“Customer satisfaction with digital banking channels in times of uncertainty”

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CUSTOMER SATISFACTION WITH DIGITAL BANKING CHANNELS IN TIMES OF UNCERTAINTY

Abstract

The unprecedented Lebanese economic crisis and the global COVID-19 pandemic have taken their toll on the Lebanese banking sector. This led to the need to investigate this sector in times of dire uncertainty by highlighting six digital banking channels offered by Lebanese banks. This study reveals how the banking industry has adapted to this novel situation by embracing dynamic technological changes to attain higher levels of customer satisfaction with digital banking channels (DBCs). Consequently, the study investigates the extent of DBC adoption, their usage benefits, the resulting service quality, and their aggregate impact on overall customer satisfaction with DBCs. The study measures customer satisfaction with digital technologies implemented in Lebanese banks during the most unstable period of Lebanese history. This study supported the deductive approach generating significantly interesting results by analyzing Spearman's correlations regarding DBC adoption and investigating customer satisfaction levels with DBCs showing satisfactory results such as high correlation for mobile banking adoption (0.544), internet banking (0.533), transactional call center (0.528) followed by ATM (0.455). A multiple linear regression study found a positive relationship between DBC adoption in Lebanese banks and overall customer satisfaction with DBCs with an adjusted R-squared value of 0.454 for DBC benefits and an adjusted R-squared value of 0.802 for DBC service quality in Lebanese banks on their customer satisfaction.

The final conclusion is that banks should invest in DBCs and develop them as they are the major determinants leading to improved customer satisfaction through higher adoption/diversification rates, improved service quality levels and greater benefits.

Keywords internet banking, mobile banking, service quality

JEL Classification G21, O33

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INTRODUCTION

The need for this study is to explore the results of the banks implementation of digital banking channels is successful on the customers satisfaction level, this research was made in an unstable financial situation, therefore, there is a need to conduct this study where digitalization is high in the banking sector. Digitalization is a growing trend in the global and Lebanese banking sectors. The purpose of this research is to study the service quality, extent of adoption and benefits of usage and their impact on the overall satisfaction with digital banking channels, by gathering primary data from customers of the major Lebanese banks that have adopted digital banking channels, whereby we are considering six main Digital banking channels being ATMs, Internet banking, mobile banking, Video teller machines, Call centers and E-branches. The satisfaction with DBCs will be shown in this research while it was conducted in an unstable banking sector, an economic crisis, and a worldwide pandemic, however we believe DBCs can play a positive part and affect customer satisfaction, which allows us to better understand and assess customer satisfaction with DBCs in situations of uncertainty. The approach of technology and alternative delivery channels to each part of human life and business has been obvious to the point that it became of extraordinary importance in managing everything particularly the banking system. Lebanese banks are one the most important and strongest institutions that compete on attaining higher levels of competitive and comparative advantage, more often Lebanese banks keep launching updated services and new features that keep the banking experience in constant improvement (Audi, 2016). Banks in Lebanon are starting to adopt financial technologies, in this growing market of corporate and retail banking competition. The main factors for capturing a higher market share and yielding higher returns lie in differentiation and innovation (IDAL, 2019).

1. LITERATURE REVIEW

The banking industry in Lebanon is of high importance and it plays a key role in the economy. Lebanese banks are embarking on the digitalization roadmap while constantly innovating and expanding their digital services. They enhance operations and compete to offer better customer experience, increase customer satisfaction levels and enhance service quality. To explore and measure customer satisfaction, it is necessary to identify key aspects that characterize this satisfaction as seen in many papers and research made around the globe. In Europe, digital banking services are fully integrated with consumers lives; research done by Mastercard examined 11 European regions. Six out of seven people use digital banking at least once per month, and thirty-eight percent use it weekly or daily. The most principal factor for sixty-seven percent of the respondents was security and convenience, being timesaving 66% and easy-to-use 65% considered as the biggest advantage of DBCs (Brusnahan, 2019). The European digital banking market is fragmented into retail and corporate banking, with the presence of several competitive aspects that might potentially change in coming years. The market of digital banking is highly competitive, with the existence of big global players, which creates challenges for banks to acquire a remarkable share in the digital banking market. Therefore, banks operating in the market of digital banking focus on reaching customers by introducing cutting edge technologies. A survey conducted by Morning Consult for the American Bankers Association in October 2019 on the sample of 2,200 adults showed that 73 percent of Americans most often access their bank accounts through online and mobile platforms. The proportion increased over the last year from 72 percent; individuals who used internet banking on computers as the first choice, came down from 42 percent to 37 percent in 2018. On the other hand, mobile banking grew from 30 percent to 36 percent, only 17 percent still prefer to go to the bank's branch. Whereas 6% prefer using the ATM, while only 4 percent prefer telephone and email banking. The breakdown of age groups showed that 62 percent of Americans aged 18-29 use mobile banking the most, while more than 50 percent of those aged 65 and older use mostly internet banking. As for preference to visiting the branch, 26% of Americans are over the age of 65 compared to only 11 percent of those aged 18-44 (American Bankers Association, 2019). In the US, after the launch of pure digital banks (branchless banks), only 3% of millennials and 1.5% of Gen Xers, and 0.8% of Baby Boomers use it as their primary account provider. An estimate based on a Q2 2019 survey of 2,506 US consumers shows that US Consumers do not want a digital bank only. The choice of banks would highly depend on product offerings, higher deposits interest rates and a better credit/debit card reward system. US customers prefer benefits and reward systems rather than consider using a branchless (Fully Digital Bank) where the human relationship is missing. What is a factor that affects trust, which, in turn, helps consumers invest or engage in banking products? However, the main determinant would still be location and convenience to be able to bank easily and within a close and easily reachable location (Shevlin, 2019). A study was conducted in 2018 on digital banking maturity in Europe, the Middle East and Africa (MEA) countries. The study grouped countries into four groups such as champions, smart followers, adopters, and latecomers. In the MEA region, the biggest market achiever and the only to be considered a digital champion was Turkey. Qatar was the closest with a ranking in smart followers (Deloitte, 2018). As for the rest of the MEA region, Saudi Arabia, Kuwait, UAE, Jordan, and Lebanon, were all listed in the late-

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comer group due to little local market pressure. When banks in these countries decided to adopt digital banking, they leverage it as a competitive market distinction (Deloitte, 2018). Digital Banks in the United Arab Emirates are leaders in adopting digital solutions, from creating digital only banks to enhancing mobile banking services, making the UAE a start-up hub for the digitally oriented financial sector. With around 30 percent of the region's financial technology companies in the UAE, KSA comes second and is as a front-runner in banking digitalization. Research on bank customers in the region by Arab Net shows that 76 percent of KSA clients use digital banking platforms, and 60 percent use mobile and online apps, ranking on top in the region, elsewhere in the Middle East, Lebanon, Bahrain, and Israel are catching up (Fintech News, 2019). Evolution of the financial sector in the middles east is rather slow, although mergers is widely thought across the region to be a priority. Because most banks are small institutions, in the Middle Eastern banks one can still see long queues of customers on payday outside branches, being that the financial sector has long been conservative and mostly owned by governments and powerful families. There is a sense of urgency that is new to the region's banking sector, for large and small banks in the region. Customers are becoming more and more demanding in the digital space of the Middle East, which in the past had long preferred brick-and-mortar thinking. The banks that will survive the next 10 years are the ones that will almost transform themselves into a fintech with a banking license (Holmey, 2019). Lebanese banks are challenged to develop and adopt digital technologies to keep pace with growing and changing customer demands. Lebanon hosts 14% of the region's Fintech start-ups, in 2017, 54 percent of individuals with a bank account are using digital banking and was ranked in 2016 as second in the region for the rate of bank customers who use mobile banking (IDAL, 2019). Most Lebanese banks have diversified DBCs, with very few banks only having ATMs as the only channel. In fact, a high number of banks have adopted Smart ATMs. However, Lebanese banks, which are among the market leaders, had E-branches and VTMs from 2008 till 2017 (El-Zammar, 2019). Banks in Lebanon are benefiting when customers use DBCs, savings can be expressed as less effort, time, and cost as per "Philippe El Hajj" DGM at Fransabank. Moreover, Lebanese banks offer less fees as incentives to clients who use DBCs, as the incentives are covered by the large cost savings when clients use DBCs. Around 80 percent of digital banking client interactions at "Blom bank" are made on the mobile banking app said Antoine Lawandos, Assistant General Manager at BLOM Bank. In April 2019, more than a million logins were made on mobile banking digital channels, which is an increase of almost 40-percent than the previous year as per "Raffy Karamanian", Digital Banking manager at" Bank Audi". Chairperson of "Bank of Beirut", Mr. Salim Sfeir stated that investments of more than $80 million were made in the IT infrastructure and digital banking over the last three years. Although Lebanese banks still lack many technologies that are already adopted abroad, in recent years, there have been some notable advancements, such as Bank of Beirut Launching the Digital Service "DIGI" a digital service for opening and managing accounts and applying for loans. Bank Audi also launched in the last quarter of 2019 the mobile Application "My Novo", which connects a customer to a bank advisor in a video conference and offers a set of banking services that can substitute a branch visit. Also, Saradar Bank launched a unique digital branch concept called "S17" which combines digital banking and the presence of banking advisor. The concept offers consumers expert support at their disposal, as well as digital self-service channels (Nakhoul, 2019). SERVQUAL was developed as early as 1985 with ten components such as Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding/Knowing the customer, and Tangibles to be later merged into five dimensions in 1988 until date (UK Essays, 2018). Reliability is the ability to perform the promised service accurately, when service providers keep their promises, particularly about the service outcomes and service attributes. Banks need to be aware of customer expectation of reliability, and to remain always consistent and correct on the first time. Responsiveness is the willingness to support customers promptly, this dimension is about attentiveness in dealing with bank customer's requests, inquiries, and problems. It is measured by length of time to help, answers and problem solving. Assurance is to ensure trust and confidence, defined by the courtesy and ability of banks; this dimension is important for the services involving elevated risk and sensitive operations. Assurance makes the success of any service interaction more likely. Empathy provides caring attention from the bank's representatives provided to customers; it is essential to show customers that the bank does its best to satisfy their needs. Individualized approach can make for successful expectation and service delivery. Tangibility is the appearance of the physical facilities, equipment and personnel, customers derive their perception of service quality by comparing the tangibles associated with these services provided. This dimension should not be overlooked, as looks make the first impression of professionalism that contributes to the overall customer experience, and define the brand position, comfortable and attractive equipment, contribute to the overall experience of service delivery (Castle, 2017). Customer satisfaction in the banking sector is a key success factor for banks; the impact of DBCs has greatly contributed and reshaped the scale of customer satisfaction in the digital era. A study of around 80,000 customers of 136 large U.S. banks over 12 years analyzed the factors that drive customer satisfaction; the customers, especially Gen X and millennials, highly appreciate the use of digital channels. Customer satisfaction is higher among those banks that link payment services to customers' accounts and successful problem resolution by solving problems online or via social media (Babrovich, 2017). Research made on the factors affecting customer satisfaction with online banking services in Thailand examining a sample of 310 respondents shows that customer expectations towards the quality and value of the service influence their satisfaction. The methodology shows a model used to test multiple hypotheses stating a positive relationship between customer expectation, perceived value, overall satisfaction, perceived quality that makes it possible to use those factors to develop and improve a bank's digital banking services. The results show that customer satisfaction is achieved from perceived quality, perceived value and emphasizing service quality, its convenience, a wide range of services (Rompho & Unyathanakorn, 2014). A study in Kenya on the influence of digital banking on customer satisfaction shows that the speed and reliability of digital banking was considered satisfactory. Clients answered that transactions made on DBCs were very fast in comparison to branches; this research shows that the speed of transactions has a positive effect on client satisfaction. And as for accessibility, responses show that the most accessible channel was mobile banking, since clients can do their banking at time and place of their convenience; the research shows that increasing accessibility increases in turn overall customer satisfaction. Banks provides clients to switch to digital banking by educating them the usage of DBCs, and this shows a good relation between adaptability and client satisfaction (Muluka, 2015). Digital banking and its impact on the banks of Jordan was explored to determine the factors that constitute digital banking benefits, as well as to examine the effect of digital banking on customer satisfaction. The studied sample consisted of clients owning a bank account in any Jordanian bank. Researchers collected 179 questionnaires and found that accessibility has a positive significant influence on customer satisfaction. Convenience has a positive influence on customer satisfaction, security and accessibility has a positive influence on customer satisfaction. Privacy has a significant influence on customer satisfaction, content has a positive influence on client satisfaction. Design has a significant influence on customer satisfaction. The result of this study proves that digital banking benefits have a significant effect on client satisfaction (Khalaf Ahmad & Ali Al-Zu'bi, 2011). Customer experience and loyalty were researched in Finland; the concept of measuring customer satisfaction level on digital services of Finnish banks has created a need to conduct this study that defines the customer satisfaction's relation to digital banking channels. A sample of 190 respondents was enough to get a 5% confidence level. Six hypotheses tested related to customer satisfaction in digital banking services, such as expectancy of performance, effort, responsiveness, reliability, security, and personalization; five of the hypotheses were accepted as to have a positive influence on customer satisfaction with digital banking channels services. Only responsiveness was not able to meet the requirement for being acceptable (Miah, 2018).

A study in India, exploring Internet Banking in terms of service quality and client satisfaction, stated that the findings were positively supporting the service quality dimensions. The prominent element investigated by Indian banking clients were

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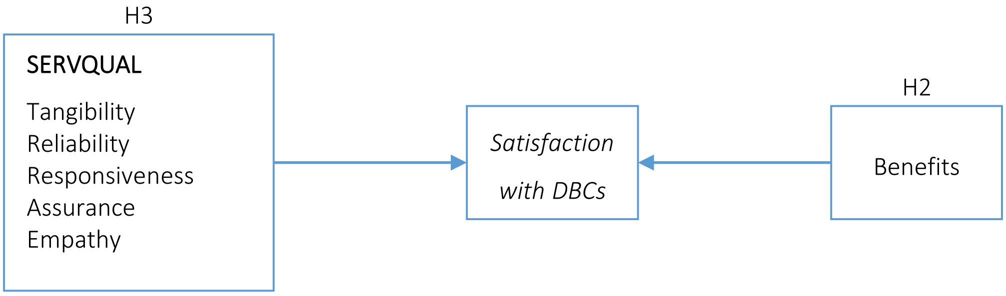

Figure 1. Impact of SERQUAL and benefits on satisfaction with DBCs

responsiveness, which has the highest impact on customer satisfaction, followed by efficiency and perceived credibility. As a result, customers expect banking channels 24/7 availability, with an appealing design, latest info, continuous improvement of security measures, consistently informing and educating customers about security measures, policies, and new operations (Singh, 2019). The COVID-19 pandemic affected the worldwide economies and most industries, thus implicating a state of uncertainty. However, a study shows that social limitations contributed to industries and people to adapt and use innovative digital solutions, such as digitalization, which became a need rather than a luxury. Being that the sprint which digital, banks have managed to attract clients was impressive; for example, "UK based Revolut" expanded from 1.5 million clients in 2018 to over 10 million in 2020, similar to the expansion of the Berlin based "N26". Many services were offered remotely rather than in person, which is the result of financial institutions revamping their operational model, to cater to new clients' preferences. It is anticipated that financial companies and banks might introduce services solely digitally (Moşteanu et al., 2020).

The goal of this study is to explore if banks that offer convenient services such as digital banking channel in a manner that reduces time and the risk of default of many transactions, induces higher customer satisfaction from DBC adoption. In addition, the benefits and incentives that encourage people to use digital channels instead of traditional banking and visiting branches take many forms, such as less fees and commissions, less waiting time, convenience of 24/7 access to accounts and others, and contribute to increased customer satisfaction. Finally, regarding DBCs' service quality and its relation to customer satisfaction, the following hypotheses are formulated:

H1: *The adoption of Lebanese banks' digital banking channels is positively related to overall satisfaction with DBCs.*

H2: *The benefits of digital banking channels in Lebanese banks positively affect~~s~~ overall satisfaction with DBCs.*

H3: *Service quality (SERVQUAL) of digital banking channels in Lebanese banks positively affects overall satisfaction with DBCs.*

2. METHOD

This empirical study was used to highlight the impact of adoption, benefits, and service quality of DBCs on customer satisfaction of the Lebanese banking sector. A quantifiable method being a survey-based questionnaire was used, from which the data collected was analyzed as seen in the coming chapters to reach a factual knowledge. This research aimed to study the effect of adoption, benefits, and service quality of DBCs on customer satisfaction with DBCs in Lebanese banks. Thus, a good understanding of data and figures helped in building a relationship between variables, leading to a strong model and a conclusion. It was built on the topic from the literature review that described DBCs and their impact on customer satisfaction and focused on the banks chosen as a sample for this study. Statistical tests were conducted to analyze the results to support or reject the hypotheses. Adopting a deductive approach, the hypotheses were tested with the help of a regression model using the data collected to obtain significant results. A survey research strategy was used, which is frequently related to the deductive approach and is frequently used in social science research. Surveys are very flexible and can be used to collect several types of data from small or large numbers of people from a selected population through the administration of a questionnaire and might be used for descriptive and exploratory research (Rodrigo, 2017). The sample was selected using a probability sampling method, specifically simple random sampling type, since the targeted sample should represent the whole population which is customers of all Lebanese retail banks who use digital banking channels. Participants were randomly selected to ensure a diverse sample consisting of 315 participants that potentially represents the whole population (Rompho & Unyathanakorn, 2014). In this study, a cross sectional time horizon was used to compare different individuals' inputs concerning the adoption, benefits, and service quality of DBCs and customers satisfaction in a single period in the year 2020 to develop an up-to-date study about DBCs in Lebanon.

3. RESULTS

The adoption of digital banking channels offered by Lebanese banks is positively related to customer satisfaction with DBCs. DBC adoption by Lebanese banks showed a non-normal distribution of data, due to the extent of adoption such as the number of machines/solutions available in Lebanese banks. Therefore, it was not possible to use a parametric test to identify the impact on satisfaction. However, satisfactory results were obtained by analyzing Spearman's correlations, which shows moderate positive correlation values between +0.3 and +0.7 for the adoption of five of the DBCs in relation the overall satisfaction. The highest correlation is in mobile banking (0.544), internet banking (0.533), transactional call center (0.528) followed by ATM (0.455) and E-branches/advisory rooms (0.440). Only the video teller machine (VTM) shows a weak positive correlation of 0.245, which is less than 0.3 in relation the overall satisfaction with DBCs.

The benefits of using DBCs in Lebanese banks positively affect overall satisfaction with DBCs.

Regression Model 2:

$$SAT = \alpha + 0.252BEN1 + 0.287BEN2 + \\ +0.278BEN3 + \varepsilon. \quad (1)$$

Pearson correlations in Model 2 show acceptable results below 0.8 for all variables, although there are few correlations, but are not considered high enough to affect the analysis of the model. The adjusted R-squared was chosen for the analysis, since it is a multiple regression; it has a value of 0.454. The adjusted R-squared implies that 45.4% of the variance can be explained by the impact of the benefits of DBCs on the overall satisfaction with DBCs. For social sciences, values > 35% are accepted as a positive linear association. The Durbin-Watson statistics for Model 2 is 1.735, meaning there is a slight positive serial correlation, but within an acceptable range between 1.5 to 2.5, where the optimal result is 2 if there is no positive or negative autocorrelation in residuals. The ANOVA of Model 2 shows a P-value of "0", which falls below "0.05", suggesting a strong significance between IVs and the DV; the chosen predictors in the regression analysis are meaningful in expressing the impact of DBCs benefits on the overall satisfaction with DBCs. In the coefficients, the independent variables: BEN1 (Cost effectiveness), BEN2 (Ease of use-user-friendly platform/layout)

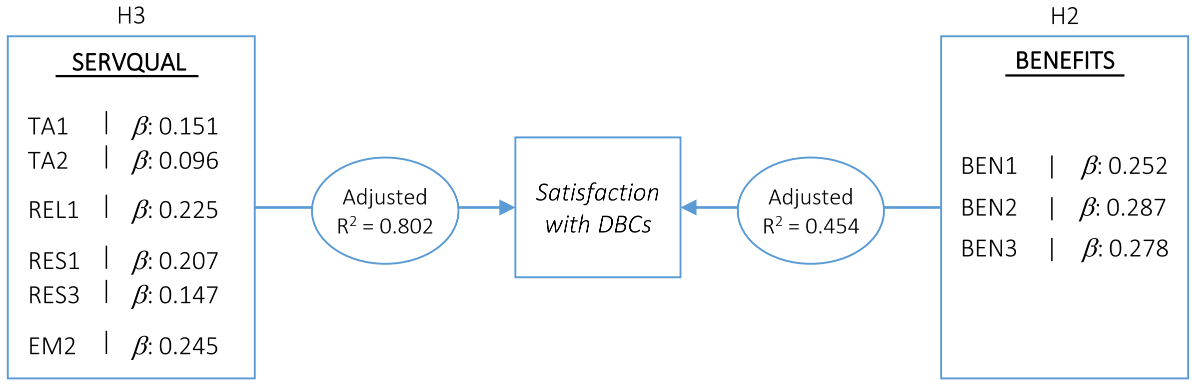

Figure 2. Regression SERQUAL and benefits on satisfaction with DBCs

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and BEN3 (Avoiding waiting in the branch) show a significant relationship. Beta coefficients have a positive sign, which implies a positive relationship between the latter and the chosen dependent variable SATISFACT (Lebanese bank customer's overall satisfaction from using DBCs). This outcome implies that a 1% change in IVs: BEN1, BEN2 and BEN3, have a positive impact on satisfaction with DBCs by 0.252%, 0.287 and 0.278%, respectively; the result of the chosen variables related to the benefits that encourage customers to use DBCs has a significant effect on the dependent variable.

Service quality (SERVQUAL) of DBCs in Lebanese banks positively affects overall satisfaction with DBCs. After running the multiple regression with the 15 IVs representing SERVQUAL instrument, some variables showed very little significance having a P-value above 0.05. Non-significant IVs were manually iterated and excluded, to keep a significant model, representing SERVQUAL's impact on satisfaction with DBCs.

Regression Model 3:

$$\begin{aligned} SAT &= \alpha + 0.151TA1 + 0.096TA2 + \\ &+ 0.225REL1 + 0.207RES1 + \\ &+ 0.147RES3 + 0.245EM2 + \varepsilon. \end{aligned} \tag{2}$$

Pearson correlations in Model 3 show acceptable results below 0.8 for all variables, although there are few correlations, but are not considered high enough to affect the analysis of the model. The adjusted R-squared was chosen for the analysis, since it is a multiple regression; it has a value of 0.802. The adjusted *R*-squared implies that 80.2% of variance can be explained by the impact of the service quality of DBCs on the overall satisfaction with DBCs, which means there is a high linear association. The Durbin-Watson statistics for model 3 is 1.967 and is almost an optimal result where a DW result of 2 means no positive or negative autocorrelation in the residuals. The ANOVA of Model 3 shows a P-value of "0", which falls below "0.05", suggesting a strong significance between the IVs and the DV. The chosen predictors in the regression analysis are meaningful in expressing the impact of DBC benefits on overall satisfaction with DBCs. In the coefficients, the selected independent variables' Beta values: TA1 (Up to date equipment & technology), TA2 (Bank has sufficient number/location of machines (ATM/ITM/E-branches and others)), REL1 (Wide range of services transactions provided on DBCs), RES1 (Fast call center, E-branch advisors and video tellers service), RES3 (Bank's digital channels offer solutions/advice promptly), and EM2 (Bank's understanding of specific needs is satisfactory), have shown a significant relationship. Beta coefficients have a positive sign, which implies a positive relationship between the latter and the chosen dependent variable SATISFACT (Lebanese bank customer's overall satisfaction from using DBCs). This outcome implies that a 1% change in IVs: TA1, TA2, REL1, RES1, RES3 and EM2, has a positive impact on satisfaction with DBCs by 0.151%, 0.096%, 0.225%, 0.207%, 0.147% and 0.245%, respectively.

4. DISCUSSION

This first hypothesis was accepted, since the analysis proves that the extent of DBC adoption is positively related to overall satisfaction with DBCs. Findings concerning mobile and internet banking are most positively related to satisfaction. This aligns with the literature review in a survey made in the US in 2019 showing that 73% of Americans most often access their bank accounts through online and mobile platforms, with an increasing shift from internet to mobile banking. As for ATM and transactional call center, the findings oppose this study, where only 6% prefer using the ATM, while only 4 percent use telephone and email banking (American Bankers Association, 2019). The analysis and perspective in the results of this study are that indeed mobile banking and internet banking are among the most used channels in Lebanon. Especially during the period of data collection, bank closures occurred and Lebanese customers relied heavily on mobile and internet banking, which also justifies the high results concerning ATMs and transactional call centers. As for E-branches/advisory rooms, they are the least moderately positively related, and video teller machines have a weak positive relation to overall satisfaction. The findings show that digital platforms do not show a high positive relation because of the limited availability in locations and in some Lebanese banks. In addition, these digital platforms are not as developed as in other countries, and services were limited on DBCs in the period of data collection, such as loans, credit cards, withdrawal limits, etc., which defeats the purpose of VTM usage and can explain the obtained results.

The second hypothesis was accepted, since the analysis proved that benefits affect satisfaction with DBCs by 45.4%, and there is a positive impact on the overall satisfaction with DBCs shown in the Benefits: "Avoiding waiting in the branch", "Cost effectiveness" and "Ease of use-user-friendly platform/layout". This aligns with the findings in the literature review where in a study on Middle Eastern banks one can still see long queues of customers on payday outside branches, and customers are becoming more and more demanding in the digital space of the Middle East (Holmey, 2019). Besides, a study on Indian banking customers shows that customers expect banking channels to be available 24/7, with a good visual layout and the up-to-date information and others, whereby if these factors are met, customer satisfaction would be positively affected (Singh, 2019). Lebanese banks offer less fees as incentives to clients who use DBCs, as the incentives are covered by the large cost savings when clients use DBCs (Nakhoul, 2019). Other studies in Europe found that 65% of respondents stated that ease-of-use is one of the most important DBC factors (Brusnahan, 2019). The direct implication of this hypothesis suggests that Lebanese banks should maintain and enhance these analyzed benefits, and also should develop different benefits with existing or newer DBCs, since a positive impact contributes to the success of banks investing in and adopting DBCs.

The third hypothesis was accepted, since the analysis proved that service quality (SERVQUAL) affects satisfaction with DBCs by 80.2%, and there is a positive impact on the overall satisfaction with DBCs, as shown in TA1 (Up to date equipment & technology), TA2 (Bank has sufficient number/location of machines (ATM/ITM/E-branches and others), REL1 (Wide range of services transactions provided on DBCs), RES1 (Fast call center, E-branch advisors, and video tellers service), RES3 (Bank's digital channels offer solutions/advice promptly), and EM2 (Bank's understanding of specific needs is satisfactory). This aligns with the findings in the literature review, such as a study on Finnish bank customers about the relation of customer satisfaction with the performance of DBCs and equipment. The hypothesis was accepted about a positive influence of digital banking channel services on customer satisfaction (Miah, 2018). Another study on the benefits affecting customer satisfaction with online banking services in Thailand shows that customer satisfaction is achieved by offering a wide range of services (Rompho & Unyathanakorn, 2014). A study of 136 US banks proved that customer satisfaction is higher in banks that successfully resolve problems via DBCs (Babrovich, 2017). The assumption that EM2 (Bank's understanding of specific needs is satisfactory) shows a higher impact on the dependent variable (Satisfaction) is justified by a higher Beta value due to customers experiencing many restrictions and changes in banking procedures during the period of data collection. Banks are communicating and dynamically catering to customers' questions and demands through digital channels while applying new procedures and regulations. As for the non-significant variables that were excluded from the statistical test, it is assumed that while considering the period of data collection, it was a time of crisis and bank closures caused by quarantine. Being: TA3 (DBCs have a friendly user interface), some banks might have applied restrictions and new procedures on DBCs without considering user experience. REL2 (Fast performing digital banking machines software), the high dependency on DBCs might have slowed some banks' DBCs. REL3 (Reliable services transactions process on DBCs), the restrictions and limitations of certain transactions have caused a decrease in satisfaction. RES2 (Resolution of claims/disputes raised through DBCs is satisfactory), a drastic increase in the number of claims and complaints was not addressed and catered for by banks. AS1 (High security and fraud protection on digital channels), some banks might not be offering satisfactory security on their DBCs such as OTPs, two factor authentication or others. AS2 (The collection of personal information is handled with care), due to some channels being in locations without satisfactory privacy measures. AS3 (Error free services transactions made on DBCs), the high load on DBCs and banks operating at low capacity might have had higher incidents and system problems that affected DBC services. EM1 (Help desks/call centers are empathetic), the strict limitations and regulations could have led to leaving unsolved claims and requests received at banks' call centers. EM3 (Educating customers on the usage of digital banking channels), assuming that fast changes on DBCs might not always be straight forward to customers on new or modified features.

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CONCLUSION

The purpose of this study is to explore service quality, adoption extent and benefits that encourage the usage of DBCs, as well as their impact on the overall satisfaction with digital banking channels. To understand their benefits for banks in a challenging economic situation, a highly competitive market has been successfully achieved. The analyzed and discussed findings are as follows: The extent of DBC adoption is positively related to overall satisfaction with DBCs. Mobile banking, internet banking, ATM, transactional call centers and E-branches were compared with the findings in the literature review on studies in the US. The benefits of using DBCs at Lebanese banks had a positive impact on the overall satisfaction with DBCs, 24/7 access to accounts and transactions, cost effectiveness (less commissions and fees), ease of use (user-friendly platform/layout), avoiding waiting at a branch. This is in line with the findings in the literature review on studies made at the Middle Eastern banks, Indian banks, and other European banks. Service quality (SERVQUAL) of DBCs in Lebanese banks had a positive impact on the overall satisfaction with DBCs in up-to-date equipment and technology; Sufficient number and location of DBCs; Wide range of services transactions provided on DBCs, fast call centers, E-branch advisors, and video tellers' service. Banks' digital channels offer solutions and advice promptly. Banks' understanding of specific needs was aligned with the findings in the literature review on studies made on Finnish, Thai and US banks. The conclusions that can be drawn would serve as managerial implications that this research outcome can contribute to the decision making on the adoption of digitalization in the banking sector. It might not be the only determinant for bank managers and decision makers, but it can be a major indicator, since the results of this study show the impact of showcasing the benefits of digital banking channels and improving their quality on customer satisfaction. This study also serves as guidance for executives in banks that have not yet implemented or developed their existing digital banking channels. On the other hand, banks and Fintech companies can use the outcomes of this study to develop and enhance their products and digital offerings, considering the results that were found as less significant. Partly to make investments in DBCs more beneficial to banks, overall satisfaction levels with DBCs in Lebanese banks can be increased. Another implication of this study is that satisfaction can induce shifting branch operations in banks. It is also concluded that Lebanese banks affected by the economic crisis, the pandemic and uncertainty are aimed at downsizing and reducing the number of branches. The results of this paper can be used to adopt or enhance DBCs based on the findings and the analysis. As an implication to the Lebanese banking sector on the need to digitalize and develop DBCs, regulatory bodies and the Lebanese central bank should empower banks by providing a digital banking infrastructure, legalizing, and regulating digitalization and DBCs. This can be achieved by developing control mechanisms and policies. Government inclusion and initiatives in this matter might lead to encouraging more people to use DBCs feeling reassured that it is a secure and regulated service, thus encouraging banks to fulfil the growing demand of DBCs. Finally, the most important implication of this study is identifying the elements of service quality, the most important benefits and the most used DBCs in an uncertainty period with multiple closure days of bank branches. Since there was heavy reliance on DBCs due a financial crisis, a period of protest, and a worldwide pandemic. These factors had a huge impact on the findings of this study, where the results would be very different in a stable period, so the results of this study were important and valuable.

AUTHOR CONTRIBUTIONS

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