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Hope for the best, prepare for the worst: barriers to service innovation

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## Hope for the best, prepare for the worst: Barriers to service innovation

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# Hope for the best, prepare for the worst: Barriers to service innovation

### **Abstract**

### **Purpose:**

Despite the growing scholarly interest in service innovation and its associated benefits for organizations, research into the barriers to developing new services remains scant. In addition, most of these studies have been mainly conducted at the firm level, failing to incorporate macro forces in the industry. To fill this gap, this research aims at investigating major industry trends as well as organizational attributes that affect organizations' capability in designing innovative services.

**Design/methodology/approach:** A qualitative approach was used. Twenty one semi-structured interviews with senior executives in different banks were conducted to collect data. Data were analyzed through thematic analysis.

**Findings:** The results suggest that privatization, technological shortcomings, legislative inefficiencies, and deposit-orientation instead of market orientation were major industry trends that affect service innovation. Furthermore, ambiguity in knowledge management regimes, silo mentality and the absence of a collaborative organizational culture, growing need to focus on human capital, and risk aversion were the main organizational attributes that should be addressed for effective service innovation.

**Practical implications:** Service innovation is a strategic asset for organizations. To effectively leverage the benefits, managers should have an end-to-end approach towards the subject. The findings of this research would inform managers of different obstacles in the development of new services from an organizational and industry-wide perspective. Based on the outputs of the interviews and a thorough review of the literature, managerial implications are presented.

**Originality/value:** This research is one of the few studies that explores service innovation challenges at both macro and micro levels of analysis, providing a more holistic view of the phenomenon in the context of service organizations.

Paper type: Research paper

Key words: Service innovation, Qualitative research, Thematic analysis, banking

### Introduction

During the past couple of years, service innovation has received increasing attention, reflected in the growing number of publications from various disciplines (Witell et al., 2015), with service innovation placed among the top three strategic priorities in service research (Ostrom

et al., 2015). This is, to a large extent, due to the demise of manufacturing industries and the role of services in reshaping the economies of not only developed but also developing contexts (Jaaron, and Backhouse, 2017), especially in the post-Fordism era (Moreira et al., 2020). In this regard, Lehrer et al. (2018) postulate that growing demand of customers for personalized experiences and services means businesses should reorganize their priorities and focus on service innovation instead of product innovation. Furthermore, Bantaue and Rayburn (2016) contend that organizations that can create knowledge, and apply it to provide new value propositions to customers through innovative services would enjoy a competitive advantage in future. However, the existing literature in service innovation suffers from ambiguities and conceptual overlaps. To be more specific, definitions of service innovation are still scattered, with service innovation, new service development (NSD) and service design being used interchangeably. Also, in many studies no clear distinction is made between the invention of a new service and service innovation (Witell et al., 2015), which further blurs our understanding of the construct.

At the same time, businesses are having a hard time meeting customer needs considering the environmental volatilities and rapid changes in market demands. According to Bantaue and Rayburn (2016, p. 670), there is "a disconnect between what leaders want to happen, what can happen, and what is happening". Under such circumstances, offering high-quality services is no longer enough to stay competitive. Rather, organizations should constantly look for innovative services to stay ahead of their competitors and engage customers with their offerings (Jaaron, and Backhouse, 2017). So far, multiple studies have endeavored to provide insight into the factors that impede or catalyze service innovation. However, existing conceptualizations of service innovation are still poorly defined despite recent expansions in the field. (Jaaron and Backhouse, 2017). Likewise, Gustafsson et al. (2020) argue that both businesses and researcher have been seriously challenged by the rapidly changing nature of service innovation. As such, they insist on gaining a better understanding of innovations in the service domain as the existing frameworks do not yield adequate information about organizational and practical attributes of service innovation. Similarly, Witwell et al. (2015) contend that a variety of components, actors, interactions and contextual elements should be taken into account when dealing with service innovation. Thus, it is very important to go beyond organizational perspective and explore service innovation more comprehensively.

In addition, the majority of the studies have been conducted in the context of developed countries or remained at the firm level, thus lacking a detailed view of forces at work in service innovation in less developed contexts or at a broader perspective. Despite the fact that some of the already identified challenges or drivers transcend borders, there is still a serious lack of scholarly work on service innovation in developing countries and/or resource-based economies. As Ciera and Muzi (2020) suggest, understanding innovation in the context of developing countries is constrained due to the absence of reliable data. Such a shortcoming also restricts businesses' capabilities to design innovative services in support of their national economic growth. Another serious pitfall in innovation studies conducted in this context is that they are mostly built on the basis of Oslo or Bogota manuals, inconsiderate of the different nature of innovation in these countries – which is in most of the cases incremental and not

radical-. Indeed, applying such metrics without attention to contextual delicacies has biased the results. Similarly, Tok (2020) argues that countries that have historically relied on their natural resources have to shift to more diversified economies, where innovation in value-added sectors plays a critical role because based on the Resource Curse Theory (RCT), many of the countries blessed with natural resources later become vulnerable due to the price fluctuations of such assets.

With these points in mind, this study initializes an effort to address the gaps identified in the literature. In doing so, we try to shed more light on the concepts of service innovation, new service development and service design. Also, we explain under what circumstances a service invention should be regarded as a service innovation. Meanwhile, a major departure of this paper from existing research is identifying major barriers to service innovation at two levels, namely organizational and industry level. We adopt a qualitative approach since businesses operating in different contexts, pursue different objectives and need different capabilities and resources to achieve them. We argue that taking into account internal and external contingencies impacts the effectiveness of management policies, including decisions about service innovation initiatives. While existing empirical research provides an initial understanding in this regard, an in-depth analysis of service innovation in the specific context of this study is very important in delineating the phenomenon in developing as well as resource-rich countries that seek to implement economic transformation schemes.

### Literature review

### **Demystifying service innovation**

Service innovation is a multi-dimensional construct, which results in the creation of new value for customers after the new service is implemented (Ayala et al., 2017). First proposed by Barras (1986), service innovation is mainly built on the premise of developing radically new or considerably improved versions of existing services, referred to as radical and incremental innovations, respectively. Through using a reverse product cycle model applied to different cases in banking, insurance and accounting firms, he realized that service innovation takes an opposite path in comparison with products, from incremental and radical innovation to product innovation. Despite the significance of this study, it was later criticized by scholars for its excessive emphasis on technological innovations, rather than non-technological aspects (Ferraz and Santos, 2016). It is worth noting that such an exaggerated view of technology in the domain of service innovation could be traced back to the decline of industrial activities during the post-Fordism era. During this time, the service sector began to attract researchers. Initially, however, most of the studies on service innovation rested upon a technological approach to innovation, borrowed from the manufacturing industries. In 1990's and 2000's, the service sector was perceived as a genuine source of innovation by itself, departing from the traditional manufacturing-based approaches. Soon, questions regarding the how's and what's of innovation emerged, with scholars seeking to investigate service innovation from a serviceoriented perspective, i.e. differentiation approach. More recently, service innovation has been under scrutiny from a cross-sectoral lens, i.e. the integrative approach, where services and goods are integrated when studying innovation (Moreira et al., 2020).

Accordingly, scholars including Ferraz and Santos (2016), Casidy et al. (2019) and Henrique Tagues et al (2020) propose three different approaches towards service innovation, namely assimilation, demarcation and synthesis. As an initial stream of research in service innovation literature, the assimilation or technologist view deals with the impact of technology in developing new services. Despite the historical significance of assimilation, this perspective has been criticized as it fails to incorporate the invisible elements of service innovation, thus leading to an underestimation of actual benefits. To ease such shortages, the demarcation or differentiation perspective is built on the premise that innovation in services is fundamentally different from product innovation, thus highlighting the need to consider theories with a service-specific nature that incorporate non-technological and non-visible aspects of innovation. Finally, the synthesis or integrative view aims to capture a deeper insight into both tangible and intangible aspects of innovation, and is usually applied in cross-sectional and cross-industry innovations. Examples include situations when service industries make use of manufacturing technologies or when manufacturing companies resort to servitization of their products. More recently, service innovation is perceived to incorporate interactive and supportive elements, both of which contribute to the development of sustainable competitive advantage (Salunke et al., 2019). To elucidate, the interactive dimension covers external and front-end innovations that directly lead to value creation for end users. In contrast, the supportive dimension refers to back-end production and internal capabilities that indirectly affect value creation, for instance through service process improvement (Casidy et al., 2019).

Service innovation, whether in the form of new service product, new service processes, or even new business models, results in value creation once commercialized (Ayala et al., 2017). The concept of commercialization is very important in defining service innovation, as evidenced by previous research. In fact, a review of various definitions of service innovation reveals that putting innovative services into practice is a recurrent theme in the service innovation literature. For instance, Toivonen and Tuominen (2009) believe that new services are innovative only when they are implemented in real terms. Also, scholars such as Biemans et al. (2015), and Skalen et al. (2014) emphasize on practicality as a defining attribute of innovation in services. Finally, operationalization of new services is the last step in a sequence of stages related to successful service innovation, i.e. idea generation, screening, assessment, development, piloting and launching. Such a distinction is in line with the Schumpeterian approach, in which innovation is different from invention (Jaaron and Backhouse, 2017). To be more specific, inventions have no inherent value by themselves, and should be offered in the market before they can be regarded as innovations (Witwell et al., 2015). Another source of ambiguity in service innovation relates to the conceptual overlap among service innovation, service design and new service development (NSD), which are currently used interchangeably. While service design relies on design principles to develop new services, NSD focuses on the processes that lead to new service generation. On the other hand, service innovation refers to the outcome of such processes, not on how the new service is created (Gustafsson et al., 2020). Also, Aspara

et al. (2017) distinguish between new service success and innovation proactivity. New service success reflects a firm's ability to introduce its new offering to the market effectively. In contrast, innovation proactivity pictures the willingness of businesses to innovate in their services, or an indication of being a pioneer in service innovation to seize market opportunities before rivals. Due to the complexity and multi-dimensionality of service innovation, there have been various classifications for the subject. To avoid confusion, Hasiao et al. (2017) offer four metrics against which service innovation can be categorized: (1) stand-alone innovative service products or items; (2) innovations in structural configurations related to existing services; (3) innovations resulting from improvements in or repositioning of existing services; and (4) innovations in business models that affect the whole organization. From another point of view, Snyder et al. (2016) argue that service innovation could be classified based on four different measures: (1) innovativeness extent- or the degree of change caused by the implementation of the service innovation; (2) the nature of change- or whether it requires changes in the core service product, processes, business models, etc.; (3) perceived newness of the service –along a continuum of new-to-the-firm versus new-to-the-market; and (4) means of provision- the technology, channels, customer interfaces, etc.

### **Benefits of service innovation**

Previous studies confirm the strategic role of service innovation in the survival and competitiveness of businesses (Merrilees et al., 2011; Prajogo and Oke.2016; Lehrer et al., 2018; Casidy et al. 2019). While traditionally, service innovation outcomes were assessed based on financial measures, there has been a shift to a broader perspective, where the true impact of such innovations is equal to the value they create for the customer (Witwell et al., 2015; Gustaffson et al., 2020). More specifically, service innovation has witnessed growing interest as researchers endeavor to understand how organizations could leverage the benefits arising from investments in this area. In doing so, it has been asserted that service innovation improves key business metrics, including business performance, brand equity and customer loyalty. Ferraz and Santos (2016) argue that service innovation calls for an entire reconfiguration of competition, as well as processes of opportunity recognition and exploitation. This, in turn, allows firms to develop new value propositions and better manage and utilize global resources. all of which have considerable impacts on performance. Similarly, Wu (2014) considers brand equity improvement via service innovation as an important mechanism to achieve customer loyalty. In fact, he believes customer loyalty and brand equity as valuable areas of research in service innovation literature. To attain higher levels of brand equity, he considers two streams of service innovation, namely technology leadership and service leadership. Reviewing previous studies, Wu (2014) concludes that positive customer responses to technology leadership would have a desirable influence on his overall perceptions of the brand equity due to pioneering advantages. In addition, both leaderships mean creating added value through delivering customized services to better serve market needs and differentiate the brand's services, which ultimately result in an improved brand equity in the minds of the customers. Likewise, customers' purchase intentions and brand preferences are influenced by brand equity, leading to higher loyalty levels and more positive attitudes towards the brand (Narteh, 2018).

In their study of the use of big data analytics in service innovation, Lehrer et al. (2018) state that the paradigm shift from a goods-dominant (GD) logic to a service-dominant (SD) logic, means businesses should no longer rely on the number of new products or services, but on the value created for customers through innovation mechanisms. In a similar vein, other scholars (Maglio and Spohrer,2008;Ordanini and Parasuraman,2011; Witell et al,2016; Aal et al,2016; Agarwal and Selen,2011; Ostrom et al,2010; Santamaría et al,2012) view service innovation as central to improved customer value, , long-term competitiveness and viability at both business and country levels However, a review of the existing literature on service innovation reveals that it suffers from frequent generalizations of findings in product innovation to this area.. The situation is even worse in the context of developing countries, where innovation has just recently begun to position itself as a key to economic prosperity, and service businesses still lag far behind their more advanced counterparts in terms of service innovation orientation (Velayati et al., 2019). As such, a major goal in this research is to deepen the existing understanding of service innovation, taking into account some industry/ country level parameters to cover contextual elements as well as organizational factors.

### **Barriers to service innovation**

Das et al. (2017) contemplate that established service and manufacturing businesses have been challenged by fundamental changes and newcomers disrupting current market patterns. Despite the general consensus on the advantages these firms could obtain through engaging in service innovation, the notion has proved not be as easy as it may sound. They further argue that successfully launching innovative services needs a wide number of internal and external factors to be combined and harmonized, some of which are partially or completely beyond the firm's control. For instance, a firm needs to be able to use its current capabilities as well as exploring and embedding new technologies. Factors such as leadership style, business strategies, culture, and performance incentives are some of the internal elements that businesses should align with their innovation orientation. On the other hand, market dynamics, competitive climate, and technological advances are often viewed as external factors that should be considered. Taking a different perspective, Aspara et al. (2017) explore the impact of current service productivity on the firm's tendency to innovate. Through studying comprehensive data sets of financial markets over a period of fourteen years, these scholars conclude that having appropriate levels of productivity decreases the firm's tendency to engage in service innovation. They further argue that the more productive businesses are in their present service provision activities, the less successful they are in implementing new services in the market. Such a negative interplay mainly arises an excessive dependence on their track of success in existing markets. Also, based on capability-rigidity paradox, proposed by Atuahene-Gima (2005), businesses highly capable of exploiting their existing know-how, are less successful in marketing their service innovations although they may proactively come up with innovative solutions.

Other scholars have also provided explanations about the antecedents of service innovation. Chen et al. (2009) focus on the barriers to service delivery innovation, and argue that different operant resources, i.e. organizational (innovation orientation), relational (collaboration with external partners), and informational (IT capabilities, infrastructures, IT human resources, and IT-enabled intangibles), are necessary for successful service delivery innovation. Hsiao et al.

(2017) investigate the drivers of service innovation, categorized as empowering and motivated, with positive psychological capital as a mediator in the relationship between the antecedents and service innovation. In their multi-level analysis (team level and employee level), they realize that motivational factors outperform the other group in stimulating service innovation. and positive psychological capital significantly mediates this relationship. In addition, Prajog and McDermott (2014) explore the relationship between organizational factors of connectedness, centralization, and formalization and modes of business environments on innovation orientations (explorative and exploitative). They conclude that environmental dynamism has a considerable impact on explorative innovation compared to exploitation orientation. In addition, environmental hostility has a stronger negative impact on exploitative innovation. Finally, Storey et al. (2015) conduct a meta-analysis to identify success factors for service innovation. Despite common grounds between product and service innovation, these researchers refer to the marked differences in the two areas and argue that it is a mistake to generalize the findings of one to another. In their opinion, designing appropriate service attributes (such as quality level, technological complexity, responsiveness, etc.), organizational characteristics (absorptive capacity, strategic orientation, etc.), team characteristics (Front-line staff involvement, customer integration, etc.), process characteristics (technical development, R&D proficiency, formal development, etc.) and market characteristics (turbulence, uncertainty and attractiveness) are the factors that considerably lead to the success or failure of service innovations.

### Methodology

Sorensen and Francesco (2017) argue that traditional perceptions of product innovation have been widely ascribed to service innovation. However, recently such conceptualizations have been contested by scholars as they do not shed enough light on critical aspects of SI. These aspects include the processes that lead to service innovation, reasons why such innovations occur or how they are organized and even consumed. In addition, it is important to investigate such issues from an interpretive perspective to fully grasp the interactivity, complexity and dynamism associated with service innovation and the barriers that exist in this respect. In fact, an interpretivist perspective would mean the research questions are investigated within their very peculiar social and historical settings and through the lens of individual experiences within this context (Creswell, 2012). The case of study is Iran, with particular focus on the banking industry as a major revenue stream. Iran is a developing country striving to move to a more diversified economy, with less dependence on oil and gas. Thus, it provides a rich context, where understanding of service innovation (currently limited to the context of developed countries) could be expanded. In line with the research philosophy and its epistemological subjective stance, the present study adopted a qualitative approach since it allows for better interpreting the ambiguities associated with the phenomenon under study (Fusch et al., 2018). Theoretical sampling was chosen as it is in line with gradual emergence of themes and concepts instead of an a-priori focus regarding participants' selection (Bagnasco et al., 2014) and would result in the selection of well-informed respondents whose insights would benefit the researcher with increased acumen (Edirisnghe et al., 2020). The sample consisted of various banking experts and academia. Details of the interviewees are provided in Appendix 1. To

maintain uniformity, all the interviews were conducted by a single researcher (Edirisnghe et al., 2020). Prior to the interviews, contacts were made via telephone and emails, with invitations sent electronically. The interviews took an average length of 40 to 65 minutes. Each respondent was provided with a brief description of the research purpose before the meeting. To fulfill ethical considerations, respondents were informed that participation was voluntary and they could withdraw from cooperation at any stage of the research. In addition, the participants were ensured d that their identity would not be disclosed. During the interviews, the respondents were encouraged to elaborate their ideas, with follow-up questions being asked by the researcher where necessary. With the participants' consent, the interviews were recorded and later transcribed.

To effectively answer the research question in relation to the specific context pf this study, thematic analysis was used to analyze the data. Green et al. (2017) argue that thematic analysis is a flexible approach in qualitative studies that allows for exploring emerging themes within data sets through "careful reading and re-reading of the data" (p. 3). Following Hussain et al. (2020) and Nowell et al. (2017), the six steps in thematic analysis were used: familiarizing oneself with the data by means of prolonged engagement with the data, development of initial codes, making sense of codes to develop themes, reviewing themes and testing for referential adequacy, defining themes through peer debriefing and team consensus and finally producing the report. It is worth noting that coding was done with the help of MAXQDA software, leading to the development of preliminary codes. To remove any possible conceptual overlap, the codes were reviewed meticulously and refined as secondary codes. The iterative nature of data collection and analysis ensured "being guided by the data and targeting the most knowledgeable respondents in each area (Velayati et al., 2019), which had a considerable impact on the quality of the data which were accumulated and analyzed. Another important component of any qualitative research is theoretical saturation. In simple terms, saturation is reached when no new or relevant pattern emerges; each category is well-developed in terms of the concept and properties; and the interplays between the categories are logically perceivable. In total, 21 semi-structured interviews were held before saturation was reached. . One final aspect in qualitative studies is triangulation as a tool to avoid biases and increase confidence in the outputs of the study. Based on the triangulation criteria proposed by Heale and Forbes (2013), this study incorporated data, investigator and theory triangulation. To be more specific, data were gathered through extensive literature reviews, semi-structured interviews, personal contemplation of the researchers, memo writing and observations. In addition, the interviews covered professionals with different areas of expertise, which would serve the inherent multiplicity of factors that influenced service innovation. Investigator triangulation was confirmed by asking a PhD candidate with special focus on innovation management once the concepts, methodological approach and findings were carefully reviewed. Finally, different streams were incorporated in developing the research and elaborating the findings, including service industries, innovation, and knowledge management.

### **Findings and Discussion**

The semi-structured interviews with industry experts were aimed at serving two purposes: Identifying the major industry trends with possible impacts on service innovation in organizations along with the specific challenges at the firm level in developing new services. Data analysis led to the identification eight macro and micro attributes with possible impacts on service innovation.

### Major industry forces

### Privatization

During the past few decades, public banks have witnessed a sweeping wave of privatization throughout the world, through which governments endeavor to increase the productivity of these organizations and accordingly boost their economic growth. Iran has been no exception. In fact, the privatization process was launched in 2007, based on comprehensive research studies and benchmarks from other countries. The program consists of 3 phases, preprivatization, privatization in progress and post-privatization, and is believed to highlight the need for further strengthening of innovative performance of the banks in Iran. The participants also believed that despite the initiation of privatization in the third national development plan of Iran, major breakthroughs took place during the fourth plan and in line with the 44th principle of the country's constitutional law, with banking as one of the pioneering industries to privatize. They further argued that privatization would facilitate new service development by means of optimizing resources and restructuring internal capabilities. Because banks need to maximize their stakeholders' profits after privatization, gaining competitive advantages through developing innovative services with added value for customers is crucial. In this respect, the interviewees argued that the monopolistic presence of the government in the industry was a serious impediment towards innovation in the design of the financial services. In a market where the banks were solely seen as a "public treasury", there was no need to compete, and thus to stay innovative:

"From a historical perspective, the omnipresence of the Iranian government in the banking industry meant that policymakers allocated a considerable share of the banks' financial resources to public administration practices... Such monopolistic circumstances and the absence of private banks and financial institutes demotivated the banking industry to innovate" (Interviewee 2, p. 3).

However, the respondents believed that the emergence of private banks along with demographic changes and the spread of technologies could lead to an increasingly important role ascribed to the development of new services for major industry players, which in turn, motivates institutes to reconfigure their existing infrastructures and capabilities to survive:

"I believe privatization in the banking industry of Iran will lead to a higher level of motivation, competition and innovation after the emergence of private banks as well as reducing the intervention of the government as the sole decision maker in this industry" (Interviewee 6, p 11).

Based on the above arguments, and in line with previous studies such as Zahra and Hansen (2000), Hong et al. (2016), and Some et al. (2020), it was agreed that privatization would have a positive impact on innovation.

However, Estrin and Pelletier (2018) have warned about adopting a too optimistic view towards privatization. In fact, they suspect that privatization alone could result in improved performance or increased innovation. They further emphasize that certain prerequisites should exist such as complementary regulations, structural reforms, appropriate public communication, sound capital markets and efficient strategies to preserve employee and consumer rights. In addition, these authors claim that due to the contextual delicacies of developing countries, adequate attention must be made to customize privatization strategies to local circumstances. Privatization only takes effect when social, political, legal and organizational infrastructures have been properly forecasted and prepared. Also as stated by Azar et al. (2013), using appropriate criteria to rank firms in terms of potential increased productivity after the transfer is another missing element in the privatization process in Iran. Accordingly, some of the interviewees referred to other industries in Iran such as aluminum, industrial machineries, and sugar, where privatization has failed to increase productivity, and ultimately turned into a crisis itself. They believed that in many industries, the transfer of public entities has been based not on merits, but to serve the political benefits of specific stakeholders. The absence of transparent monitoring and controlling procedures along with weak financial strategies were other factors that could lead to the failure of prescribed mandates in this regard. Thus, it was stated that to effectively launch privatization and reap the benefits, strategic and operational infrastructures should undergo serious modifications. Otherwise, hopes for desirable outcomes would fade in the face of existing shortages.

### • Technological shortcomings

Nowadays technology is widely perceived as a game-changer for service industries, which influences customer experience positively when applied to service innovation (Banteau and Rayburn, 2016). Xu et al. (2014) state that information technology is key to increased productivity and growth, which explains why developed economies have invested huge amounts in ICT and other technologies to stay competitive through attaining service leadership and technology leadership. In this respect, the advent of Web 2.0 dramatically changed organizations' approach towards technology. Such advances not only changed existing business models in the banking industry, but also paved the way towards new businesses such as ecommerce and e-banking. Accordingly, the respondents believed that to meet the ever increasing demands of future markets, banks should be sensible and intelligent, act flexibly in their design processes based on the demand scale and nature through keeping the closest proximity to the customer, be able to effectively leverage social media, detect unseen markets through the provision of innovative services, and look for novel opportunities and revenue streams with the help of new technological landscapes. Meanwhile, serious obstacles, aggravated by the long history of sanctions on Iran, have hindered the realization of the industry potentials. To be more specific:

"Lack of access to SWIFT networks, or global payment services such as VISA and MasterCard, as well as insufficient provision of software, hardware and cyber security infrastructures have considerably devastated the technological maturity of our financial system...a deficiency which calls for serious reengineering of our business models and capacities" (Interviewee 1, p. 13).

It was also stated that like any other industry, business models in banking should be developed based on open collaborations to create long-term value for customers as well as other stakeholders. The banking value chain in Iran has been designed in a traditional, non-flexible format. On the other hand, new players such as Fintechs and Social Banks are emerging, which means the value chain would soon be disrupted. Timely identification of technological shortcomings followed by the customization of service innovations to the contextual specifications of Iran would lead to better customer experiences, and increased satisfaction. As one of the interviewees mentioned, Iranian banks have to embrace collaborations with emerging players in the field of technology to implement intelligent changes in their practices before it is too late for them.

Yet a more important challenge, according to some of the interviewees, was the absence of design thinking and real-time business analytics. They complained about the overemphasis on the use of technology in introducing and upgrading interfaces, and not how technology could be used to collaborate with customers, collect data to analyze their experiences, and incorporate design thinking. From the interviews, it became evident that despite the prevalence of big data and business analytics, many service organizations still suffer from decisions based on intuition, and/or political behaviors. In a similar vein, Banteau and Rayburn (2016) explain that developing a design-centric culture, use of prototypes and blueprints to define and test solutions through the use of technology in ideation, inspiration and implementation phases could considerably facilitate service design. With the help of technology, traditional methods could shift from static to iterative to identify what customers really need. This becomes possible through establishing constant flows of data from various data sources, investigation of customer search behaviors, social networks, geographical and even psychological data.

### • Legislative inefficiencies

Considering the rapid pace of technology and increasing market complexities, regulatory agility plays a key role in the success of innovative services. According to the results of a study conducted by Canada's Economic Strategy Tables (2018), a modern regulatory system that values innovation adoption and fosters intellectual property rights protection requires cooperation between the policymakers and industry players. It also calls for serious reduction in overlapping reporting and supervisory mechanisms since such inefficiencies considerably increase transactional costs for service providers and discourage banks and financial institutes from taking innovative steps. In this respect, one of the interviewees referred to the establishment of two virtual banks in Iran a decade ago which were forced to close off by the Central Bank of Iran despite the initial investments as a result of legal noncompliance. During the interviews, it was also stated that the regulatory bodies in Iran suffer from lack of agility, which in turn brings about wasted opportunities. The respondents also believed the Central

Bank of Iran could have a significant impact on developing more adaptive legal practices and procedures with the aim of facilitating coopetition and knowledge sharing among key players of the industry.

"At present, the banking industry in Iran is faced with many challenges resulting from poor legislations, such as the divergence of banks from their true missions, misconducts of the Islamic banking principles, improper distribution of banking debt instruments, etc. What further aggravates the situation is that the existing legislations were last update in the 1980's, which poses serious problems considering the speed and scale of changes within the banking domain since then. "(Interviewee 10, p. 14).

The respondents believed that regulatory organizations could make use of technological advances to keep pace with business innovations. They firmly believed that regulators are in need of restructuring in order to better pass new laws or even abrogate cumbersome ones in favor of innovative activities. This gains paramount importance in the context of developing countries, where issues such as reporting, monitoring, client onboarding, compliance surveillance, and cybersecurity lag far behind global standards. Finally, it was emphasized that developing Shariah-compliant services is a major avenue for service innovation in Islamic banking, but policymakers, bankers and legislators need to come up with a common understanding to develop effective legal infrastructures and compliance measures. This is in line with the findings of Su'un et al. (2018) who ascertain the growing prevalence of Islamic banking products such as Mudaraba (the sharing of profit and loss), Wadiah (safekeeping), Musharaka (joint ventures), etc. due to their significant impact on the welfare of both Islamic and non-Islamic communities.

### • Deposit orientation instead of market orientation

Currently, the banking industry in many developing countries is going through multiple hardships, including monopolistic approaches, ambiguities about the roles of different elements within the banking ecosystem, structural disproportions in the deposits, intervention of unauthorized agencies and subsequent increase in the prime costs for banks, poor liquidity of banks' possessions, and low share of commissions in the revenue streams of banks. The situation is worsened in contexts with regular, often non-differentiated services, where fierce competition exists among a large number of players such as Iran. More specifically, in Iran more than 35 banks and financial institutes (considerably a large number compared to many other countries) operate under the approval of the Central Bank of Iran (CBI) while the government still exerts considerable control in specific areas despite the sweeping wave of privatization. To elucidate, many public organizations, healthcare centers, military and educational entities in the country are obliged to cooperate with specific banks and invest their resources in the form of current accounts (as a very low-cost resource). This means such governmentally favored banks could easily gain huge amounts of money without really having to compete with others or taking the burden to innovate, while others have to resort to paying

higher profits to attract customers. Thus, the latter only strive to gain access to more financial resources without any specific strategy that could differentiate them from competitors. As observed by the interviewees, such rivalry takes a destructive form and leads to "the contagion of unethical competitive conducts". In this regard, one of the respondents said:

"If organizations are allowed to choose among competing banks to break the monopoly, the commission-based incomes of the banks would increase significantly, with considerable decrease in the prime costs of deposits... this will also encourage banks to design high quality services to attract and retain customers rather than tempting them based on higher financial profit rates" (Interviewee 15, p. 14).

Generally, it was agreed that in case banks routinely perform strategic analyses of their strengths and weaknesses and (re)define their segmentation strategies instead of competing in a red ocean, they would be more successful in developing new services for their specific targeted markets. According to the experts, differentiation through focusing on real market needs is a lost ingredient within the banking industry of many developing countries including Iran. However, if implemented properly, it would lead to the generation of competitive advantage for businesses. Similarly, previous literature suggests that market orientation (consisting of customer orientation, competitor orientation and inter-functional coordination) would improve the overall innovative performance of firms. The significance of market orientation lies in the fact that it enables firms to be more responsive to the market based on the information they collect about customers' needs and competitor moves. As a currentlooking strategy, market orientation focuses pragmatically on the existing market, thus enabling businesses to better meet the present demand through prolonged dialogues with customers and deep market analysis (Bhattarai et al., 2019). Similarly, scholars such as Wang and Miao (2015), Dogbe et al. (2019) and Frega et al. (2018) confirm the positive impact of market orientation on organizational innovativeness.

### Organizational challenges that impede service innovation

In addition to the major industry trends, several factors at the organizational level were also identified throughout the interviews which played a significant role in the innovative performance of banks. In other words, the respondents believed the poor innovative performance of businesses also has roots in certain organizational attributes, as follows:

### • Ambiguity in knowledge management regimes

The 21<sup>st</sup> century has witnessed increasing demands for knowledge societies, which has caused fundamental changes in business structures. Growing complexity in customer needs and expectations as well as shorter product life cycles are only two of the challenges that businesses, including banks, deal with nowadays. Thus, knowledge management (KM) has turned into a top priority for modern organizations (Pancholi and Pancholi, 2014). Accordingly, Venkitachalam, and Willmott (2017) define strategic knowledge management (SKM) as "harnessing know-how that is comparatively non-replicable so as to influence

environments as well as to respond to them" (p. 313), which explains why it is often viewed critical for overall productivity and innovation performance However, the participants in this research were concerned about the widespread belief in less developed contexts, in which SKM is perceived to materialize by establishing IT systems and databases. Such misperceptions would signal the absence of a strategic approach towards the nature and fundamental role of knowledge in fostering innovation. As stated in the interviews, limited views of knowledge-as-systems and lack of an end-to-end approach towards knowledge-based innovation would be detrimental to the operationalization of KM strategies to create long-term value. It was further argued that in order to develop innovation capabilities, organizational learning should be strengthened through appropriate mechanisms. It was also emphasized that monitoring competitors, receiving timely feedbacks from customers and use of the experiences of global players could serve as important facilitators of organizational learning and innovation. The respondents argued that doing business in vacuum is not possible, and that businesses should never cease learning. This would help them to be fully aware of market dynamism and even proactively initiate changes through constantly refreshed understanding of current and future forces affecting rivalry. It was mentioned that:

"Our managers generally look for reaching short-term goals. They also adopt a reactive, and not proactive, approach towards innovation and change. Thus, many valuable opportunities are lost or hunted by competitors" (Interviewee 7, p. 4).

Despite the above arguments, there was a general consensus among the respondents that quite a large number of organizations still lack clear SKM practices. More specifically, the participants believed that in many cases, senior executives cannot make informed decisions about choosing between internal generation of knowledge (i.e. in-house R&D), and external sourcing (i.e. alliances, acquisitions, outsourcing, etc.). In this respect, previous studies (for instance, Capron and Mitchell, 2009) suggest a combination of internal and external sourcing. Grigoriou and Rothaermel (2016) suggest that in the face of competence-destroying changes. managers should first study their internal knowledge production processes because firms with a good level of internal knowledge generation capability and/or with high coordination costs in terms of knowledge assimilation would not benefit much from external sourcing strategies. Moreover, Venkitachalam and Willmot (2017) contend that reaching a balance between knowledge codification (establishing people-to-systems ties and documentation of tacit knowledge in the form of explicit knowledge) and personalization (developing individual-toindividual interactions to facilitate knowledge transfer) is another important issue to be considered. This would result in excessive knowledge structuration or knowledge proliferation respectively.

### • Silo Mentality and the absence of a collaborative organizational culture

Yiu et al. (2019) state that the transition from a product-dominant logic to a service-dominant logic requires consideration to a multiplicity of factors, ranging from organizational structures and appraisal systems to organizational processes and culture. Schein (1996) defines

organizational culture as a set of values that serve to provide norms and expected behaviors of organizational members. As an invisible yet very powerful force, organizational culture has been found to positively associate with financial and market performance, organizational effectiveness, employee attitudes and knowledge management practices (Hoogan and Coote, 2014). In this regard, one of the most cited problems in the interviews was the tendency to keep knowledge and experiences to oneself, rather than sharing it with others although such collaborative practices have been found to positively impact organizational dynamism in practical and theoretical terms. In fact, the participants viewed their organizations as a constellation of individual silos suffering from low efficiency in knowledge sharing and management. According to the respondents, such conservative approaches and viewing knowledge as a source of monopolistic organizational power might stem from the existence of an organizational culture not open to knowledge-based cooperation. Meanwhile, some of the participants stated that over-reliance on knowledge possession originates at times from managers' concerns about highly skilled employees leaving the organization, and not because of their worries about their own positions in the firm. Since employee turnover results in the loss of organizational knowledge, managers tend to keep key expertise and know-how to themselves, and not accessible by employees. Meanwhile, the participants believed the only solution to effectively deal with the environmental complexities was to encourage knowledge cooperation both inside and outside the boundaries of the organization. In this respect:

"Choosing a participatory approach towards strategy implementation, instead of traditional top-down practices, will foster a positive sense among employees" (Interviewee 2, p. 7).

Regarding the impact of organizational culture on innovation, Oyemomi et al. (2018) refer to switching modes of knowledge proposed by Sullivan and Nonaka (1986), i.e. socialization, externalization, combination and internalization of knowledge, and state that successful conversion and sharing of knowledge is to a great extent influenced by organizational culture and support. They further point out that an enabling culture, in which knowledge sharing is encouraged, results in improved performance. Similarly, fostering an organizational culture that encourages interactions among members improves learning and resource sharing and innovation performance (Yiu et al., 2019).

### • Growing need to focus on human capital

The proliferation of the resource-based view (RBV) and knowledge-view theory of the firm, gave rise to human capital as a strategic resource responsible for developing sustainable competitive advantage (Ortega-Lapiedra et al., 2019). In fact, sustainable economic productivity is not a function of physical resources possessions, but a direct product of knowledge and human capital of businesses. So, tangible growth is achieved only when organizations invest in their human resources. Human capital refers to the cumulative capabilities, knowledge, and experiences of members (Zhou et al., 2019) at different organizational levels. As such, it goes beyond traditional perceptions of human resources because in the new perspective, the emphasis is placed on knowledge production and sharing

in and among different groups of stakeholders. In line with this, it was mentioned that under current circumstances:

"The role of human resources has become even more critical as they have the closest interface with customers. Thus, banks have started to take serious steps to empower their personnel.... If employees feel they are valued by the organization, they reciprocate and act as knowledge transfer intermediaries at various levels. Even in more modern channels of service delivery, the reciprocity rule works, so employees should be valued and encouraged to fulfill their own part in the innovation process" (Interviewee 2, p. 9).

Previous studies also confirm the significance of human capital in the innovation process. Zhou et al. (2109) contend that employees' expertise and know-how are the key inputs for innovation. Organizations with higher levels of human capital tend to better identify and distribute valuable information to be put into practice. Thus, training and job enrichment for employees would ultimately lead to deeper assimilation of specific skills. Finally, employees with more job-specific expertise challenge the prevailing norms and look for innovative solutions to address existing and potential inefficiencies. Considering the fact that education is often a metric to measure human capital level in the industry, banks and financial services are labeled as organizations with high human capital. Hence, these findings resonate with the context under study, and call for designing service-oriented HR management practices, as confirmed by Ostrom et al. (2015).

### Risk aversion

Service innovation is inherently paradoxical. On one hand, it is considered to be a major driver of economic growth and business competitiveness; on the other hand, service innovation does not necessarily lead to success, with a comparable rate of failure in relation to product innovation (Storey et al., 2016). In addition, during the interviews, it was emphasized that financial services are high-risk in nature. Custody risks, principal-agent risks, systemic risks of the market, uncertainties arising from outsourcing activities as well as the entrance of Fintechs, and suboptimal penetration of advanced technological safeguards such as AI and analytics to identify high risk factors are only some of the challenges banks and financial institutes are faced with. This, in participants' views, would ultimately lead to a certain degree of risk aversion among executives, which in turn impedes service innovation. What exacerbates the situation in the context of many developing countries such as Iran is related to the prevalence of "public management mental model" among these executives. In other words, although privatization has been widely implemented in the industry, many of the newly established private banks are managed by retired directors from the public sector. Despite the valuable experience they have gained throughout the years, these executives still have public governance mindsets, failing to act in a positive risk-taking manner to seize market opportunities, radically stressing the downsides of service innovation. Such a risk-aversive culture may delay or even prevent the organization from introducing innovative solutions. As one of the interviewees mentioned:

"It is easy to blame people in case of failure, which is very common when it comes to service innovation. However, if an innovative solution succeeds, the benefits are dispersed among a vast number of people and agencies. In addition, our organizations are not really open to mistakes; you might even lose your job in case of major errors or financial loss. This for sure has a negative impact on managers' propensity to take risks associated with innovation"(Interviewee 18, p. 3).

Through a review of previous studies, Torugsa and Arundel (2017) argue that from a traditional point of view, the heavier weight of penalties and poor rewards systems to acknowledge innovative efforts, combined with aggravated public scrutiny, unfavorably affect risk-taking behaviors. Also, the existence of several -often contradicting- goals increases managerial timidity, which means even in case of service innovations, incremental rather than disruptive changes are embraced. Meanwhile, these authors challenge these prevailing attitudes towards risk aversion, Based on the concept of "revealed barriers" which was proposed by D'Este et al. (2012), innovation not only creates awareness of potential impediments for managers, but also equips them with better insight for developing strategies to cope with such burdens.

### Theoretical and managerial implications

Based on the findings discussed above, this research contributes to the current understanding of service innovation from both theoretical and managerial perspectives. To start with, the present study sheds light on a collection of ambiguities regarding service innovation conceptualization. More importantly, it provides a more comprehensive view of the barriers to service innovation that goes beyond organizational level and incorporates major industry trends as well. Finally, it takes into consideration the contextual delicacies that affect service innovation of organizations in a developing and resource-abundant country. As already discussed, knowledge about such context-based differences matter to academia and practitioners and is in need of further explorations. In addition, the findings also highlight several important issues. For in instance, during the interviews, it was mentioned that businesses, including banks and financial institutes, should strengthen their market orientation to capture existing revenue streams. While this is true, it needs to be mentioned that excessive focus on current market demands could lead to missed opportunities to identify future trends. In this respect, Bhattarai et al. (2019) refer to market disruptive capability as complementary to market orientation. Based on the dynamic capability view, proposed by Teece et al. (2007), this capability is future-centric, enabling firms to prepare themselves for upcoming market changes beforehand. They further state that market disruption would help businesses increase their innovative performance through the design of new services and products ahead of competition, forcing other market players to follow and act accordingly. Likewise, Das et al. (2017) state that while traditionally financial institutes could rely on incremental innovation in their existing services, they now need radical innovations to reshape the market. Meanwhile, it should also be noted that taking such an approach imposes risks and costs on the organization, and should thus be meticulously analyzed so as to avoid exponential burden on the organization.

In addition, the interviewees mentioned that risk aversion is a major stumbling block in service innovation. Although risk-aversion has been extensively associated with lower engagement of senior managers in innovation, it might contradictorily be perceived as a chance to launch more innovative practices in case organizations formulate effective strategies to deal with risks. This means risk management, and not risk aversion, should be regarded as a major component of strategic decision making processes. Thus, even when key decision-makers are not receptive to risks, it does not follow that they cannot effectively implement innovation. To do so, designing content-specific strategies along with transforming risk aversion to risk awareness and management through training and professional development could prove helpful (Torugsa and Arundel, 2017). Another important organizational asset mentioned by the participants was human capital. Previous studies encourage direct communication and participation of employees as a tool to convey ideas, expertise and know-how. Although well-educated employees tend to speak up more, they would feel frustrated if they realize their ideas are not being valued by the organization (Zhou et al., 2019). Therefore, organizations with distinctively higher human capital levels should be cautious in implementing direct voice mechanisms as this might negatively impact their innovative performance in case of poor transfer of ideas into real solutions. It should also be noted that making direct suggestion may not be a proper approach due to variations in the expertise and skills, budget restrictions, and different feasibility levels, among others. Thus, as suggested by Zhou et al. (2017), managers should think of differentiating participatory mechanisms to generate ideas. Ultimately, the respondents viewed the ability to manage internal and external volatilities through innovating as a major asset for senior executives. To them, such an ability means constantly implementing changes in existing practices to better align the business with the environment. Thus, transformation occurs in two levels: 1) top managerial level, where executives are wellinformed towards the strategic importance of innovation, and 2) spreading such knowledge to lower levels, which breaks possible resistance towards change.

### **Research Limitations and Suggestions for Future Research**

The limitations in the present research highlight the need for more rigorous exploration of service innovation challenges and capabilities to address such obstacles. The data were collected from senior executives in banks and financial institutes, which despite their inherent strategic value, may not cover the intricacies associated with different organizational levels and inter-organizational networks. This gains more prominence considering the growing interdependencies among stakeholders and the prevalence of new business models such value co-creation and coopetition where not only customers but also other players of the value chain such as competitors could synergize with the business to innovate. Thus, an interesting field of research would be investigating service innovation challenges and strategies with focus on these interdependencies. In addition, it is not clear how the interaction between market orientation and market disruption would affect organizational performance despite the complementary nature of both constructs. Indeed, understanding such complexities would help businesses make a more informed decision to allocate their resources to these two streams of activity. Finally, based on the configurational theory, the success of any innovative initiative depends on a variety of factors, and there are multiple ways to effectively leverage such

innovations. In addition, the decision about which way to take depends largely on the context a firm operates in (Torugsa and Arundel, 2017). Consequently, another prospect research area could be studying the interplay among various inter and intra-organizational factors that affect service innovation success or conduct cross-sector or cross-national studies in this respect.

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### **Appendix 1: Interview information**

Interviewee	Profession	Age	Gender	Approximate
Number	9/			Duration
1.	Chief Marketing Manager	46	Male	51 minutes
2.	Business Consultant	42	Male	45 minutes
3.	IT Manager	61	Male	37 minutes
4.	Marketing Vice President	51	Male	70 minutes
5.	IT Manager	32	Male	62 minutes
6.	Strategy Development Manager	36	Female	53 minutes
7.	Lecturer	38	Female	45 minutes
8.	R&D Manager	45	Male	68 minutes
9.	R&D Manager	41	Female	60 minutes
10.	Legislation Consultant	52	Female	48 minutes
11.	HR Manager	50	Female	72 minutes
12.	Chief Marketing Manager	49	Male	47 minutes
13.	HR Manager	56	Male	49 minutes

14.	CEO	44	Female	45 minutes
15.	Business Consultant	39	Female	53 minutes
16.	Lecturer	29	Female	55 minutes
17.	Product Manager	47	Male	62 minutes
18.	Strategy Vice President	38	Male	59 minutes
19.	Chief Marketing Manager	61	Female	47 minutes
20.	Strategy Development Manager	40	Male	74 minutes
21.	Lecturer	29	Female	36 minutes

### Topics discussed

- Discussing the significance of service innovation and possible outcomes
- Evaluating the innovative performance of the industry
- Exploring mega trends with possible impacts on service innovation
- innovat.
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  ates that encourage Examining organizational attributes that encourage or hinder the development of new services

Dear Reviewers,

We would like to thank you for your attention to our paper "Hope for the best, prepare for the worst: Barriers to service innovation". We are glad the revisions have been accepted and would like to sincerely thank you for your insightful comments. A few minor revisions that were mentioned have been implemented, which we hope proves satisfactory.

Regards,

Authors

Reviewer 1				
Reviewer's Comment	Authors' Response			
This is an interesting paper and the	Thank you very much. We are glad the revisions			
limitations previously pointed out have	have been effective.			
been addressed carefully				
The literature review has been extended	Thank you. As you mentioned, we tried to			
(as suggested) to include brand equity	strengthen the theoretical foundations of the			
service innovation using recent refs. The	research by using updated references from high-			
research questions are now being	ranking journals. We also did our best to establish			
explored theoretically too which was	a better link between the research objectives and			
partially missing.	the existing literature.			
Generally speaking, the method and	Thematic analysis is a powerful tool to analyze			
findings have been explained well and	qualitative data. We also replaced the long			
the number of long verbatim quotation	quotations with theoretical support, which we			
has been substantially reduced and	believe considerably improved the quality of the			
replaced with clear explanations relating	work. Thank you for your advice.			
to the literature review.	XXX			
The discussion of the findings is now	We are glad to hear that. As suggested in the first			
adequate for the rest of the paper. Authors have reviewed this section	round of revisions, we added theoretical support to our arguments. We also redeveloped the			
carefully adding clear explanation and	theoretical and practical contributions of the work			
arguments backed up with literature.	in a clearer language.			
Also, the both theoretical and empirical	in a cicarci language.			
contributions have been reviewed.				
The paper addresses well a gap in the	Thank you so much. We believe the extensive			
literature and provides an interesting	review of literature helped us better identify the			
insight in an often understudied area	gaps that this research aimed to cover, i.e.			
(not in terms of subject but rather in	conceptual ambiguities of service innovation, as			
terms of bias towards specific countries	well as barriers to service innovation at two			
with other regions largely ignored).	different levels in parallel, with specific focus on			
	a rather untouched context.			
The paper is well written and clear. It	Thank you. During the revision phase, we			
offers an interesting reading and some	carefully read the paper, correcting misspellings			
good food for thought.	and/or poor structures.			
Reviewer 2				
<b>Reviewer's Comment</b>	Authors' Response			

This Paper has been improved significantly and it is now in a high standard, but there are some small points that need to be considered. It seems authors have decided to change the title which I support but it seems the old title still remain in some area and that need to be changed both in the document (Title page) and may be on the system

We would like to thank you for your attention. Yes, there seems to be a mistake about the new title, but please be sure that it will be corrected for the final submission.

The paper has been improved significantly and now has a much better storyline and flow. But I still think there is a need for better highlights of the contribution in the Introduction. You may also add a bit about the context, of course not much, by justifying it better why Iran and a context

Thank you. We tried to better highlight the contributions of this research, with extra information about the context. Also, information about the context was placed in the methodology section to justify the qualitative approach.

The LR section has been rewritten completely and now has much better and stronger arguments. It is now much clearer for the reader why the research question proposed for this study is important, but having said that I don't think some of the headings are chosen with enough thoughts and better to think about them very carefully

We shortened/ redeveloped some of the titles in the literature section, and hope they turn out to be satisfactory.

This section is far better than before and by adding thematic analysis it certainly became stronger not only in terms of method but also in terms analysis of the data

Thank you. We agree that the new version is quite stronger and more perceivable for the reader.

As I mentioned, the thematic analysis made the paper stronger and analysis make much better sense for reviewer. Also, by reducing the length of the direct quotation the flow of the data analysis is much easier to follow

Thank you for your comment. We are happy the section is seen as a dramatically improved version of our first submission.

Both theoretical and practical contributions have been explained much better and clearer. In the previous version, there were some contradictions that not existed in this version

Thank you so much. During the revision phase, we redeveloped both the theoretical and practical implications based on extensive data analysis and review of literature.

Generally speaking, the level of commutation has been improved

We reread the paper, making correction where necessary to improve the language. Thank you for noticing the effort.