

A HOLISTIC APPROACH TO INNOVATION MANAGEMENT IN BANKING: A REVIEW

Vesna Tornjanski¹, Mladen Čudanov², Gheorghe Săvoiu³

¹Eurobank a.d. Belgrade, Serbia, e-mail: vtornjanski@gmail.com

²University of Belgrade, Faculty of organizational sciences, Serbia, e-mail: mladenc@fon.bg.ac.rs

³University of Pitesti, Romania, e-mail: gsavoiu@yahoo.com

Abstract. *This article analyses theoretical background of innovation and frameworks to guide managers in banking towards a holistic approach for successful innovation management in a highly dynamic and competitive business environment. We aim to provide a holistic viewpoint by eclecticism in review of multiple approaches. With regards to a holistic perspective on innovation management in banking, the paper provides strong foundation to better understanding the dynamics in banking and facilitates exploring of future business opportunities for sustainable competitive advantage in banking, which is particularly significant for this sector.*

Keywords: *innovation management, banking, holistic approach, open innovation, strategic innovation.*

1. INTRODUCTION

Banking industry is facing the numerous challenges in recent decades as a result of mainly external forces that are changing the market at high speed. Phenomena such as: volatile business environment, dynamic customer needs, regulatory pressures, rapid technological development, fierce competition and shorter product and service life cycles are trends that shaping banking sector in the 21st century. In order to sustain competitive, banks need to understand these trends and to redefine existing business strategies without any delay [1, 2].

Innovation is widely accepted as the core of a competitive economy [3], taking into account that has always represented a key role in sustainability and development of any organization, as an inseparable part of organizational ambidexterity. Innovation implies a set of knowledge and actions that leads to creation of new products, services, processes and markets, or expansion existing ones. As such, innovation is recognized as one of the competitive forces of an organization [4, 5].

Also, it has been argued that organizations may achieve a better business performance with the clear and unambiguous innovation strategies [6]. Depending on how well organizations set up and implement product and/or service development activities and thus accomplish continuous innovation success is influenced by their organizational innovativeness [7, 8].

In the last half-century, many researchers have produced an extensive scientific overview regarding the innovation. Some studies are based upon innovation typologies such as technological innovation [9, 10], product and process innovation [11], service innovation [12] and strategic innovation [13, 14], while some studies are focused on economics of research and development, innovation diffusion and innovation output [15 - 17]. Many theories such as institutional theory, cognitive theories, transaction cost

economics, socio-technical approaches, market orientation and resource-based view theory [19] have provided important theoretical findings to the innovation theory. Also, research findings on contributing factors to successful / failed innovations in financial services [21], approaches to new product development [22] or customers' involvement in the development process [23] have contributed to the innovation theory and practice in certain aspects of service innovation. However, none of these theories represent a comprehensive framework that guides managers toward successful innovation management considering a holistic perspective. Also, scholars that deal with the innovation management in service sector assert that major gaps in understanding development of service innovations in financial service sector still exist [20].

Despite the fact that prior studies have provided significant contribution to the innovation, most research is focused on particular aspects of innovation and accordingly does not provide a holistic framework to innovation management. Moreover, the previous literature suggests that managing innovation is a complex and risky process [18], hence requires systematic and more holistic approach to innovation management in order to be successful in innovation outcomes and organizational performances.

The aim of this paper is to extend and deepen the theoretical background of innovation and to provide an overview of conceptual frameworks for innovation management from holistic perspective to facilitate discovering future business opportunities for sustainable competitive advantage in banking industry.

2. LITERATURE REVIEW

Innovation implies an idea, object or fashion experienced as new by organization, units or individual [53]. Perceiving innovation at the organizational level, innovation can be defined as a new idea, product, service, process, technology and structure. Earlier studies adopt innovation as a process that encompasses generation, acceptance, adoption and implementation of novelty [54, 55]. In the context of organizational innovation, it includes research, development, and implementation of new ideas and behaviours [58].

Innovation management represents the implementation of inventiveness within organization, and in essence it illustrates a certain pattern of organizational change [24]. Also, innovation management is defined "as the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended

to further organizational goals” [25]. To achieve successful innovation management, it has been argued that organizations have to achieve valuable performance and integration of the domains that imply innovation strategy, management of creativity and ideas, selection management, portfolio management, implementation management and human resource management [48].

Considering the ongoing globalization of economics and markets that accelerate innovation processes and due to significant changes in financial service sector, holistic approach to innovation management is recognized as highly valuable to face the challenges in a dynamic and complex business environment. Some researchers argue that the holistic economic approach of innovation systems provides a fruitful basis for better understanding the dynamics of service innovation [26].

Some authors have developed a pilot holistic model for service industry, drawing innovation as interaction of internal and external stakeholders [27]. The holistic model consists of two parts. One part implies managing key business activities in a targeted manner, i.e. the involvement of customer contact employees by the top management. It has been argued that customers' involvement have positive attitude to long-term relationships “to avoid the cost of starting a new relationship and thereby positively interact with contact employees” [43]. Also, the strategic focus on innovation management is supported by many scholars. Furthermore, it is considered that the successful innovation strongly depends on top management support as main activity in the innovation process [32]. The second part of the model is related to foundation of a positive climate for innovation [27]. Creating a positive innovation climate is closely associated with the organizational ability to bring together customers in the innovation process. Recently conducted empirical studies argue that customers' involvement into development of product and service innovations are much more successful than without them [28], and customers now co-create value with the enterprise more and more, taking on an active role of “prosumers” [78]. Many authors have agreed that customers need to be an integral part of a holistic innovation strategy. Moreover, literature argues that, in financial services, customers need to be in the centre of business focus [29 - 31]. However, due to changes in the business environment, engaging customers into the development process require new methods and suitable information and communication technologies to facilitate external knowledge flows into the organization, especially in financial service sector as one of the knowledge-intensive industries. Designing interface between financial service organizations and its customers simultaneously facilitates interaction with the customers and creates possibilities to collect new ideas [30].

Taking into account increasing trend towards customers' integration into the innovation processes, a new model of innovation has been recently occupied both, scientists and practitioners worldwide, i.e. open innovation model. The idea of open innovation hypothesizes that organizations cannot

innovate in isolation if they intend to be competitive. At the end of the 20th century, Chesbrough identified several factors that eroded the underpinnings of the closed innovation concept when closed innovation shifted to open innovation. Numerous examples of concept success, like Innocentive [79], illustrate theoretical framework. One factor was changed in industry and society which resulted in increased mobility of highly experienced and skilled people. The mobility of knowledge workers allowed ideas and knowledge to spill over from central R&Ds to companies of all sizes in many industries. Secondly, the development of financial structures such as private venture capital caused the innovation processes to exceed the boundaries of a company. Thirdly, shorter product life cycles, advanced technology and increasingly knowledgeable suppliers and consumers challenged the companies to profit from their internal source of knowledge. These factors affected all industries once they made a closed innovation approach no longer sustainable. As a result of these influencing factors, an open innovation approach has replaced the traditional closed innovation [33, 34].

Open innovation is defined as “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively” [35]. According to the idea of open innovation, a shift from the previously closed boundaries of an organization to a semi-permeable membrane should enable an innovation to easily move between the internal R&D and external environment. Moreover, the central role of innovation is to research new ideas that have saleable potential at the open market [36].

Following pioneering definition and researches regarding open innovation, literature on open innovation concept has covered various topics. These topics include the different forms and the degrees of organization's openness, knowledge flows, the involved parties into the innovation process, and the influence of openness on innovation performance [36, 39, 40, 41]. “Open innovation has come a long way in the past decade, in both the quantity and quality of research on the topic. The original conception of open innovation has been enhanced through inbound knowledge flows from other frameworks and theories innovation, strategy and economics. At the same time, outbound flows from open innovation have shaped and influenced innovation studies and other areas of social science research” [44]. Since its origination, the concept of open innovation has had powerful links to resource-based view of the organization, as well as the related dynamic capabilities perspective. Furthermore, there are strong links between open innovation and research on absorptive capacity [44].

Given that intellectual assets and knowledge flows became inseparable components of the new economy, open innovation is extended for the most recent definition which states that open innovation is distributed innovation process based on consciously managed knowledge flows outside an organization, using tangible and intangible mechanisms equivalent to the organization's business model [42].

While some authors emphasize that open innovation

represents the most suitable way towards creating the superior value to the customers and organization [30, 37], another underline that open innovation concept is a holistic approach to innovation management [38].

3. INNOVATION IN BANKING INDUSTRY

The lines dividing competing banks are becoming progressively indefinite, exceptionally with regard to the products and services offering. Accordingly, it becomes extremely challenging for the banks to obtain differentiation advantage over competitors, taking into account competitors can easily imitate. Consequently, competitive edge is based on the ability to provide “strategic services that are tailored to the unique requirements of clients in a timely fashion” [49]. Many authors argue that innovation represents an additional means by which banks may straighten out market performance and achieve competitive advantages at the financial market [51, 52].

Innovation in banking industry is acknowledged as an influential factor that basically changes economics of banking and the financial system in general. Also, it has been argued that innovation has the power “to enhance the efficiency of the financial systems in the performance of its core functions” [45], and accordingly to significantly contribute to the economics [45]. Financial innovation is defined as something new that brings cost reduction, risk reduction, and provides advanced products, services and instruments that fitting the financial system stakeholders’ requirements [46].

Successful innovation in the banking industry is based on the set of integrated drivers that encompass excellence, satisfaction, simplicity, sociability, differentiation, separability, innovation speed, technology use, product fit and innovative culture [64, 65].

3.1. Types of innovations in banking

Previous literature on the type of innovation in banking differentiates areas of innovation on product innovation, process innovation, and risk-shifting innovation [45]. In addition to this, John White, America’s Banking Lead of the Institute for Business Value extends the innovation types in banking to the operations innovation, business and enterprise model innovation [50]. Some authors state that most oft-recurring types of innovation are product, process, administrative, technical, radical and incremental innovation [56].

Product innovation includes new products or services introduced by a bank to meet customers' needs [58]. Banks that are active innovators of products use organizational systems substantially different and more suitable for developing new products in comparison to the less active product innovators banks. “Active product innovator banks have also progressed considerably in opening up traditionally tight operating structures in order to initiate product innovation” [57].

Process innovation implies new elements introduced into a bank's operations [58]. Banking industry needs a revolutionary

approach to reduce time to market. Accordingly, business has to be viewed not in terms of functions or products, but rather as key processes. Process innovation incorporates the employment of a business process view with the utilization of innovation to key processes to achieve large-scale cost reduction and developments in flexibility and quality at service level [59]. Some empirical studies show that local banking development influences the probability of process innovation, but weak affects the product innovation [47].

Banks that aim at enhancing shareholder wealth have to concentrate on managing underlying risks and operations. Risk-shifting innovation refers to unbundling of the particular elements and risks of certain mechanisms that should be further integrated using diverse combinations [45], while operations innovation focuses on technologies and business practices that will allow banking operations to innovate in line with the predefined business strategy [60].

Administrative innovations include organizational structure and administrative process. This type of innovation represents the innovativeness that are indirectly related to the organization's basic business operations, while significantly influences a management systems [54].

Since business environment has changed over the last 30 years, banking sector is undergoing a period of transformation that results in adoption of new business models, suitable to deal with the uncertainty and complexity. Business model innovation becomes extremely valuable for the banking industry, since its affecting long-term success of a bank. Moreover, it has been argued that innovation in business models becomes a more important than innovation in product and service as factors that foster sustainable competitive and growth of an organization [61].

3.2. Innovation culture in banking

Most organizational scholars perceive organizational culture as powerful weapon to achieve better business performance and enable long-term effectiveness of organizations [62]. “Creating a more innovative culture requires a change in the system, because people’s beliefs about innovation are related to beliefs about other aspects of the system” [66].

Leading organizations cherish an innovative culture and entrepreneurialism by having strong support from strategic management and structured internal processes which promote networking, collaboration and risk-taking among employees. Also, these organizations have a clear performance management structure measures and rewards for desirable behaviors which encourage innovation [63]. The innovative culture within an organization incorporates an innovative vision and leadership, style of management, development of idea creation, flexible organizational structure and advocates organizational support for innovativeness [65].

However, due to a risk-averse culture, short-term focus that is typical for banking industry, siloes approach to operations and lack of internal capability, banking sector is not recognized as the most innovative industry [63]. Past was characterized with a tight bureaucratic organizational structure with high levels of centralization and standardization, which

resulted in inflexible business models. Yet, today's banking industry confronts to a highly competitive business environment that requires quick and effective response to rapid external changes [1, 67]. Although organizational culture in the banking industry is changing, there are still barriers that discourage innovative culture within the banking sector. Organisation culture and organisation silos are viewed as very important barriers to innovation, particularly for large and medium size banks. In contrast, small banks tend to suffer less from cultural issues and organisation silos [68].

Development of innovation culture in banking sector, and particularly in large banks represents a challenge task to the strategic management, since banks have to have strong focus on risk management and to take into account regulations when innovating. Also, innovation culture development implies a set of activities with strong support of senior management and a lot of time to innovative culture flourishes [68].

Key to successful adoption of innovative culture is the inclusion of all employees in the innovation process. Also, recognition and rewarding contributors magnifies the awareness of the significance. "Innovation departments can play a role in developing the organisation culture but there is still a wide variance in the use and structure of innovation departments, even in the most innovative banks" [68] worldwide.

3.3. Technologies and innovations in banking

Information and communication technologies (hereafter: ICT) represent a strategic competence and significant driver of change at most companies since the end of the 20th century [69]. The role of ICT evolved over the last 20 years. Traditional "back office" function is shifting toward a more "strategic" role enabling both, supporting an existing business strategies and shaping new ones [70].

Following growing consumer requirements and strong competition, banks are investing a lot into PC banking technology. As a result, banks are introducing new technologies that facilitate consumers to do financial operations at more comfortable and accessible way [49]. Significant innovations related to technologies that marked the last decades are ATMs, internet banking, telephone banking, e-banking and e-money [49, 71]. Recently, m-banking has been recognized as an extraordinary opportunity for a new mode of e-commerce, and major factor that influences banking performance and business at a high speed [72]. Besides of innovations of banking distribution channels, innovations of internal banking systems exercised strong influence on performance and profitability of banks, too. Among all, customer relationship management and bank management technologies are recognized as the most featured technologies [49, 73].

According to the Efma and Infosys survey results of over 150 banks worldwide, IT systems present the most significant barrier for banks of all sizes when innovation is in question. It has been found that one of the major issue with IT systems is that they are silo based, which implies that integration is complex and difficult process. Banks argue that "silo based

systems had the most impact in terms of time to market, cost of innovations and functionality of innovations" [68].

Over last few years, there is a consistent trend showing that banks are more innovative in distribution channels than in other areas of business. Also, based on survey results, the highest priority of IT investments in the forthcoming period will be in channels (26%), followed by products innovation (21%), while process innovation is in the third place of priority with 18%. Customer service and experience innovation, sales and marketing innovation and other innovation have lower priority of planned IT investments [68]. Planned IT investment areas are presented in Figure 1.

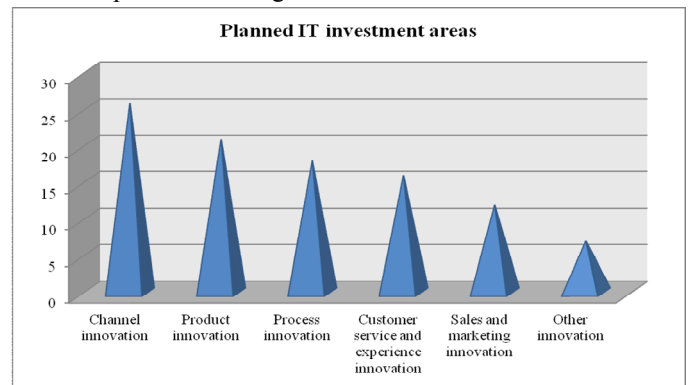


Fig. 1 PlannedIT investment areas in banking sector [68]

Overall, innovations in terms of technologies will represent investments with the capabilities for banks to launch products and services faster, with the features such as personalized products using multiple channels. "Enterprise-wide systems can support these capabilities, and a componentized approach to deployment of these systems can reduce risk and make the exercise more practical" [68].

4. TOWARDS A HOLISTIC APPROACH TO INNOVATION MANAGEMENT IN BANKING

Innovation management represents a vital process for banking industry. Taking into account that innovation process encompasses a number of business activities undertaken to carry out the innovation into market, it has been noticed that in the extremely volatile and uncertain business environment, innovation management requires new forms of managing the process. Accordingly, a holistic and systematic approach to management innovation along with the development and adoption of effective implementation mechanism and structures, are elements that should be the basis for managing innovation to create significant improvements in the value creation to all corresponding stakeholders. Moreover, effective external linkages focused on generating a portfolio of ideas should be in the focus of any organization, yet banking particularly [1, 74].

Long-term vision to holistic approach of innovation process lies in "an interactive model with feedback loops and interactions between different activities" [1], by shifting from linear to nonlinear process that requires corresponding innovation strategy [75]. Banks have recently shifted its focus

towards innovation strategy, which is recognized as the most significant strategic tool of innovation, by focusing on establishment of a clear set of objectives, processes and innovation performance metrics. Due to wide range and various types of innovation areas, innovation strategy allows banks to effectively prioritize its resources and it is confessed to be the essential for banking [68].

Fasnacht has developed a conceptual framework regarding managing innovation that is based on open innovation model for financial services. The model implies three basic principles: a transition strategy from a closed to an open innovation model, dynamic managerial practices, and appropriate corporate culture of open innovation [1]. The model emphasizes shifting from vertical organizational structure to structure that is founded on openness, flexibility and customer-centric principles. According to the authors, strengthening trust within an organization and intensifying partnerships with external stakeholders becomes increasingly important in an interconnected world. Also, employees and customers are recognized as two most valuable assets of the business in financial services. [1, 31].

Many organizations in banking industry rely on an ad hoc and unstructured innovation approaches that often results in incremental developments. To this end, a framework that provides outcomes driving a growth takes into account seven perspectives: a managed innovation process, strategic alignment, industry foresight, customer insight, core technologies and competencies, organizational readiness and disciplined implementation [76].

A holistic observation connects theme of this article with the trend observed by Hagel and Singer [77], where most large corporations comprise of three bundled, but essentially separate parts:

- Customer relations management
- Product innovation
- Infrastructure management.

In that context, it is possible for organizational structures in banking industry to increase distinction of these three parts, ranging from changes in departmentalization [80] to complete transformation to internal network [81]. That trend is observed at the example of Swiss private banking [82].

5. CONCLUSION

As the global marketplace is characterized by intensive political, economic, social, technological and demographic movements, change became a ubiquitous and decisive, creating equally possibilities and threats to the banking sector. Accordingly, a holistic approach to management innovation provides strong foundation to better understanding the dynamics in banking and represents a valuable instrument to face the challenges in volatile business environment.

Many authors argue that competing on innovation differentiation facilitates strengthening position at the highly competitive marketplace. To achieve better innovation performance in banking, integrated drivers such as excellence,

simplicity, sociability, satisfaction, differentiation, separability, innovation speed, technology use, product fit and innovative culture should be incorporated into an organization and all areas of banking business.

Literature on the type of innovation in banking differentiates areas of innovation on product innovation, process innovation, risk-shifting innovation, operations innovation, and business and enterprise model innovation. Among all, business model innovation is recognized as extremely valuable for the banking industry, since its addressing long-term sustainability and growth of a bank. Also, banks have recently shifted its focus towards innovation strategy by focusing on establishment of a clear set of objectives, processes and innovation performance metrics.

The literature review introduced in this paper provides frameworks that guide managers toward successful innovation management considering a holistic and systematic approach, with the aim to facilitate new business opportunities for sustainable competitive advantage in banking. Conceptual framework towards holistic innovation management that is based on open innovation model for financial services suggests three basic principles to be taken into account in the process of transformation: a passing strategy from a closed to an open innovation model, dynamic managerial practices, and corresponding innovation culture that fosters innovation blooming. Introducing an innovation department can play a significant role in shifting from traditional to a more innovative organization in banking.

On the other hand, a framework that takes into account seven perspectives: a managed innovation process, strategic alignment, industry foresight, customer insight, core technologies and competencies, organizational readiness, and disciplined implementation, leads to a systematic innovation management, which represents a foundation for creating radical innovations as a basis for business performances development.

There is no doubt that traditional approaches to innovation management in banking are no longer feasible. Consequently, new forms of managing innovation with a holistic view and systematic acting, along with the adoption of effective instruments and structures should be carried out in banking to create superior value to customers and stakeholders, respectively. Shifting from linear to nonlinear innovation processes, continually incorporating internal and external knowledge in the innovation process, consciously managing knowledge flows, intensifying partnerships with external stakeholders, creating a customer-centric organization and adopting the strategic innovation framework are leading principles of managing innovation, aiming at building sustainable competitive advantage and developing sustainable growth in banking.

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