A NEED FOR RESEARCH FOCUS SHIFT: BANKING INDUSTRY IN THE AGE OF DIGITAL DISRUPTION

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Abstract. *Societies and business worldwide are rapidly digitizing, breaking down country and industry boundaries, building new opportunities, and at the same time accelerating the challenges while harming long-successful business models. This is called digital disruption - a phenomenon that will substantially shape banking industry and its operations in years to come. Despite growing significance digital disruption is causing in banking, there is still a lack of interest among researchers with respect to this issue. This article aims to shed light the understanding of biggest challenges facing banking industry in the age of digital disruption. The purpose of the article is to emphasize the need for shifting a research focus towards driving issues, as well as to provide an overview of perspectives to narrow the research gap and to facilitate digital transformation of banks. The article may contribute to the academics, managers in the financial services, banking industry, IT sector and innovation management.*

Keywords: *Digital disruption, banking industry, research focus shift, digital transformation.*

1. INTRODUCTION

The financial services sector has a vital role in the contemporary world economy. The financial institutions that comprise an economy's financial system represent the brain of the economy's assuring the majority of the economy's requisites for many operations. Banking industry represents the predominant part of financial services [1] and "banks play a vital role in the economy of any country" [2].

Traditionally, banking industry is recognized as a conservative industry, very resistant to change. The past was characterized by stable business environment, clear business models and defined boundaries that made linear and predictable business and business environment resulting in the slower pace of changes, compared to other industries. Yet, the conditions have changed over the last 20 years, which has led to paramount changes in the banking industry [1].

Today's highly competitive marketplace, characterized by global economic integration into volatile business environment, shorter product and innovation life cycles, rapid growth of information technologies and electronic communication, puts pressure on banks to continuously evolve, by changing its competitive dynamics and strategic context [9]. Besides, business worldwide is rapidly digitizing, breaking down industry boundaries, building new opportunities, and at the same time accelerating the challenges while harming long-successful business models. This is called digital disruption - a phenomenon that will substantially shape banking industry and its operations in years to come [10].

However, despite growing significance digital disruption is causing in banking, there is still a lack of interest among researches with respect to this issue.

On the other hand, age of digital disruption requires businesses to swiftly and smoothly change businesses and its business processes beyond the standard level of flexibility to efficiently and effectively carry out unpredictable external and internal changes, i.e. to be agile [3]. Given that banking is not recognized as fast-changing industry, various issues and gaps arise with reference to confronted trends that shaping banking industry today. Yet, fast-changing and uncertain business environment of the new economy imposed by digital era, address new organizational capabilities and competencies [4] which imply that banks need to redefine traditional approaches of doing business, to adapt to changes faster, more efficiently and effectively [1, 5, 6, 7, 8].

Having that in mind, the article aims to shed light the understanding of biggest challenges facing banking industry in the age of digital disruption. The purpose of the article is to emphasize the need for shifting a research focus towards driving issues, as well as to provide an overview of perspectives to narrow the research gap and to facilitate digital transformation of banks.

2.DIGITAL REVOLUTION AND DIGITAL DISRUPTION

It is widely accepted that the first digital revolution, known as the third industrial revolution, has been characterised to a great extend by mass digitization, given that products, services and media were shifted into a binary, electronic pattern. Inevitably, the first digital revolution refers to the overall changes in information and communication technologies during the second half of the 20th century. However, the first digital revolution of the 80s and 90s is now nearing the end [11].

"The Second Digital Revolution is distinguished by mass atomization — or, in other words, the everyday pulling of electronic, digital content into the perceptible real world. It is, therefore, only with the arrival of the Second Digital Revolution that a frictionless transformational circle is finally being closed between the physical world of real space and the digital frontier of cyberspace" [11].

Change that occurs when new business models and new digital technologies disturb the value of existing products and services is known as digital disruption [10, 12]. Internet, massive social networks, mobile computing, smart phones, cloud-based solutions, open source, community-based tools and development practices are disruptive triggers in today's economy world. These driving forces put high pressure on business-to-business (B2B) services, and have brought serious market disruption to business-to-consumer (B2C) industries [13]. “That the digital age has circumvented traditional means of value preservation is undeniable. Porter’s grim prediction that the digital age will homogenize product offerings, push the basis of competition towards cost versus differentiation, and benefit the consumer has proven correct. As a result, the previously unassailable defensive walls built by incumbent firms to protect value were easily scaled to digitally-enabled competitors” [22].

Taking into account the amount of disturbance digital disruption is inducing today, organizations needs to estimate opportunities and threats and start creating new business alternatives, appropriate to deal with the future. Digitization offers many opportunities to organizations, such as increase cross-selling possibilities and development of strong customer relationships. It has been found that "companies that had 50% or more of their revenues from digital ecosystems and understood their end customers better than their average competitor had 32% higher revenue growth and 27% higher profit margins than their industry averages" [10] with applying of the broader view on the business ecosystems.

However, according to the research results of MIT Center for Information Systems, 32% of top managers evaluate that revenues of their organizations would be threatened due to digital disruption in the next five years. Besides, 60% of top managers are with the opinion that more time should be spent on this issue in years to come. Among all, it has been found that Airbnb, Amazon, Uber, Apple Pay, Kabbage, Venmo and banks are the most worried about the phenomenon, i.e. digital disruption [10, 14].

3. BANKING INDUSTRY IN THE AGE OF DIGITAL DISRUPTION

Digitization is changing the rules in banking. The 1990s is marked as the decade of e-commerce. In the mid of 1990s, academics and managers have shifted focus to understand the impact of internet. The initial understandings were directed to comprehend the radical changes of competition rules. As the rapidity with which competitive dynamics could shift in a specific industry accelerated, traditional strategies utilized to create, capture and preserve value were found to be inadequate. Yet, at the beginning of the 21st century social commerce [20] replaced the e-commerce, making more pressure on business operations worldwide [21, 22]. Digital disruption forces have weakened well-established business models, intensified the importance of competences and digital channels, while introduced the customer-centric era. Digitization often lowers entry barriers, creates lines between competing banks progressively indefinite and makes openings for fast-moving competitors that compete at lower cost, thus causing tumble in the industry. The phenomenon of digitization will increasingly determine which bank will create or fail to create a value for stakeholders [15].

Digitization may provide many opportunities to banks, such as: advancements of interactions among customers and internal and external stakeholders, provides higher quality of management decision making, enables new business and / or operating models, e.g. peer-to-peer innovation of products or services [16].

On the other hand, despite many opportunities digitization may provide to banks, it is found that many retail banks have struggled to invest into the projects to improve front, middle and back office banking operations. Besides, shifting from legacy systems to digital systems implies radical changes for organizations. Jim Marous has recognized emerging trends that are changing retail banking landscape nowadays:

- “Drive-to-Digital: Impacting delivery, marketing and service usage;
- Payment Disruption: New players, technologies and innovations;
- Increased Competition: Neobanks and non-traditional player pressures;
- Branch Optimization: Maybe not branchless, but certainly less branches;
- Focus on Customer 3.0: Digitally astute, social and yearning for insight;
- Breaking Down Silos: Product and data silos begin to crumble;
- Simplifying Engagement: Removal of friction and steps to engage;
- Improving Contextual Experiences: Leveraging data for improved service;
- Differentiating Brands: Avoiding commoditisation in a digital world;
- Global Innovation Perspective: Expanding view of tomorrow’s innovations” [17, 18].

Besides, the Bitcoin - digital currency is seen as potential threat to financial institutions worldwide, given that crypto currency and its basic principles challenge the well established money system [19]. Moreover, banking industry is facing with the issue with vast volumes of data that cannot be properly analyzed and managed without convenient technology to derive expected value for business. These challenges imply underlying changes that comprehend a strategy shift, change of operating models, cultural changes, and a set of new knowledge and skills to be able to cope with entire transformation that takes place in banking.

However, despite growing significance digital disruption is causing in banking, there is still lack of interest among researchers with respect to this issue, given that only 299 articles might be found on this burning issue at Google Scholar. Comparing to e.g. process improvement in banking, for which 22,500 articles is found using keywords at Scholar browser, stems that burning issue is 75 times less important than process improvement.

Figure 1 depicts the proportion of written articles / papers with respect to digital disruption and process improvement in banking.

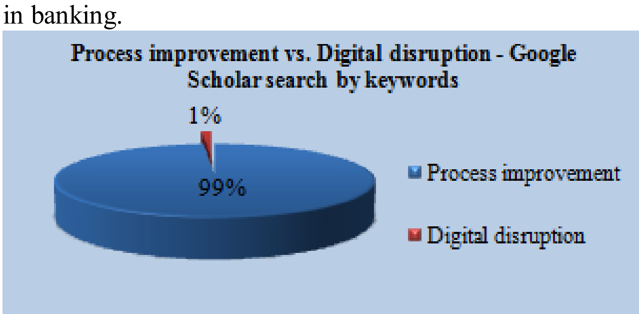

Fig. 1 Paradox in the current research focus using keywords at Google Scholar

Papers / articles that are committed to process improvement in banking have share of 99%, while digital disruption in banking seizes only 1% of written papers / articles. This paradox calls for research focus shift towards significant issues banking industry is facing today and for which it is expected that will leave a significant impact to this industry in years to come.

4. FUTURE PERSPECTIVES OF BANKING

4.1. Agile bank model

Agility is a key to the competitive and innovation performance of organizations in contemporary business environment that put pressure on banks to continually change and evolve. Agility signifies a set of strategic activities and dynamic capabilities of strategic management to swiftly and smoothly change businesses and its business processes beyond the standard level of flexibility to efficiently and effectively carry out unpredictable external and internal changes [3, 23]. Moreover, agility refers to operations agility, too, i.e. the ability of bank to simultaneously be capable to deliver quality service, to be enough flexible while reducing operations costs in a harmonized fashion [24]. Having that in mind, the agile bank may increase market share and decrease operational costs [25].

According to the Struat, Global Banking Industry Marketing Leader at IBM, banks face three crucial challenges to become an agile bank: complexity of existing applications, customer behaviour changes and increased amounts of data [26]. Model of agile bank cannot be built overnight, given that banks have historically operated in the stable business environment that resulted in slow pace of changes. To this end, Accenture has shown five characteristics of agile bank in the age of digital disruption: a) Focus on customers, by offering products and services according to the needs of customers, i.e. hyper-personalized production; b) Shifting complex distribution towards simple and flexible processes, which requires continuous harmonization with the market trends; c) Transformation of fixed expenditures into variable costs and investment savings in revenue generation opportunities; d) Creation of flexible distribution to efficiently and effectively support channel decisions; e) Mixture of physical and digital channels in order to grow market share without traditional branches [25].

To survive, develop and grow in the age of digital disruption, agile bank's model requires appropriate, i.e. agile leadership to effectively deals with the uncertainty, complexity and transformation towards agile bank, simultaneously.

4.2. Digital bank model

Despite agile offerings from non-banking industry, as well as fact that banks are exploring methods to shift existing business models toward digital one, the changes have not been recognized as too disruptive, so far. Product and services have been developed, processes have been enhanced, data and information have been shared within an organization, and branches have been redesigned and reduced. These developments were costly to banks, but achieving a complete new banking experience through digitization will demand even more changes. Hence, disruptive changes are estimated to be in the product and service portfolio and in the revenue model [27].

When banking on digitization is in question, Asian banks are found to be the furthest ahead, followed by European banks, while the U.S. banks are recognized as the slowest in adoption of digitizing process [28]. In the recent study issued by McKinsey&Company, it is found that Asian customers are using internet and mobile channels increasingly, which resulted in usage growth for more than 35% in the past few years. In accordance to that, branch usage is decreased for 27% across Asia. "At a few leading banks, nearly 20% of key product purchases are now completed online; across Asia, on average about 25% of prepurchase decision-making and 40% of postpurchase servicing is conducted through mobile or Internet devices" [29].

Being a digital bank requires pre-defined digital transformation strategies, which imply a different perspective and pursue different objectives. From business-centric perspective, transformation strategies focus on the change of organizational aspects, incorporation of new technologies, products and processes. "Their scope is more broadly designed and explicitly includes digital activities at the interface with or fully on the side of customers such as digital technologies as part of end-user products. This constitutes a clear difference to process automation and optimization, since digital transformation strategies go beyond the process paradigm, and include changes to and implications for products, services, and business models as a whole" [30]. There are four dimensions that represent fundamental elements of digital transformation strategies, i.e. technologies use, value creation changes, structural changes and financial aspects [30].

The use of technologies represents an organization's attitude towards implementation and ability to exploit new technologies. Thus, the strategic role of IT is crucial, along with the organization's view: market leader in technology usage or market followers with well established standards. In both cases, the use of new technologies implies transformation in value creation which further requires structural changes of an organization to properly support operations of business. However, the existing operating model can only be transformed after taking into account financial perspective which implies an organization's "urgency to act owing to a diminishing core business and its ability to finance a digital transformation endeavour; financial aspects are both a driver and a bounding force for the transformation" [30]. Given that these four dimensions are dependent, management of organizations needs to harmonize all perspectives for successful transformation of organization towards digital model, including alignment with other operational and functional strategies within an organization [30].

In recent report issued by MIT Sloan Management Review, authors have revealed four options for business models convenient to operate in the age of digital disruption, but two might be appropriate for banking industry.

"The supplier model" – the model implies sales through another company, thus it represents an operations in the value chain of another sinewy organization. Examples for this model are insurance companies which operate via independent agents (e.g. Chubb Group), mutual fund via broker houses (e.g. Vanguard), and electronic products through retailers (e.g. Sony). In the digitization process, suppliers have lower power and consequently are pursued to continually reduce prices, which result in continuing industry consolidation [10].

”The omnichannel model” - the model provides access to the products and services to customers using a mixture of both physical and digital channels. The model aims to offers multiple and greater choice and coherent customer experience. Banks (e.g. Toronto-based CIBC and Bilbao, Spain-based BBVA), and retailers (e.g. Wal-Mart, Nordstrom and Carrefour) aspire to become omnichannel business providers in an integrated value chain with strong focus to customer relationship. Gaining entire knowledge of the end customers, their needs and goals represents one of the biggest challenges in this model, according to the research results shown in the report. To facilitate this process, many organizations have recognized big data analytics, mobile applications, social media and metrics of customer experience as possibilities to increase deep understanding of the end customer’s needs [10].

Digital banking implementation is understood to be grounded on three perspectives: 1) customer centricity, 2) open innovation [31] and 3) organizational flexibility [32].

Customer centricity consists of two main parts in a digital transformation: customer experience focus along with an in-depth questioning of the role of branches. Customer centricity perspective is based on three success factors: a) Attentive and pragmatic focus – with the aim to better understand customers’ expectations, thus to facilitate anticipation process. The customer centric perspective requires a change in mind-set and existing practices, by putting customer in the center of business focus; b) Readiness and creativity - requires the organization's ability to capture the entire potential of new technologies, thus it implies agile IT functions and forming cross-functional teams focused on customers’ expectations.; c) Redesign of role of branches – “Traditional branch networks embody the brand of the bank as an institution and host an important number of the banking staff. Changing the role of the branch means changing the habits, beliefs, incentives, and experience of the people who work in and for branches. The digital shift is a cultural shift, with new skills required to meet newly digitized customers. What does the future of branches look like? A top executive from a pure online player sums it up nicely: "Delivering high-value advice through true experts." In this scenario, banks have flagship branches that showcase the brand and are fully integrated parts of the omnichannel customer journey” [32].

Open innovation and ecosystems are recognized as a key of design and delivery in the digital age, given that the perspective is aspired to create an agile organization that incorporates customers’ needs with solution to provide new services quickly. Digital teams that consist of integrated IT and marketing experts are seen as a value to produce innovations that are quickly ready for use of customers. Thus, a mixture of internal know-how with external market potentials creates more valuable innovations in the digital era [32].

Organizational flexibility implies organizational and technological agility. An agile IT platform is crucial to the digital operating model of banks. "The proliferation of new technologies and the faster time-to-market call for a fundamentally flexible IT platform that is able to integrate external cloud services. IT organizations need to be segregated by seamlessly integrating the front-end IT into the business and industrializing the back end. At a deeper level, it means a cultural change to embrace new technology testing and integration, and to adopt a customer solutions-driven mind set" [32]. Organizational flexibility requires a clear long-term vision and at the same time strong short-term implementation capacities.

Besides, the biggest challenge in creating digital bank model is changing the traditional organizational culture and employees' mind-set, given that digital age is forces banks to shift from a product-centre to customer-centric view, from traditional IT “back office” role to a tech-savvy mind-set, and from silo-based to inclusiveness perspective. It has been recognized that three features are underlying principles for cultural shift towards digital model: forward thinking, “test-and-learn” approach, and openness of all employees [32, 33, 34, 35]. To this end, leaders have a significant role in cultural shift. At the same time, having the support of the all employees at all levels in bank is crucial for the successful digital transformation of bank.

5. CONCLUSION

Digital disruption is remarkably changing businesses worldwide, builds new opportunities and at the same time disrupts long-successful business models, while accelerates new challenges. The phenomenon will substantially shape banking industry and its operations in years to come. Despite growing importance digital disruption is creating in banking industry, there is still lack of interest among researchers with regard to this burning issue, given that only 299 articles might be found on this issue at Google Scholar, which is 75 times less than e.g. process improvement. Therefore, this gap calls for research focus shift towards significant issues banking industry is facing today and which will leave a significant impact to this industry in years to come. To this end, we have collected an overview of perspectives to facilitate forthcoming digital transformation of banks.

The article may contribute to the academics, managers in the financial services, banking industry, IT sector and innovation management.

Future research with regard to banking industry in the age of digital disruption should incorporate perspectives from different stakeholder group, i.e. academics and senior managers from banking industry. These insights may reveal additional useful information regarding the issues banking industry is facing in the age of digital disruption.

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