



Available online at <http://jeasiq.uobaghdad.edu.iq>
DOI: <https://doi.org/10.33095/t29arx88>

The Role of Technology-Based Customer Relationship Management in Sustainable Competitive Advantage - A Field Study of Iraqi Banks

Alzahraa Sabah Alchalabi*
Department of Administration,
College of Administration and Economics
University of Baghdad
Alzahraa.Sabah@coadec.uobaghdad.edu.iq

*Corresponding author

Saadoon Hammood Chitheer
Department of Administration,
College of Administration and Economics
University of Baghdad
Saadoon_m@coadec.uobaghdad.edu.iq

Received:2/12/2023

Accepted:3/1/2024

Published Online First: 30 /8/ 2024



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

Abstract:

The objective of this research is to examine the impact of technology-based Customer Relationship Management (CRM) on sustainable competitive advantage in government and private banks in Baghdad. The research problem is summarized by the main question: "Have bank leaderships been able to leverage technology-based CRM for sustainable competitive advantage? And have they been able to maximize this impact?" Given the significance of the banking sector, government and private banks in Baghdad were chosen as the focus of this research. Commercial and Islamic banks were selected for the study, and the researcher conducted field visits to six banks (including Rafidain Bank, Trade Bank of Iraq, Alnahrain Islamic Bank, Al Taif Islamic Bank, Iraqi Middle East Investment Bank, and National Bank of Iraq). The research sample comprises 212 frontline employees, and the researchers employed a descriptive-analytical approach. A questionnaire was used as the primary data collection tool for the field study, consisting of 60 items covering the research variables and their sub-dimensions. Interviews were also conducted. After evaluating and testing the reliability and validity of the research measurement tools, the data were analyzed and hypotheses were tested using appropriate statistical tools, including the SPSS for data analysis. The results revealed a significant and meaningful impact of technology-based CRM on sustainable competitive advantage.

Paper Type: Research Paper

Keywords: technology-based CRM, Sustainable Competitive Advantage.

1. Introduction:

Achieving customer happiness has become an imperative requirement for all firms in the contemporary global economy. Building solid and constructive relationships with customers is how this is accomplished. Customers' demands and desires are being given special consideration by businesses, and Customer Relationship Management (CRM) is thought to be the most effective guiding principle for building positive relationships with future customers. The functions of technology and human resources can be combined to better serve customers, which increases staff productivity, makes marketing simpler, draws in new clients, increases profitability, and so on. Any organization's ability to manage its connections with consumers is a key factor in determining its success.

The management of the expanding amount of information that is available and the provision of correct and pertinent information to clients are substantial issues for enterprises in the modern day. CRM requires customer data to operate effectively. Technology is therefore essential for maintaining client connections and boosting intelligence. It has improved in terms of transparency, proactivity, interaction, and decisiveness, enabling enterprises to engage with customers in a dynamic manner (AlChalabi, 2019).

The crux of a triumphant CRM implementation lies in engaging individuals in the conception and execution of IT-supported business processes. Consequently, Patel (2009) asserts that information technology constitutes an integral component of the majority of CRM strategies (Dunn and Rogers, 2019). Dean (2000) underscored that ongoing technological advancements are pivotal in addressing key issues such as maintaining economic efficiency, promoting social justice, enhancing team cohesion, and reforming public service (Rahima et al, 2018).

The infrastructure or instrument known as technology-based CRM makes it easier to execute CRM. As a result, it's important to determine the technologies that organizations want to use based on the sorts of customers they serve, the size of their organizations, the traits of their employees, and their current IT infrastructure (Zahedi and Tofighi, 2011). By enabling integrated information and impactful engagement, the use of technology-based CRM is expected to improve an organization's capacity to maintain profitable customer relationships, as well as promoting integration, knowledge giving and creativity (Danook et al, 2023).

Many businesses continue to communicate with clients using outdated ways, which can result in them receiving information that is not relevant. As a result, emphasis is placed on the significance of personalizing and presenting information to interested customers in a way that suits their wants and requirements. It is emphasized how important it is to communicate pertinent information with connected consumers and strike a balance between addressing customer wants and attaining business objectives.

Consequently, the current study investigates the impact of technology-based CRM in striving to attain sustainable competitive advantage (SCA). To examine such relationships, an experimental study was conducted, and data were collected from front-office employees in both government and private banks. The selection of banks for the study was based on several reasons, including their substantial market share due to their significant capital ownership. The chosen banks share a common characteristic, excluding Islamic banks, as they maintain branches outside Iraq, signifying their market position and geographic expansion. These factors make these banks a significant subject of academic study to comprehend the performance of the banking sector and its economic impact on local and regional levels. Therefore, technology-based CRM has become a crucial technology for the services sector in enhancing customer relationships.

1.1 Literature review:

Previous studies have elucidated the capability of technology to collect, analyze, store, and share data concerning both prospective and existing customers, particularly in the context of its influence on CRM initiatives. These technological competencies significantly augment employees' capacity to respond to specific customer requirements, offering enhanced methods for attracting new customers and fostering loyalty among existing ones (AlQershi et al, 2020). While information technology facilitates the creation and utilization of procedures, the efficacy of these processes is contingent upon qualified personnel.

Many studies have addressed the independent variable of technology-based CRM. Thompson et al (2000) outlined that technology-based CRM involves horizontal business integration, engaging customers through direct interaction, web, email, and telephone, utilizing a combination of analytical and operational techniques (Mekhum, 2020).

Mukerjee and Singh (2009) anticipated that the adoption of technology-based CRM would enhance an organization's capability to establish and sustain profitable customer relationships by facilitating information integration and sharing, positively impacting the organization's interactions with customers in a seamless and efficient manner. Consequently, the imperative for effective customer data analysis and personalized responses became evident (Rashid and Tahir, 2013).

In a study conducted by Amare (2018) the aim was to assess the extent of Awash Bank's application of CRM practices across four dimensions (customer focus, knowledge management, organization, and technology-based CRM), and its impact on customer loyalty. The results indicated that the customer focus dimension is more important than the technology-based CRM dimension, as it has a significant impact on customer loyalty.

Mwirigi's study (2019) recommended that commercial banks consider the technology-based dimension of CRM when formulating strategies, given its significant impact on customer satisfaction in the commercial banking sector.

The study conducted by Podile (2021) analyzed customer relationship management as a new approach to discovering and attracting consumers through the development of communications with customers. The results indicated that technologies had gained significant importance in the Indian banking sector, and the bank should have strived to employ technology for effective and reliable management.

Additionally, several studies discussed the dependent variable, sustainable competitive advantage. In the conducted study by Alharthi (2012) the problem revolved around the absence of a general framework elucidating how to maintain sustainable competitive advantage within organizations. The researchers concluded, emphasizing the importance of identifying variables such as organizational profitability and the learning process in preserving sustainable competitive advantage. They highlighted how the business entity operated as a system using input-output and feedback, integrating this into various models within the value chain and service engineering. They affirmed that achieving this required manager to plan for dealing with customers as a group composed of a series of transactions based on their purchases.

The study conducted by Alalie et al (2018) aimed to contribute to the understanding of how SCA could be developed and applied in assessing the performance of a large local bank in Iraq. The results identified the most formidable challenge posed by new banks that consistently led in adopting new technologies, irrespective of their substantial asset base.

In the study by Amesho et al (2022) significant gaps in managing SCA through technology and innovation systems were assessed, along with their impact on service delivery in a competitive business context. The study concluded that managing technology and innovation for SCA is not merely a means to achieve a specific goal but rather a set of tools and strategies to ensure the proper delivery of services to individuals and communities.

Shah (2022) presented a comprehensive framework that integrated the concepts of organizational knowledge, managerial decision-making capabilities, SCA, and big data analytics. This framework was labeled as "The Perpetual Model of Big Data Analytics as a SCA" Additionally, Shah introduced a unique model for analytic maturity, named the "SAMDDC-DAMPPC Analytic Maturity Model," which aided in identifying and classifying companies based on their analytical maturity.

Significant contributions from prior studies have enriched the understanding of the relationship between technology-based CRM and SCA. Onyango and Katuse (2016) demonstrated a substantial positive impact of technology-based CRM on SCA, recommending a focused investment in information technology within banks due to its impact on overall achievement, particularly in SCA. Zaky (2017) proposed that technology-based CRM positively affects SCA and the advantages of banks, emphasizing the need for decision-makers in the Egyptian banking sector to enhance success factors influenced by customer relationship management, including technology-based CRM, managerial commitment, human resources, and organizational knowledge and culture.

Consequently, the central problem addressed in this study revolves around the challenges encountered in the digital transformation and the imperative of implementing technology in the banking industry in Iraq, particularly within the context of CRM. These challenges encompass a lack of awareness, superficial negligence of CRM practices, and the disregard for the critical role that information technology plays in achieving SCA.

Furthermore, the study aims to comprehend the direct and indirect impacts of technology-based CRM. These impacts materialize through interactions between bank employees and customers, elucidating how such interactions contribute substantively to establishing a long-term competitive advantage in a fiercely competitive market environment.

2. Material and Methods:

The researchers employed a descriptive-analytical methodology by collecting and analysing the necessary data to achieve objectives and test hypotheses. Data were gathered using a questionnaire tool consisting of two parts. The first part encompassed personal information of employees working in the front line of government and private banks, including gender, age, marital status, educational qualification, years of service, and participation in training courses. The second part included questions pertaining to research variables. To measure the technology-based CRM variable, the researchers relied on a study by AlQershi et al (2020). Regarding the dimensions of SCA, the researchers constructed these dimensions based on two studies. The first study Foon and Nair (2010) identified the following dimensions: flexibility, brand reputation, organizational learning, and innovation. The dimension of quality was added to these dimensions based on the scale of the second study (Nasef et al, 2022). The researchers utilized various statistical tools available in statistical software program such as SPSS to process the data and extract the results.

2.1 The research population and sample:

The research was conducted within governmental and private banks, encompassing both commercial and Islamic banks from both sectors. The study focused on the employees working within these banks as the research community. The sampling method employed was a comprehensive survey. The researchers distributed 257 questionnaires, from which 212 valid questionnaires were collected for analysis, constituting the sample size. The questions were developed using a Likert five-point scale.

2.2 Hypothetical research plan:

The visual representation elucidates the researchers' concept and illustrates the logical connections between the study variables. This diagram has been crafted based on organizational and intellectual literature related to research variables. Its purpose is to align with the research problem and questions, affirm its significance, and ensure compatibility with the research objectives. As depicted in Figure 1.

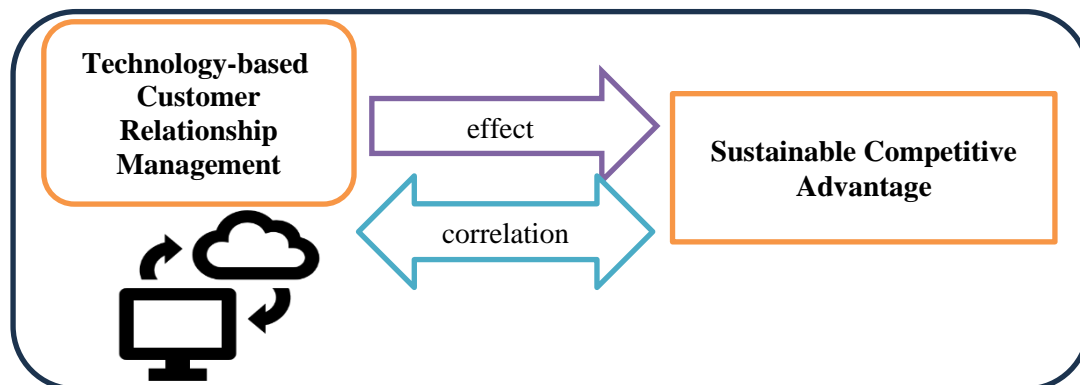


Figure 1: The Hypothetical design of the research

2.3 Hypotheses:

Primary Hypothesis 1: There is no statistically significant relationship between technology-based customer relationship management and sustainable competitive advantage.

Primary Hypothesis 2: There is no statistically significant effect of technology-based customer relationship management on sustainable competitive advantage.

2.4 Technology-based Customer Relationship Management:

The COVID-19 pandemic has accelerated digital transformation in Iraq, with banks adopting electronic governance and customers preferring online shopping and remote learning. These successful electronic experiences are expected to continue improving services and operations in the future (Albayatey et al, 2021). CRM is described as a process by Kotler and Keller (2009) and Maulana et al (2021). It involves managing detailed information about each customer and carefully managing the lifecycle of all customers to increase customer loyalty. Furthermore, Kotler and Keller (2016) defined CRM as an organization's attempt to inform, persuade, and remind customers directly or indirectly about the products and brands they sell (Ra'ed and Hani, 2019). Kotler and Keller consider it a promotional tool for communicating with organizational customers, increasing sales, and motivating them.

Further explaining this, Singh and Singh (2016) claim that CRM is a multifaceted process involving a variety of information technologies that emphasize fostering a two-way exchange with customers, enabling the organization to have a thorough understanding of their needs, desires, and buying habits. CRM is characterized in the financial services industry as a collection of procedures intended to foster mutual and lasting value between financial service businesses and their clients (Kotarba, 2016).

A different, more thorough viewpoint on CRM was offered by (Sitinjak et al, 2020). They see CRM as a strategic business philosophy supported by tools and technology created to improve business-related human relationships. The researchers concur with this comprehensive viewpoint because customer relationship management is integrated into an organization's guiding principles. This ideology includes the support of CRM procedures and tactics by the top management, which subsequently involves everyone in the organization. This help is underpinned by specialized technology systems and infrastructure that streamline deployment. As shown in the figure 2, Pedron and Saccol (2009) emphasized the links between various customer relationship management approaches, considering CRM to be the guiding principle for any strategy and information technology deployment.

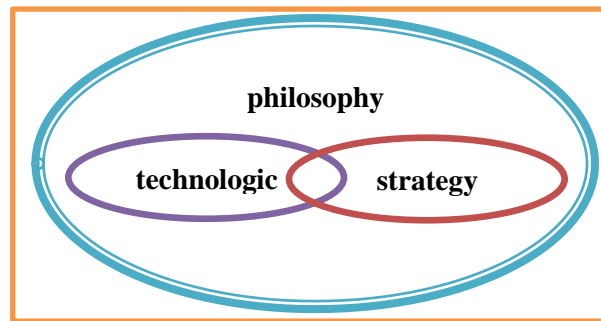


Figure 2: Linkages between different customer relationship management approaches. (Pedron and Saccol, 2009)

Three points of view were used by Payne and Frow (2005) to categorize the various perspectives on customer relationship management. (As a focused technical solution in a tactical manner, Extensive technology, Customer-focused)

According to the first viewpoint, CRM results from the utilization of all customer-related data, procedures, metrics, and information in order to provide customers with individualized service and foster a culture of customer loyalty and satisfaction. Konovalov et al (2020) provide this definition of CRM and refer to it as “data-driven marketing”. These firms are of the opinion that CRM should be managed as a technology rather than as a strategy protocol (Alam et al, 2012). Through the deployment of CRM, they want to increase earnings and hasten the creation of new product lines (Alchalabi et al, 2022). The attitude that equates technology-based CRM with CRM was questioned by (Rani et al, (2022) and was cited as a major factor in the failure of CRM practices in enterprises. Based on the second viewpoint, CRM is an integrated collection of customer-focused technological solutions. CRM, in this perspective, is an information technology tool whose purpose is to aid in the customer acquisition and service processes (Czopek and Kazusek, 2020).

The customer's point of view is the focus of the third and final perspective. A CRM business strategy makes it possible to communicate with the organization as a single entity that completely comprehends the particular circumstances of each customer. According to Rahman et al (2021) the CRM approach gives the organization a clear and complete view of each client and all activities associated with them. To build a solid, mutually advantageous relationship with clients, businesses must understand their requirements, wants, and preferences (Kazem et al, 2020). According to some experts, CRM is a long-term strategy where the customer relationship develops from the first point of contact through loyalty-building within organizations (Godecka, 2002). According to (Mugunthan and Kalaiarasi, 2017) CRM is a technique or framework that gives businesses a perspective on customer management. CRM is viewed as customer-facing by (Park and Kim, 2003) and (Reinartz et al, 2004), who categorize it into three relationship stages: initiation, maintenance, and termination. These phases have an effect on CRM, enhancing its value and profitability (Hoseini and Naiej, 2013).

Researchers and practitioners emphasize that CRM should not be approached merely as a technological tool; instead, there is a need to view CRM in a strategic and holistic manner. While the previously detailed perspective is comprehensive in its expectations, CRM needs to be adaptable in a dynamic and constantly changing environment. It's worth noting that from a scholarly perspective, the focus is on the philosophical content of customer relationship management rather than the technological content (Rababah et al, 2011).

CRM is a mindset at the center of every information technology strategy and application, executed through methods intended to drive information technology applications, according to a content study of CRM by (Pedron et al, 2009). According to Kiyak and Labanauskaite (2020) CRM is also a technique that calls for software and technology to automate the organization's activities for sales, marketing, and customer service.

Technology provides diverse tools to enhance the relationship between organizations and customers, thereby increasing satisfaction levels. These tools include mobile phones, email, fax, text messages, and web services to facilitate customer interactions. They offer means to collect, categorize, analyze, interpret useful information, and along with applying feedback mechanisms (Wareewanich et al, 2019). Their application combines both analytical and operational techniques (Mekhum, 2020). Organizations can consider utilizing artificial intelligence, as it provides accurate and swift diagnostic results. It supports the development of a diverse range of artificial intelligence technologies that perform marketing activities such as information retrieval (e.g., web crawlers), customer acquisition (e.g., programmatic advertising and retargeting), customer retention (e.g., recommendation systems), and interaction through communication (e.g., customization and content generation engines), to name just a few (Ziliani and Ieva, 2019).

Which provides accurate and rapid diagnostic outcomes. Artificial Neural Networks (ANN) can also be employed, known for their data classification and processing capabilities, handling various data types (Khalil and Rada, 2023). In cases where data is unclear or incomplete, which is meant Mahdi and ALmohana, (2022) as the loss of a value or group of values from the data. it can be addressed using Fuzzy Regression Bridge model as a simulation, as proposed by (Kareem and Mohammed, 2023), and suggested by (Wu et al, 2010). A new approach relies on fuzzy logical data and logistic regression modeling to detect financial crises in banking service in Taiwan (Shemail and Mohammed, 2022). Additionally, chatbots (Robotic Process Automation), mobile applications for improved customer service, and social media platforms can be employed (Nunna, 2020). Utilizing Enterprise Resource Planning (ERP) systems, information systems can be integrated, supporting coordinated workflow and consolidated data. It ensures unified maintenance, real-time consistent information provision, and alignment between partners. Employing a client-server model, it supports integrated business operations and collaborative applications (Alhalboosi et al, 2021).

2.5 Sustainable Competitive Advantage (SCA):

When George Day examined tactics for preserving competitive advantage in 1984, the idea of sustainable competitive advantage (SCA) was first established (Alalie et al, 2019). Porter who defined a variety of competitive methods (cost leadership, differentiation, and focus) to attain a long-term competitive edge, first used the term SCA in (1985). The distinguishing qualities of an organization in the market, relating to its products and services in the present, can be expressed as the extension of competitive advantage (Salman et al, 2019). Porter omitted offering a formal definition of SCA, nevertheless. Sustainability, in the words of Mazzarol and Norman (1999), is the capacity to create commercial strategies that rivals are unable to imitate (De Silva and Chitraranjan,2018).

According to Barney (1991) an organization with SCA is one that employs a strategy to create value that is not in line with that of existing or potential rivals. Additionally, he contends that an organization has SCA when it implements a value-creating strategy that is difficult for rivals to imitate at the same time or when other companies are unable to copy the strategy's advantages (Maulini et al, 2022). Weak organizations that do not properly use their resources and competencies have lost the ability to deal with these difficulties (Ahmed and Al-Kubaisi, 2021).

The definition of SCA has several benefits from a theoretical standpoint, not the least of which is avoiding the issue of figuring out how long organizations must maintain competitive advantages in order to ensure their “sustainability” across various industries. According to empirical evidence, sustained competitive advantages typically last for a long time in the context of time (Elijah and Millicent, 2018).

According to Gomes and Romo (2019), it is “the assets, features, or capabilities of the organization that are difficult to replicate or surpass and provide a superior or suitable position over competitors in the long term.” According to (Kotler, 2012), SCA is an advantage within the organization that lasts for a long time and is impossible to replicate. Additionally, it involves “the continuous endeavor of organizations to achieve distinctiveness, authenticity, and attract a prestigious position by embodying their ability to provide unique advantages (products/services) that place them among prominent organizations in the business sector, while taking into account the organization's study of competitive organizational movements” (Guimares et al, 2017).

Hoffman (2000) defined SCA as the long-term advantage of putting into practice a distinct value creation strategy that is not being carried out concurrently by any current or potential competitors, as well as the inability to replicate the advantages of this approach (Yatim et al, 2019). According to Anwar et al (2018), SCA is essentially a strategic advantage that an organization has over rival companies operating in the same market, leading to exceptional performance and the satisfaction of important stakeholders (Khan and Khan, 2019). Additionally, it is described by Etin and Knouch (2018) as “the superior performance achieved by the organization through the utilization of various resources, especially intangible ones, in a way that competitors find challenging to imitate, given the repetition or distinctiveness of this advantage” .This ensures its access to wide markets and the provision of diverse products (Danook and Al.obaidy, 2022).

According to Thiel (2017) SCA is one that meets the requirements of future generations while maintaining long-term economic, social, and environmental performance. It is also a condition of innovation and excellence that sets an organization apart from its competitors by wisely investing in its unique resources that are challenging for competitors to duplicate (Al-naqeeb and Ismael, 2021). It is viewed as “the most suitable tool for competition, aiming to discover innovative ways to produce and deliver goods and services more efficiently and effectively compared to what competitors offer in the market, and to materialize this in the real world, with creative processes outperforming counterparts from other organizations within the same sector” (Naliaka and Namusonge, 2015).

According to Srivastava et al (2013), organizations acquire SCA through their ability to develop a set of core competencies that enable them to serve their target customers better than their competitors. Core competencies refer to a unique set of capabilities developed within an organization in its key areas, such as quality, customer service, innovation, team training, flexibility, and responsiveness, allowing them to outperform their competitors (Kuncoro and Suriani, 2018). In this perspective, core competencies are embodied in organizational collective learning, coordinating employee behavior towards the brand, and integrating it with customer relationship management techniques to gain SCA.

Additionally, Kotler stressed that firms can obtain a variety of SCA, such as cost-effective structures, product advantages, streamlined distribution networks, and customer support (Ocholla, 2020). The ability to swiftly and decisively manage and reconstruct intricate networks of resources and connections is crucial for maintaining a competitive advantage, according to Kotter (2014) and Purwani and Nurcholis (2015) and (Nurcholis, 2021). Two crucial characteristics define SCA :(Widodo and Hayu, 2021)

First of all, a SCA is “dynamic,” which denotes that it is not constant and unalterable. It suggests that a sustained competitive advantage is fluid and difficult to replace over time. The nature of competitive advantage is temporary and contingent, regardless of the market structure that is in place.

Second, “Continuity” the growth of an absolute competitive advantage might result from the accumulation of a relative competitive advantage over time. This implies that a position of absolute advantage may develop from the continuous accumulation of competitive advantages.

A competitive advantage and the creation of superior resources are characteristics of sustained competitive superiority, which will eventually become outmoded and impossible for rivals to imitate. The firm must revitalize its resources to gain short-term advantages and fight rivals in order to keep them from reaching the same performance level (Black et al, 2000).

When an organization outperforms rivals who have made comparable investments in terms of gains from investments over a lengthy period of time, making it impossible for rivals to catch up, it has achieved sustainable dominance in the market. Resilience, transparency, and repetition are three widely acknowledged pillars of sustainability (Finlay, 2000).

A thorough examination of the competition is required prior to beginning the strategic implementation of sustainability in competitive advantage. Four stages make up competitor analysis: developing an appropriate strategy within the context of competition, creating a superior strategy that gives a competitive edge, getting ready for anticipated competitor responses, and figuring out how to create defenses against competitor attacks (Hussey, 1999).

From a contradictory perspective, Aveni (1994) strongly argued that no organization can build a SCA because today's strength rapidly becomes tomorrow's weakness. Instead of striving for stability and balance, organizations must actively disrupt their own advantages and those of their competitors by creating a series of temporary advantages (He and Wong, 2004). It is worth noting that this viewpoint does not necessarily reflect the reality in all cases, as there are numerous examples of organizations that have managed to build SCA and sustain success in the long term. In fact, successful organizations focus on building SCA through continuous innovation and adaptation to market changes and customer needs. Success relies on the organization's ability to sustain and evolve, not solely on hindering competitors' advantages. This may require developing new strategies, improving operations, exploring new opportunities for innovation and growth, and emphasizing the use of information technology.

3. Discussion of Result:

Testing the hypotheses for the study variables as follows:

A. Testing the First Basic Hypothesis: There is no statistically significant relationship between technology-based CRM and SCA.

Table 1: Results of the correlation and impact relationship between technology-based Customer Relationship Management (CRM) and sustainable competitive advantage

Sig.(r)	R	Sig.(F)	F	R2	β	α
0.000	0.767**	0.000	300.100	0.588	0.649	1.009

Table 1 demonstrates that the correlation coefficient (r) value is 0.767. This is the Pearson correlation coefficient between the variables (technology-based CRM and SCA). This value indicates a strong positive correlation between technology-based CRM and SCA.

Furthermore, Sig.(r) represents the statistical significance level of the correlation coefficient, which in this case is 0.000 (less than 0.05), suggesting that this correlation is statistically significant.

Therefore, the researchers reject the first basic hypothesis (that there is no statistically significant relationship between technology-based CRM and SCA) and accept the alternative hypothesis as follows: “There is a statistically significant relationship between technology-based CRM and SCA”

B-Testing the Second Basic Hypothesis:

There is no statistically significant effect of technology-based CRM on SCA.

The table reveals that the regression parameter for the constant (α) is 1.009. This represents the expected value of the dependent variable SCA when the independent variable technology-based CRM is equal to zero. The regression coefficient for the slope (β) is 0.649, indicating the expected change in SCA when the independent variable technology-based CRM changes by one unit. In other words, when technology-based CRM increases by one-unit, SCA increases by 0.649.

The coefficient of determination (R^2) is 0.588, signifying that approximately 58.8% of the variation in the dependent variable SCA can be explained by the independent variable technology-based CRM. Hence, there is a strong relationship between these two variables.

The F-test value is 300.100, used to determine whether the relationship between the variables is statistically significant. The p-value for the F-test is 0.000 (less than 0.05), indicating that this relationship is statistically significant.

Therefore, the researchers reject the second basic hypothesis (that there is no statistically significant effect of technology-based CRM on sustainable competitive advantage) and accept the alternative hypothesis as follows: "There is a statistically significant effect of technology-based CRM on SCA "

4. Conclusion:

The importance of technology-based CRM in enhancing SCA for banks is clear. There is a strong recommendation to invest in information technology, particularly in innovative products such as ATMs, mobile banking services, social media banking, and agency banking services.

The confirmation of the positive relationship between technology-based CRM and sustainable competitive advantage underscores the ongoing need to improve technological infrastructure for strategic benefits. Banks are strongly advised to commit to enhancing service quality by offering innovative and accessible products to customers. On the other hand, the importance of technology-driven customer relationship management is highlighted, with a recommendation for banks to focus on building strong customer relationships through the use of CRM systems. Banks should allocate the necessary resources for this purpose, with a focus on developing an organizational culture supportive of improving the customer experience. The shift to an organizational structure that encourages interaction between departments and emphasizes the role of everyone in achieving customer relationship management goals represents a cultural change that enhances the effectiveness of CRM strategies.

In conclusion, this research sheds light on the critical importance of the banking sector, where dynamics of customer relationships and competition are rapidly evolving. In the banking industry, a technology-based CRM system has become indispensable for achieving SCA. These technologies contribute to enhancing customer interactions, streamlining internal operations, and making data-driven decisions. They enable banks to provide unique customer experiences and effectively manage risks. Moreover, they continually adapt to the evolving expectations of customers.

Ultimately, technology-based CRM plays a vital role in achieving success and maintaining a competitive edge for banks in this highly competitive era.

Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, Which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved By The Local Ethical Committee in The University.

References:

1. Ahmed, A.H. and Al-Kubaisi, S.A.D.A. (2021). "The effect of creating knowledge according to the model (Nonaka and Takeuchi, 1995) on organizational ambidexterity: A study on a sample of Iraqi private banks". *Journal of Economics and Administrative Sciences*, Vol. 27, No. 127, pp.1-19.
2. Al Chalabi, A.S. (2019). "The Extent of Application of E-Tourism Marketing Technology in The Website of The Iraqi Tourism Board", Vol. 9, No. 9, pp.342-355.
3. Alalie, h.m., harada, y. And noor, i.m. (2019). "Mediating role of empowerment strategies in the impact of motivation factors on sustainable competitive advantage: a study of the banks in Iraq". *International journal of academic research in business and social sciences*, Vol. 9, No. 2, pp.568-578.
4. Alalie, H.M., Harada, Y. and Noor, I.M., 2018. "The Challenges of Creating Sustainable Competitive Advantage in the Banking Industry in Iraq". *World Journal of Business and Management*, Vol. 4, No. 2, pp.1-15.
5. Alam, I., Ibn Rahman, M., Iqbal, N. (2012). "The Impact of Customer Relationship Management on Organization Profitability and Growth: An Empirical Study on Some Selected Service Organizations in Dhaka City", Bangladesh. *Journal of Integrated Marketing Communications and Digital Marketing*, Vol. 3, No. 2, pp.1-22.
6. Albayatey, A. S. W., Makttoof, H. S., Mawlood, S. J. (2021). "Quality of Transition to E-Learning under Corona pandemic: An Application Study in College of Administration and Economics", Baghdad University. *Review of International Geographical Education Online*, Vol. 11, No. 5, pp. 4614-4632.
7. AlChalabi, A. S., Hassan, I. S. (2022). "The impact of organizational culture on marketing innovation: An analytical study of Choco Mania employees' perspectives. *Resmilitaris*", Vol. 12, No. 3, pp.2568-2587.
8. Alhalboosi, F. H. A., Mawlood, S. J., Al-halboosi, I. A. M. (2021). "Role of ERP Systems in Improving Human Resources Management Processes". *Review of International Geographical Education Online*, Vol. 11, No. 4, pp.1667- 1681.
9. Alharthi, S.Z., 2012. "Towards a sustainable competitive advantage". *International Journal of Business Research and Development*, Vol. 1, No. 1, pp.17-31.
10. Al-naqeeb, M. A. S., Ismael, I. K. (2021). "The impact of organizational silence on a sustainable competitive advantage: A case study of the electrical industries company". *Mediterranean Journal of Social Sciences*, Vol. 12, No. 3, pp.34-46.
11. AlQershi, N., Mokhtar, S. S. M., Abas, Z. B. (2020). "Innovative CRM and performance of SMEs: The moderating role of relational capital". *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 6, No. 4, pp.155-173.
12. Amare, a. (2018). "Application of customer relationship management and its effect on loyalty (case of awash bank)", A Thesis Submitted to St. Mary's University, School of Graduate Studies in Partial Fulfillment of The Requirements for The Degree of Master of Marketing Management, pp.1-86
13. Amesho, K.T., Edoun, E.I., Naidoo, V. and Poee, S., 2022. "Sustainable competitive advantage through technology and innovation systems in the local government authorities". *Africa's Public Service Delivery & Performance Review*, Vol. 10, No. 1, pp.1-19.
14. Black, J. S., Porter, L. W. (2000). "Management: Meeting new challenges".
15. Çetin, O., Knouch, M. (2018). "Sustainable Competitive Advantage in Green Supply Chain Management". *Sustainability and Social Responsibility of Accountability Reporting Systems: A Global Approach*, pp.347-367.

17. Czopek, m., kazusek, m. (2020). "Customer relationship management. Strategy and system perspectives zarządzanie relacjami z klientem". *Strategia i perspektywy systemowe*, Vol. 3, No. 57, pp.34-48.
18. Danook, A. A., Al. obaidy, O. F. H. (2022). "Evaluating the dimensions of strategic intent according to the Hamel and Prahalad model/a case study in Oil Projects SCOP Company". *Nankai Business Review International*, pp.1-21.
19. Danook, A. A., Yassin, M. S., al. obaidy, O. F. H., Almejdhab, F. J. (2023). "The Absorptive Capacity of Knowledge as an Approach for Building Strategic Reliability in the Sponge Organizations/Small Organizations in Kirkuk Governorate as a Model". *Corporate Reputation Review*, pp.1-19.
20. De Silva, L. M. H., Chitraranjan, C. D. (2018). "Factors affecting on gaining a sustainable competitive advantage for Sri Lankan higher educational institutes". *International Business Research*, Vol. 11, No. 4, pp.106-118.
21. Don, P. and Rogers, M. (2019). "Customer Relationship Management: A Discussion on Its Misconceptions".
22. Elijah, A. B., Millicent, A. D. (2018). "The impact of a sustainable competitive advantage on a firm's performance: Empirical evidence from Coca-Cola Ghana limited". *Global Journal of Human Resource Management*, Vol. 6, No. 5, pp.30-46.
23. Finlay, P.N. (2000). "Strategic management: An introduction to business and corporate strategy". Pearson Education. CiNii Research, New York: Pearson Education, pp.1-751
24. Foon, L.S. and Nair, P.B. (2010). "Revisiting the Concept of Sustainable Competitive Advantage: Perceptions of Managers in Malaysian MNCs". *International Journal of Business & Accountancy*, Vol. 1, No. 1, pp.63-78.
25. Gołdecka, E. (2002). "Sposób na pozyskanie lojalnego klienta. Bank", Vol. 11, pp.66-68.
26. Gomes, J., Romão, M. J. B. (2019). "Sustainable competitive advantage with the balanced scorecard approach". In *Advanced methodologies and technologies in business operations and management*, IGI Global, pp.1415-1428.
27. Guimarães, J. C. F. D., Severo, E. A., Vasconcelos, C. R. M. D. (2017). "Sustainable competitive advantage: a survey of companies in Southern Brazil. BBR". *Brazilian Business Review*, Vol. 14, pp.352-367.
28. He, Z. L., Wong, P. K. (2004). "Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis". *Organization science*, Vol. 15, No. 4, pp.481-494.
29. Hoseini, S. H. K., Naiej, A. K. (2013). "Customer relationship management and organizational performance: A conceptual framework based on the balanced scorecard (Study of Iranian banks)". *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 10, No. 6, pp.18-26.
30. Kareem, R. E., Mohammed, M. J. (2023). "Fuzzy Bridge Regression Model Estimating via Simulation". *Journal of Economics and Administrative Sciences*, Vol. 29, No. 136, pp.60-69.
31. Kazem, H. F., Alchalbi, A. S., Rahimah, S. H. (2020). "The Role of Public Relations in Customer Loyalty: Perspectives of Mobile Phone Service Consumers in Iraq", *Journal of Research in Educational, Humanitarian, and Literary Sciences*, Vol. 1, No. 1, pp.63-78.
32. Khalil, H. H., Rada, S. M. (2023). "An Artificial Intelligence Algorithm to Optimize the Classification of the Hepatitis Type". *Journal of Economics and Administrative Sciences*, Vol. 29, No. 135, pp.43-55
33. Khan, N. A., Khan, A. N. (2019). "What followers are saying about transformational leaders fostering employee innovation via organizational learning, knowledge sharing and social media use in public organizations?" *Government Information Quarterly*, Vol. 36, No. 4, p.101391.

34. Kiyak, d., labanauskaite, d. (2020). "Opportunities of the crm concept in creating process of a value-based tourism product". *Management*, Vol. 36, No. 1, p.16487974.
35. Konovalov, N., Gromoff, A., Vladimirova, A. V., Gorchakov, Y. (2020). "Can CRM flexibility raise bank efficiency?" *Global Journal of Flexible Systems Management*, Vol. 21, pp.101-112.
36. Kotarba, M. (2016). "New factors inducing changes in the retail banking customer relationship management (CRM) and their exploration by the FinTech industry". *Foundations of management*, Vol. 8, No. 1, pp.69-82.
37. Kuncoro, W., Suriani, W. O. (2018). "Achieving sustainable competitive advantage through product innovation and market driving". *Asia pacific management review*, Vol. 23, No. 3, pp.186-192.
38. Mahdi, W. S., ALmohana, F. A. M. (2022). "A Comparison of a Radial Basis Function Neural Network with other Methods for Estimating Missing Values in Univariate Time Series". *Journal of Economics and Administrative Sciences*, Vol. 28, No. 134, pp.134-146.
39. Maulana, Y. S., Hadiani, D., Nurjanah, D. S., Mulyana, A. E., Fajar, A. N. (2021). "An analysis of customer satisfaction and its effect on customer relationship management". In *1st Paris Van Java International Seminar on Health, Economics, Social Science and Humanities (PVJ-ISHESSH 2020)*, Vol. 535, pp.16-19.
40. Maulini, Y., Maulina, E., Purnomo, M. and Rizal, M. (2022). "Knowledge integration and entrepreneurial capabilities for sustainable competitive advantage through supply chain management". *Uncertain Supply Chain Management*, Vol. 10, No. 2, pp.333-344.
41. Mekhum, W., Rajabhat, S. (2020). "Relating technology-based CRM, market orientation and service innovation in Thai hotels". *International Journal of Innovation, Creativity and Change*, Vol. 11, No. 7, pp.596-614.
42. Mostafa, S.A., Ahmad, M.S., Mustapha, A., et al. (2017). "A concise overview of software agent research", modeling, and development. *Softw. Eng*, Vol. 5, No. 1, pp.8-25.
43. Mugunthan, C., Kalaiarasi, G. (2017). "Theoretical Framework of Customer Relationship Management: An Overview". *International Journal of Scientific Research and Management*, Vol. 5, No. 7, pp.6431-6441.
44. Mwirigi, R. N. (2019). "Effect of Technology Based Customer Relationship Management on Satisfaction of Commercial Banks' Account Holders in Nairobi City County", *Kenya*, Vol. 11, No. 9, pp.67-72.
45. Naliaka, V. W., Namusonge, G. S. (2015). "Role of inventory management on competitive advantage among manufacturing firms in Kenya: A case study of Unga Group Limited". *International Journal of Academic Research in Business and Social Sciences*, Vol. 5, No. 5, pp.87-104.
46. Nasef, A.M., Mohamed, M.A., Abdelaal, E.M. and Abouraia, M.G. (2022). "The Role of Performance Marketing in Achieving Sustainable Competitive Advantage for Hotels". *Journal of Tourism, Hotels and Heritage*, Vol. 4, No. 1, pp.20-36.
47. Nunna, B. P. (2020). "A New Paradigm in Customer Relationship Management". *Customer Relationship Management and IT*, pp.83-88.
48. Nurcholis, L. (2021). "The mediating effect of knowledge exploitability and organizational agility on the relationship between marketing adaptation strategy and sustainable competitive advantage". *Contadina y administration*, Vol. 66, No. 1, pp.1-14.
49. Ocholla, C. A. (2020). "Relationship marketing and sustainable competitive advantage of ambulance service providers in Kenya": A case of AMREF flying doctors (Doctoral dissertation, Africa Nazarene University).

50. Onyango, L.A. and Katuse, P., (2016). "Creating sustainable competitive advantage in banking through technology, customer relationship management and internal marketing: a case study of co-operative bank of kenya (co-op bank) ltd". *International journal of technology and systems*, Vol. 1, No. 1, pp.101-123.
51. Payne, A., & Frow, P. (2005). "A strategic framework for customer relationship management". *Journal of marketing*, Vol. 69, No. 4, pp.167-176.
52. Pedron, C. D., Saccol, A. Z. (2009). "What lies behind the concept of customer relationship management? Discussing the essence of CRM through a phenomenological approach". *BAR-Brazilian Administration Review*, Vol. 6, pp.34-49.
53. Podile, v.,2021, "role of customer relationship management in indian banking sector mr". Sajith kumar b, head of the department, people institute of management studies, munnad, kerala. *Journal of the maharaja sayajirao university of baroda issn*, 25, p.0422.
54. Porter, M. E., Kramer, M. R. (1985), "Advantage. Creating and Sustaining Superior Performance, Simons, pp.56-68.
55. Ra'ed, m. D., hayat, h. K., hani, a. L. (2019). "The impact of customer relationship management on customer loyalty via the mediating role of customer satisfaction: an empirical study on private Kuwaiti" fitness gyms, *IBIMA Business Review*, Vol. 2, pp.1-20.
56. Raheemah, S.H., Al Alzahraa, S.C., Gatea, E.A. and Alshabebi, K.W. (2018). "The Impact of the Coherence of the Working Group in Confronting the Obstacles of the Application of Electronic Administration-An Analytical Study". In 2018 1st Annual International Conference on Information and Sciences (AiCIS), Fallujah, Iraq, 20-21 November 2018, IEEE, pp.296-305.
57. Rahman, M. M., Hussain, M. T., Moon, S. P., Tisha, M. M., and Lima, M. T. (2021). "Impact of Customer Relationship Management (CRM) on Organizational Performance: A Study from the Perspective of Bangladesh". *American Journal of Trade and Policy*, Vol. 8, No. 3, pp.225-230.
58. Rani, p., jariko, m.a. and channa, n. (2022). "the key aspects of crm relevant to implementation in the banking sector, Vol. 4, No. 1, pp.1-14.
59. Rashid, B. B., and Tahir, S. B. (2013). "Assessing the influence of customer relationship management (CRM) dimensions on organization performance: An empirical study in the hotel industry". *Journal of Hospitality and Tourism Technology*, Vol. 4, No. 3, pp.228-247.
60. Salman, S.M., Raheemah, S.H. and Saeed, S.A. (2019). "Knowledge Management Factors and Their Impact on Competitive Priorities". *Opción: Revista de Ciencias Humanas y Sociales*, Vol. 20, pp.450-467.
61. Shah, T.R., 2022. Can big data analytics help organisations achieve sustainable competitive advantage? A developmental enquiry. *Technology in Society*, Vol. 68, p.101801.
62. Shemail, A.H., Mohammed, M.J. (2022). "Semi Parametric Logistic Regression Model with the Outputs Representing Trapezoidal Intuitionistic Fuzzy Number". *Journal of Economics and Administrative Sciences*, Vol. 28, No. 133, pp.70-81.
63. Silitonga, R. Y., Setiawati, M., Immanuella, S. E. (2023). "The Impact of Supply Chain Management Practices on Competitive Advantage and Organizational Performance". *Journal of Management Studies and Development*, Vol. 2, No. 1, pp.26-36.
64. Singh, S., Singh, A. (2016). "Customer relationship management (CRM)-A statistical perspective". *International Journal of Current Research*, Vol. 8, No. 2, pp.26771-26776.
65. Sitinjak, M. F., Triagung, H., Sarjono, H., Putra, O. B. W., Ariani, V. (2020). "Implementing of Customer-driven Approach to Develop A Web-based e-CRM in Rural Tourism. In 2020 International Conference on Information Management and Technology (ICIMTech), IEEE, pp.654-659.

- 66.** Thiel, M. (2017). "The power of the social domain in sustainable development: non-market strategies for generating sustainable competitive advantage". *International Journal of Innovation and Sustainable Development*, Vol. 11, No. 2, pp.213-229.
- 67.** Wareewanich, T., Sukpasjaroen, K., Chankoson, T., Ruaengmaneeya, N., Raviyan, N. (2019). "Customer Relationship Management (CRM) and logistic customer satisfaction". *international Journal of Supply Chain Management*, Vol. 8, No. 2, pp.211-221.
- 68.** Widodo, S., Hayu, R. S. (2021). "The role of performance and new services development on sustainable competitive advantage in Indonesian private universities". *International Journal of eBusiness and eGovernment Studies*, Vol. 13, No. 1, pp.117-141.
- 69.** Yatim, N. H., Rusuli, M. S., Yatim, N. A. (2019). "The effect of Government Intervention on the sustainable Competitive Advantage Among SMEs in Malaysia". *International Journal of Modern Trends in Business Research*, Vol. 2, No. 8, pp.15-22.
- 70.** Zahedi, M., Cheshmberah, M., Tofighi, S. (2011). "An empirical study to identify and rank CSFs in customer relationship management (CRM): A case study of oil products distribution". *Management Science Letters*, Vol. 1, No. 4, pp.595-606.
- 71.** Zaky, A.H.M., 2017. "Determinate customer relationship management (crm) and its effects on sustaining competitive advantage in the Egyptian banking sector". *The Business and Management Review*, Vol. 8, No. 5, pp.266-275.
- 72.** Ziliani, C., Ieva, M. (2019). "Loyalty management: from loyalty programs to omnichannel customer experiences". *Routledge*, pp.1-258

دور إدارة علاقات الزبون القائمة على التكنولوجيا في تحقيق الميزة التنافسية المستدامة - دراسة ميدانية للبنوك العراقية

سعدون حمود جثير الربيعاوي
جامعة بغداد/ كلية الادارة والاقتصاد
قسم ادارة الاعمال

Saadoon_m@coadec.uobaghdad.edu.iq

الزهراء صباح الجلي
جامعة بغداد/ كلية الادارة والاقتصاد
قسم ادارة الاعمال

alzahraa.sabah@coadec.uobaghdad.edu.iq

Received:2/12/2023

Accepted:3/1/2024

Published Online First: 30 /8/ 2024

هذا العمل مرخص تحت اتفاقية المشاع الابداعي نسب المصنّف - غير تجاري - الترخيص العمومي الدولي 4.0

[Attribution-NonCommercial 4.0 International \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)



مستخلص البحث:

الهدف من هذا البحث هو دراسة أثر إدارة علاقات الزبون القائمة على التكنولوجيا على الميزة التنافسية المستدامة في البنوك الحكومية والخاصة في بغداد. وتتلخص مشكلة البحث في السؤال الرئيسي: "هل تمكنت قيادات البنوك من الاستفادة من إدارة علاقات العملاء القائمة على التكنولوجيا لتحقيق ميزة تنافسية مستدامة؟ وهل تمكنت من تعظيم هذا التأثير؟" ونظراً لأهمية القطاع المصرفي فقد تم اختيار البنوك الحكومية والخاصة في بغداد لتكون محور هذا البحث. تم اختيار البنوك التجارية والإسلامية للدراسة، وقامت الباحثة بزيارات ميدانية لـ (6) مصارف هي (مصرف الرافدين، المصرف العراقي للتجارة، مصرف النهرين الإسلامي، مصرف الطيف الإسلامي، مصرف الشرق الأوسط العراقي للاستثمار، المصرف الأهلي العراقي). وتكونت عينة البحث من (212) موظفاً في الخطوط الأمامية، واستخدمت الباحثة المنهج الوصفي التحليلي. وتم استخدام الاستبانة كأداة أولية لجمع البيانات للدراسة الميدانية، وتضمنت من (60) فقرة تغطي متغيرات البحث وأبعادها الفرعية. وأجريت المقابلات أيضاً. وبعد تقييم واختبار ثبات وصلاحية أدوات قياس البحث، تم تحليل البيانات واختبار الفرضيات باستخدام الأدوات الإحصائية المناسبة بما في ذلك برنامج SPSS لتحليل البيانات. وكشفت النتائج عن تأثير كبير وهداف لإدارة علاقات الزبون القائمة على التكنولوجيا على الميزة التنافسية المستدامة.

نوع البحث: ورقة بحثية

المصطلحات الرئيسية للبحث: إدارة علاقات الزبون القائمة على التكنولوجيا، الميزة التنافسية المستدامة.