at an innovation strategy", *The International Journal of Human Resource Management*, Vol. 21, No. 11, pp. 1863-1883.
- Yin, R.K., (2003), *Case study research. Design and methods*. London: Sage.
- Youndt M.A., Snell S.A., Dean, J.W., Lepak, D.P., (1996). "Human resource management, manufacturing strategy and firm performance", *Academic Management Journal*, Vol. 46, No. 6, pp. 740-751.
- Zhang, Y., Sun, J., Yang, Z., Wang, Y., (2020). "Critical success factors of green innovation: Technology, organization and environment readiness", *Journal of Cleaner Production* .

Appendix A.

Table A1. Interview subject description

Subject ID	Role	Experience in financial sector
A1	governor of CBI (Central Bank of Iran), CEO in state and private banks	35 years
A2	CEO in state banks	32 years
A3	CEO and board of state and Privet banks and the member of The Money and Credit Council (MCC)	24 years
A4	CEO And board of state and Privet banks	26 years
A5	CEO And board of state and Privet banks	17 years
A6	Head of Department in state bank	19 years
A7	Head of Department in state and private banks	20 years
A8	mid-level management experience in state banks	16 years
A9	mid-level management in private banks	15 years
A10	mid-level management in private banks	17 years
A11	mid-level management experience in state banks	17 years
A12	head or member of NSD project team	12 years
A13	head or member of NSD project team	12 years
A14	head or member of NSD project team	11 years
A15	head or member of NSD project team	10 years