TOWARDS SUSTAINABILITY: EFFECTIVE OPERATIONS STRATEGIES, QUALITY MANAGEMENT AND OPERATIONAL EXCELLENCE IN BANKING

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Abstract
This paper sets out to extend and deepen the understanding the ways toward economic sustainability through efficient and effective growth operations strategies, quality management and operational excellence in banking. In this study we define new quality management practices based on developed conceptual architecture of digital platform for operations function in banking. Additionally, we employ decision making framework consisted of two parts: introduction of new operations services using Total Unduplicated Reach and Frequency (TURF) statistical analysis and segregation of core from actual and augmented operations services utilizing Analytic Network Process (ANP) method based on BOCR model. Proposed quality management practices were used for the first time in this paper for particular purposes and have the high potential to impact the excellence in banking business. The study can contribute to operations management, quality management, innovation management, IT management, business process management and decision making in service organizations.

Keywords: Economic sustainability, operations strategies, quality management, operational excellence, banking industry, TURF statistical analysis, ANP-BOCR model

JEL Classification: C25, C44, C83, D02, G21, L15, O31

Introduction

The concept of sustainable development has been extensively studied from various aspects in the theoretical literature over the time. The analyses of hundreds definitions of sustainable development concept depicts that there is no unique and comprehensive formulation which provides clear understanding of the phenomenon due to its complex and multi-dimensional issue, which indicates that sustainable development should be

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considered as an integrated system of economic, ecological, social and institutional perspectives (Ciegis, Ramanauskiene and Martinkus, 2009).

In today's intense competition, comprehensive changes in technology, customers' demands, regulatory requirements and demographic changes into the volatile business environment, strategic managers worldwide understand sustainable business development not only as an option, but as a fully integrated paradigm into the strategy and operations of organizations. Businesses worldwide are rapidly digitizing, breaking down industry boundaries, building new opportunities and at the same time harming long-successful business models (Weill and Woerner, 2015; Tornjanski et al., 2015). These underlying influences create big pressure on banks to continuously evolve, by changing its strategic context and competitive dynamics (Propa, Banwet and Goswami, 2015; Weill and Woerner, 2015). As a result, banking sector is undergoing significant transformation towards structure that follows principles of flexibility, openness and customer-centricity (Fasnacht, 2009; Huo and Hong, 2013; Tornjanski et al., 2015a) founded on quality management and business excellence frameworks with the aim not just to meet, but to exceed a variety of stakeholders' expectations of whom customers are the most prominent to banks (Talib, Rahman and Qureshi, 2012).

Having that in mind, operations as a function, operations management, its effective strategies and dynamic capabilities have to be acknowledged as a strategic element in banking industry in order to be able to continuously create superior value to stakeholders through quality management and operational excellence, thus to contribute to the overall organizational performances and sustainability (Brown, Bessant and Lamming, 2013; Gupta, Czernik and Sharma, 2001; Hietschold, Reinhardt and Gurtner, 2014; Metaxas and Koulouriotis, 2014; Slack, Lewis and Bates, 2004; Zangiski, de Lima and da Costa, 2013; Slack, 2015; Sprogies and Schmidt, 2015). On the other hand, sustainability from operations management perspective may be achieved if operations managers in banking institutions understand what they have to provide and how to leverage resources and capabilities as an integrated system (Bridoux, 2004). More precisely, operations managers in banking industry have to develop the ability to tailor appropriate strategies with clear long-term vision and strong short-term implementation capacities to effectively boost transformation of operating model from traditional "back-office" role towards "strategic" role with the possibility not only to support business strategies, but also to shape new ones for well-being of an organization on the long run (Henderson and Venkatraman, 1999).Such initiative implies appropriate management of quality, operational excellence and the ambidextrous approach to operations management.

Quality management supports all functions of an organization to flourish throughout continuous development, improvement and organizational change (Asif and de Vries, 2015; Kaynak and Hartley, 2005; Kim, Kumar and Kumar, 2012). Current literature advocates a number of quality management practices that contribute to the quality management system and organizational performances, accordingly. Talib, Rahman and Qureshi (2011) stated that most organizations apply statistical process control, Six Sigma or the ISO 9000 standards. However, total quality management (TQM) has recently received particular attention from scholars and practitioners worldwide (Durmaz, Düşün and Demir, 2015; Hietschold, Reinhardt and Gurtner, 2014; Sila and Ebrahimpour, 2003; Wiengarten et al., 2013). Yet, Asift and de Vries (2015) summarized quality management practices into the following categories: customer satisfaction management, process management, supplier

management, data and information analysis, employee training and development, and employee empowerment. Durmaz, Düşün and Demir (2015) found three core dimensions to the quality in banking referring to technical quality of the service, functional quality processes and general image results. Despite a wide spectrum of views on quality management, a common denominator to all of them represents a need for technology based services, methodologies, techniques and tools which will effectively carry out underlying quality management practices (Asift and de Vries, 2015; Talib, Rahman and Qureshi, 2012) for achieving business excellence and sustaining preferable levels of organizational performances (European Foundation for Quality Management, 2010).

The paper is organised as follows. The literature review section unfolds the conceptual foundations by defining recently advocated paradigms that will significantly reshape operations' management in banking industry from which effective operations' strategies derive. Also, it exhibits background on quality management and operational excellence in banking. The research methodology is then introduced with a detailed explanation of the steps, measures and sample. Afterwards, the results and discussion of the study are presented. Finally, the paper concludes with the implications and recommendations to managers in banking, along with the suggestions for future research.

1. Literature Review

The field of operations management in service organizations has evolved tremendously over the years, mainly due to external factors that forced service operations managers to face the transition with the fundamental requirement to disclose effective operations strategies, to use adequate quality management methodologies, techniques and tools, and to focus on operational excellence in order to sustain outstanding organizational performance (Gunasekaran and Ngai, 2012; Kriščiūnas and Daugėlienė, 2006; Vinodh, Sarangan and Vinoth, 2014). As a result of years of the evolution, service operations management has entered into the "mass customization-lean-agile-fit" era (Zhao and Lee, 2009; Gunasekaran and Ngai, 2012; Brown, Bessant and Lamming, 2013; Tseng and Hu, 2014; Vinodh, Sarangan and Vinoth, 2014). In this paper we propose mass customized-lean-agile-fit operations strategies for banking industry that originated from conceptual foundation of mass customization, lean, agile and fit paradigms, that are described hereinafter.

Mass customization has emerged as an important paradigm due to the heterogeneity of individual needs, competitive intensity and shorten product life cycles (Huang, Kristal and Schroeder, 2008; Khalili-Araghi and Kolarevic, 2016). Mass customization is a "paradigm that seeks, as its goal, to combine the value-added effectiveness associated with product customization with the cost-efficiency closely related to mass production" (Huang, Kristal and Schroeder, 2008). To effectively support mass customization strategy, organizations should reconsider the entire value chain from front to end, by efficiently adjusting economy of scale, variety and time to market (Tseng and Hu, 2014) and effectively managing the dynamics and trade-offs among product design, system design and supply chain design (Hoekstra and Nahmens, 2005). Service organizations are increasingly inspired by lean management nowadays. Among all, financial services are pressed to improve operational efficiency due to strict governmental regulations and intense competition determined by non-financial companies and changes in customers' behaviour (Staikouras and Koutsomanoli-Fillipaki, 2006; Leyer and Moormann, 2014). Despite increased interest in the application of this paradigm, financial services often experience difficulties in

successful adoption of lean. According to De Koning and De Mast (2006), lean represents an integrated system of principles, tools, techniques and practices aimed at waste reduction, synchronization and management of workflows in organization. Rother (2009) recognizes that employees' capability to think and act towards lean, i.e. to be focused on efficiency and value-creating processes in day-to-day business activities is equally important element in lean management. A common denominator in all lean aspects is fundamental idea of optimization and continual improvement of operations processes (De Koning, Does and Bisgaard, 2008). Agile service operations' management requires quick respond to changes in demand in terms of both volume and diversity (Christopher, 2000; Power, Sohal and Rahman, 2001). Naylor, Naim and Berry (1999) define agility as a usage of market knowledge and a virtual organization to bring about profitable solutions and alternatives in a volatile marketplace. A holistic approach that integrates mass customization, lean and agility, i.e. fit framework is a new model for economically sustainable organization (Pham and Thomas, 2011; Vinodh, Sarangan and Vinoth, 2014). Prior theories strengthen fit framework which combines these concepts and allow organizations to tune its operational and technological capabilities (Pham and Thomas, 2005).

The shift of operations' strategies in banking further implies alignment of new strategies with corresponding quality management practices. Extensive literature review that focuses on quality management in banking industry shows that majority of research was focused on quality services and total quality management in banking, aiming at achieving higher financial performances, competitiveness and sustainable business excellence, while satisfying customers' needs (e.g. Agrawal, Tripathi and Seth, 2014; Ayo et al., 2016; Durmaz, Düşün and Demir, 2015; Hossain and Dwivedi, 2015; Liang and Pei-Ching, 2015; Metaxas and Koulouriotis, 2014;P. Afthonidis and D. Tsiotras, 2014; Talib, Rahman and Qureshi, 2012). Despite extensive research on service quality and total quality management in banking, little is known about quality management and business excellence, viewed from operations perspective in banking. With regard to operational excellence in banking, the Boston Consulting Group (BCG, 2015) has recognized that efficient and effective processes, streamlined organization, customer excellence and strong underlying capabilities represent four levers of operational excellence. On the other hand, EY (2013) noted that achieving excellence in operations implies changes in current operating models, streamlining processes by particular focus on control improvements and employment of the latest technologies. Besides, EY (2013) pointed out that alignment of operating model with the overall organizational strategy, usage of appropriate technologies and tools to automate and manage operational capacities, consideration of cultural and employees' change aspect, application of business process management tools to establish effective end-to-end processes and adjustment of IT capability with business changes, represent key focus area when finding a way to achieve operational excellence in banking today.

2. Research Methodology

For the purpose of this paper, the method of case study has been recognized as the most suitable research method to deeply understand issues of operations management in banking, thus to ensure a holistic view on the researched phenomena in real life (Săvoiu, 2014). Within the case study, we have incorporated a multi-method approach to strengthen the results on a given research problem. To understand a specific problem, in-depth interviews were conducted with the senior managers in operations area of the bank under study as a

targeted sample of respondents for ensuring that the participants meet the requirements to be included in the study. As a response to the given problem, we have developed a conceptual architecture of digital platform for operations' function to improve service quality, achieve operational excellence and to satisfy end-users of the bank. Further, we propose a two-phase approach for service selection process to facilitate effective decision making.

Phase I

First phase encompasses the selection of new services. According to the market requirements, five new services were recognized as significant contributors to the sustainability and thus proposed by the authors of the paper to be further evaluated. The beginning of process is based on the principles of mass customization paradigm, which implies the inclusion of end users in the evaluation process. A survey method was carried out among experts of the bank under the study by conducting a web-based questionnaire as a survey instrument. Experts of the bank were asked to select the combination of proposed services with the aim to ensure that the possible introduction of new services would reach its maximum usage according to the business needs. In other words, y_i={1,end user *i* will use service; 0,end user *i* will not use service}. In this phase, 39 experts of the bank took participation in the evaluation process. The results were derived using a statistical analysis employed to estimate potentials of new services' usage (Săvoiu, 2012; Săvoiu, 2014; Săvoiu, 2015). For that purpose, Total Unduplicated Reach and Frequency (TURF) analysis is applied, as the most suitable method to acquire the optimal solution to the given problem. The results were substantiated by the equations (1) and (2) (Serra, 2013). Equation 1 was used to reach maximum penetration of final combination of services, i.e. number of end users that are subjected to a limited number of varieties.

$$\max Z = \sum_{i=1}^{m} y_i \quad (1)$$

Equation 2 was used to reach maximum frequency of varieties, i.e. the highest number of selected services by each user.

$$\max Z = \sum_{i=1}^{m} f_i y_i \quad (2)$$

The results of TURF were analysed in Excel spreadsheet with the advanced option for solving mathematical programming problems.

Phase II

Second phase implies final selection and segregation of core from actual and augmented mass customized operations services. In this phase, we have recognized that the most suitable method for solving a certain real problem is the Analytic Network Process (ANP) multi-criteria method. ANP is applied in modelling and quantitative analysis of service lines and their relative weights in regard to benefits, opportunities, costs and risks (BOCR) (Saaty and Vargas, 2001; Saaty and Ozdemir, 2005; Saaty, 2009; Tornjanski, Marinković and Lalić, 2014) to estimate all the effects when making decision. To create a decision model, a problem is decomposed into components of a controlled hierarchical structure. At the top of the hierarchy is the main objective, followed by four criteria at the second level, which reflect both positive and negative impacts on the final goal. Each criterion incorporates a set of sub-criteria derived from the broader literature and therefore suggested by the authors of the paper to be included in the model (Tornjanski, Marinković and Lalić, 2014). Pair-comparisons were carried out by decision maker in operations area of the bank

under the study using a nine-point Saaty's scale. According to the pair-comparison matrix, local priority vector was obtained by solving (3) (Liang and Li, 2008):

$$A\omega = \lambda\, maxW \quad (3)$$

Where:

A – the pair-comparison matrix

Λmax – its largest eigenvalue

W – the local priority vector

Next, unweighted supermatrix, weighted supermatrix, cluster matrix and limit supermatrix were constructed. Final results were obtained by synthesizing the whole model.To calculate the final rank of alternatives, Saaty proposes two ways of calculation. In this paper, the subtractive method is applied using the formula (4) (Saaty and Ozdemir, 2005; Saaty, 2008; Liang and Li, 2008; Tornjanski, Marinković and Lalić, 2014):

$$bB + oO - cC - rR \quad (4)$$

Where:

b, o, c, r – the priorities for BOCR merits in regard to strategic criteria (Liang and Li, 2008).

The results were derived using Super Decisions software package for decision making.

3. Results and discussion

The bank under this study (hereafter: the bank) is a European bank which established operations in Serbia in 2003. Today it counts more than 900.000 clients with 1.500 employees. With total market share of 4.61% it is ranked among the top 10 banks according to balance sheet assets in the banking sector of Serbia (NBS, 2015).

Decision maker from the operations area of the bank made the introduction to the interview highlighting the significance of the operations function for overall organizational performances: *"...Operations function in our bank represents an engine of the organization which simultaneously provides services, information and knowledge to numerous internal and external stakeholders that have different and often confronted requirements (Figure no.1). Nevertheless, during the years of successful business in Serbia, operations function has significantly contributed to the results of the bank, mainly due to established strategic alignment with business strategies and proper management of operations. These and many other efforts invested by the management and experts' team from the operations function have resulted in an overall improvements of the bank's performances…"*. Decision maker emphasized that: *"Operations function should continue to evolve to ensure economic sustainability for the bank. To this end, we have recognized that it is of paramount significance to develop a model which will visualize operations activities, reduce complexity and time to market with the possibility to effectively support mass customized services and lean operations strategies into everyday business"*.

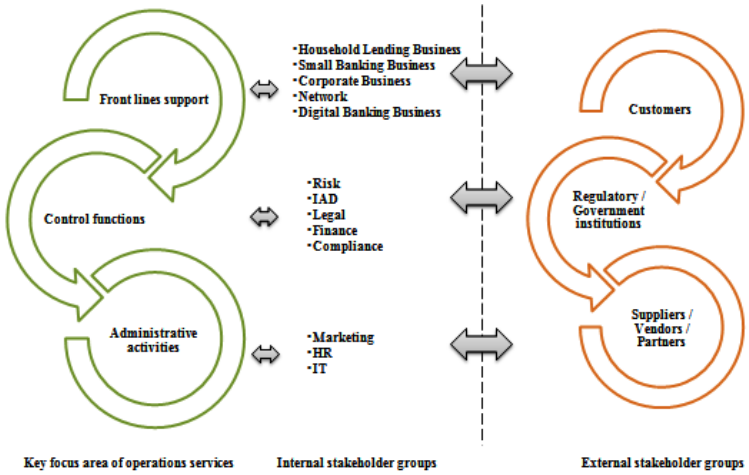

Figure no. 1: General overview of key focus area of operations' services and stakeholders

Further, one of the senior managers of the bank has explained: *"Operations management faces multidimensional complexity when looking for ways in supporting all functions of the bank. Regardless of the organizational model followed, operations' activities are placed at the core of the bank that puts great challenge on operations' managers to determine the right mix of product and resources. To this direction the first aspect which needs to be put in place is segregation between core and less core services which operations' manager needs to support. It is clearly dependent as priority by regulatory requirements as for such activities there is no alternative, but going further from those the variety of indicators coming from market needs (e.g. digitalization), top management strategic focuses (e.g. corporate vs. retail banking), external opportunities for collaboration (e.g. outsourcing) needs to be continuously evaluated in order to provide balanced operational support. Common denominator which always needs to be considered is available resources and how to keep them as flexible as the demand. This is where appropriate models will play a key role for operations' managers. Key challenge is how to filter variety of data in order to identify key indicators which ought to shape operations manager strategy and how to monitor and have early alert on changes of those indicators in a way to efficiently adjust and prioritize operations services and resources".*

By summing up the results from in-depth interviews, two key questions were recognized:

- In which way to effectively support mass customized-lean-agile-fit operations' strategy to satisfy customers, to improve quality of delivered services from operations' function and to achieve operational excellence with the particular focus on establishing and managing complex and non-linear processes, yet to have established adequate control process in real time?

- In which way to introduce new services, yet to be maximally in use, and how to segregate basic from less core services provided by operations' function?

As a response to the first question, we have developed a conceptual architecture of digital platform for operations function to reduce complexity, time to market, and at the same time

to visualize operations' activities. The purpose of the platform is to effectively support mass customized-lean-agile-fit operations' strategy, improve quality, achieve operational excellence and increase customers' satisfaction accordingly. A conceptual architecture of digital platform for operations' function aims to link value chain from front to end in order to provide mass customized services, information and knowledge. Our intention is to enable continuous optimization, improvement of operations' processes by eliminating waste and by allowing quick respond to changes in demand in terms of both, volume and diversity through digitized end-to-end process. The platform consists of three layers. First layer is depicted in the Figure no. 2, and represents operations' interactive product catalogue which allows users self-service by selecting multiple available services, in any combination, provided by operations function.

Figure no. 2: First layer of the conceptual architecture of digital platform – Operations interactive product catalogue

Each service has a detailed specification to enable stakeholders sheer understanding of the offer in real time, and at the same time enables interactions with experts from the organizational part which delivers service by using:

- on-line chat for instant support and
- video call for deeper understanding of addressed issue.

Besides, end users at this level have the possibility to evaluate quality of delivered services by particular organizational part of operations' function. Second layer of the architecture represents operational layer with the purpose of collecting, storing and sorting data of requested activity, thus allows adequate allocation of selected task to particular organizational part that should process it. Furthermore, it enables feedback to the requestor and storage data after completing the process for further analysis and control. Conceptual architecture of the second layer is shown in Figure no.3.

Figure no. 3: Second layer of the conceptual architecture of digital platform – Operational layer

Third layer (Figure no. 4) of the architecture represents a strategic layer which aims to yield an insight into the quality level of delivered services, the results of organizational performances, as well as to ensure effective support in decision making using data from previously derived qualitative and quantitative analysis.

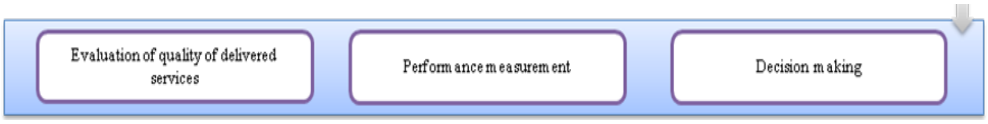

Figure no. 4: Third layer of the conceptual architecture of digital platform – Strategic layer

With the holistic and systematic design of processes that are digitized, we enabled streamlined operations' function with clear and simplified non-linear processes, strong focus on control point and strategic tools for effective decision making, aiming at improving overall operations' service quality and achieving operational excellence. Also, we see this solution as an integral part of operations' strategies that can effectively support mass customized services and lean strategies. Finally, the platform allows extensive digital capabilities for further business optimization, and can be used not only for operations function in banking, but for the entire organization in service industry.

Further, based on the in-depth interviews we have understood that services operations' managers face a challenge of product offerings in today's dynamic and unpredictable business environment. To this end, we provide a comprehensive framework to facilitate strategic decision making and to improve quality of decisions. The framework consists of two parts. First part refers to the introduction of new services for operations function. Based on the business needs, we have acquired the following results each time with the reach and the frequency obtained. The results from TURF analysis are presented in Table no. 1.

Table no. 1: TURF analysis results

Service line	Proposed new services	Reach* (%)	Frequency** (%)
Line 1	Business consulting services	76.92	76.92
	Reporting services	12.82	74.36
	Change management services	5.13	35.90
	Total reach / Average frequency per line	**94.87**	**62.39**
Line 2	Business consulting services	76.92	76.923
	Reporting services	12.82	74.359
	Innovation and development management services	0.00	12.821
	Total reach / Average frequency per line	**89.74**	**54.701**
Line 3	Business consulting services	76.92	76.923
	Reporting services	12.82	74.359
	Strategic and operational planning services	0.00	5.128
	Total reach / Average frequency per line	**89.74**	**52.14**
Line 4	Business consulting services	76.92	76.923
	Change management services	10.26	35.90
	Innovation and development management services	0.00	12.821
	Total reach / Average frequency per line	**87.18**	**41.88**

Service line	Proposed new services	Reach* (%)	Frequency** (%)
Line 5	Business consulting services	76.92	76.92
	Change management services	10.26	35.90
	Strategic and operational planning services	0.00	5.128
	Total reach / Average frequency per line	**87.18**	**39.32**

** Reach is the number of end users who intend to use at least one service.*

*** Frequency represents the number of times a service received a maximum score.*

According to the results, service Line 1, i.e. business consulting, reporting and change management have been recognized by the experts' group as the most beneficial services that satisfy actual business needs. Therefore, services in Line 1 represent candidates to be included in the second part of the decision making process. Second part refers to the segregation of core from actual and augmented operations' services. In this phase, the authors of the paper have selected eight existing and three new services to be evaluated through BOCR decision model that is shown in Figure no. 5.

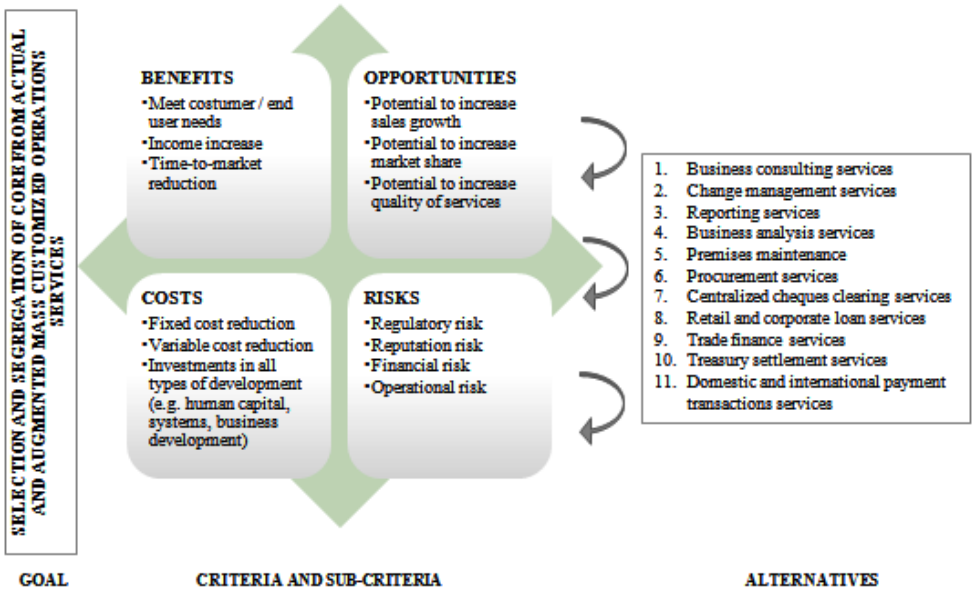

Figure no. 5: BOCR decision model

Segregation of core from actual and augmented operations services was carried out by a decision maker from the operations area of the bank. The acquired results using ANP-BOCR method are shown in Table no. 2.

Table no. 2: Results from ANP-BOCR model

Existing and new services with the highest score	Ideals	Normals	Raw	Segregation
Domestic and international payment transactions services	1.000	0.128	1.000	**Core**
Reporting services	1.000	0.128	1.000	**Core**
Business consulting services	0.800	0.103	0.800	**Core**
Centralized cheques clearing services	0.800	0.103	0.800	**Core**
Retail and corporate loan services	0.800	0.103	0.800	**Core**
Premises maintenance	0.800	0.103	0.800	**Core**
Trade finance services	0.800	0.103	0.800	**Core**
Business analysis services	0.600	0.077	0.600	**Actual**
Procurement services	0.600	0.077	0.600	**Actual**
Change management services	0.400	0.051	0.400	**Augmented**
Treasury settlement services	0.200	0.026	0.200	**Augmented**

According to the results, 64% of the selected services are categorized as core, followed by 18% of actual, while 18% of services are recognized as augmented. Besides, of the three new services from Line 1, two have been identified as core by a decision maker of the bank.

Presented decision making framework employs two different methods that were combined for the first time in this paper for different purposes. Total Unduplicated Reach and Frequency (TURF) statistical analysis is first time used for introduction of service lines in the operations' area and Analytic Network Process based on the BOCR model is first time used for segregation purposes. Accordingly, we define new quality management practices in banking based on:

- Conceptual architecture of digital platform for operations' function that can be designed at the organizational level and used not only in banking, but in service industry in general;

- Comprehensive framework for effective decision making that consists of:

  - Total Unduplicated Reach and Frequency (TURF) statistical analysis for introduction of new operations services and

  - Analytic Network Process (ANP) method based on BOCR model for segregation of core from actual and augmented operations services.

Finally, we have recognized that presented solutions have the high potential to improve the excellence in business.

Conclusions

Today's continuously evolving business environment demands by operations' management in banking to be agile and lean with the capacities and capabilities to effectively support mass customized product and services in order to meet a variety of stakeholders' expectations, emphasizing the creation of superior value and customers' satisfaction. To achieve that, previous literature suggests set of underlying principles that should be taken

into account. One of the fundamental requirements lies in acknowledgment of operations as a function and its effective strategies to be viewed as a strategic element in banking. Further, it is necessary to understand what operations management needs to provide and how to leverage resources and capabilities as an integrated system. Finally, operations' managers in banking have to develop the ability to tailor appropriate strategies with clear long-term vision and strong short-term implementation capacities to effectively shift operating model from traditional "back-office" to "strategic" one with the particular focus on quality management, operational excellence and the ambidextrous approach of operations. Existing literature suggests numerous quality management practices acting in the capacity of overall quality management ecosystem. A common denominator to all of them is a need for adoption of adequate methodologies, techniques and tools to effectively carry out quality management practices and to achieve excellence in business operations, thus to sustain preferable levels of organizational performances.

In our paper we define new quality management practices based on developed conceptual architecture of digital platform for operations service and introduction of techniques for effective decisions making, which have the high potential to improve the business excellence in banking. The purpose of the digital platform is to enable streamlined operations function with clear and simplified non-linear processes, strong focus on control point and strategic tools for effective decision making, aiming at improving overall the operations' service quality and achieving operational excellence. We propose this solution to be integral part of operations' strategies that can effectively support mass customized services and lean strategy. This solution allows extensive digital capabilities for further business optimization, and can be used not only for operations' function in banking, but for the entire organization in services' industry. A conceptual architecture of digital platform for operations' services with all presented features and capabilities is first time developed for operations' function in banking. Proposed framework for effective decisions aims to increase overall quality in decision making process. For the purpose of this work, we employed two different methods that were combined for the first time in this paper for different purposes. Total Unduplicated Reach and Frequency (TURF) statistical analysis is first time used for introduction of service lines in the operations area, and Analytic Network Process based on the BOCR model is first time used for segregation purposes.

Based on the reviewed literature and the results obtained from the study, this paper draws some recommendations for managers in financial services: (a) Incorporation of integrated mass customization, lean and agile paradigms into the operations strategies, (b) Development of innovative and flexible solutions with established control point, continuous monitoring and measuring of operations performances, (c) Development of smart processes focused simultaneously on the efficiency and effectiveness of banking operations, (d) Adoption of comprehensive, quantitative, and objective approach to decision-making with the development of a systematic, logical and ambidextrous view on the problem, and (e) The use of appropriate tools and decision support software solutions.

Future research should focus on testing the proposed quality management practices in banking. The study can contribute to operations management, quality management, innovation management, IT management, business process management and decision making in service organizations.

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