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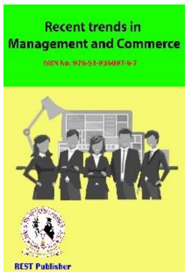

The influence of e-banking service quality on Commercial Bank

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Abstract: *A business financial institution is a company that provides fundamental investment goods and services, such as taking deposits and disbursing business loans. The term "commercial institution" can refer to a bank or subsidiary of a major bank that focuses on deposit and banking services offered to corporations or big or medium-sized firms as opposed to people or small businesses. Taking retail banking or commercial financial organizations as examples. A commercial bank is a financial organization that is permitted by law to accept cash from multiple businesses and individuals and lend to them. These banks are open to everyone and offer assistance to people, groups, and entities. Commercial banking is essentially the category of banking that people use often. State and federal regulations have Growing revenue and client retention will be made easier by improving relations with consumers connections collection of guidelines, strategies, and instruments that companies use to monitor and assess interactions with clients and information over a period of the client's lifetime. Revenue growth and maintaining customers will be made easier by improving customer service connections.*

Keywords: *Commercial bank, customer relationship management, Data envelopment analysis, E-banking Service, corporate Social Responsibility.*

1. INTRODUCTION

A commercial lender is a type of financial organisation responsible for any operations involving general financial transactions, the issuance of investment loans, and related tasks. As their name suggests, commercial banks are the pursuit of profit organisations that perform banking activities for financial advantage. The previously mentioned organisations are businesses that generate money, and they only function for financial gain. Short-term loans are frequently used to finance businesses and trade. The administration of relationships with clients (CRM), a collection of practises, methods, and methods, is how businesses oversee and assess interactions between consumers and information throughout the customer lifecycle. Growing revenue and client retention will be made easier by improving relations with consumers connections collection of guidelines, strategies, and instruments that companies use to monitor and assess interactions with clients and information over a period of the client's lifetime. Revenue growth and maintaining customers will be made easier by improving customer service connections. The effectiveness of a collection of consistent decision-making models (DMUs) with numerous inputs and outputs is evaluated using a non-parametric method known as data-envelopment evaluation (DEA). DMUs in this situation could be institutions like banks, companies, schools, and healthcare facilities. In 1978, Charnes, Cooper, and Rhodes provided there Data Envelopment Analyses (DEA) non-linear programme model, which was based on the work of Ferrell (1957Electronic banking is frequently referred to as online banking or digital banking. It is a via the internet electronic means of payment that offers a variety of products and services from any financial institution and is able to conduct various types of transactions, including deposits, settlements, and transfers of funds. Through electronic banking, money can be moved instantly and securely, particularly if the same bank manages both accounts. Users have the option of tracking these activities in actual time, which provides them peace of mind and lets these individuals know when the process is complete. Corporate social responsibility, also known as CSR or business social responsibility, is a form of self-regulation used by international private enterprises. It aims to support social goals that are activist, philanthropic, or beneficial

FIGURE 1. Commercial Bank

2. COMMERCIAL BANK

Studies and documents have increased during the period of significant change in the world's financial markets. A variety of factors, such as the internet, legislation, and economic changes, have contributed to an important shift in the marketplace in which financial service businesses operate. The development of online shopping and banking, the growth of the portfolio risk management ventures, and the extensive integration of the financial services sector have all had a significant impact on the regulatory environment for commercial banks in recent years. Every single one of these factors contribute to the fierce competition in the banking sector [1].The commercial banking industry experienced a decline between the first of January 1988, and December 31, 2001. During this time, we gathered information on every purchase completed by exchange-traded banks and banking holding companies that submitted a report to the Federal Reserve Board's (FRB), however we only included entire bank acquisitions that were unaided by the government in our sample. 1 A bank obtaining complete ownership of its target bank was referred to as a whole bank acquisition [2]. In general, economists have approached the investigation regarding business banking as a subset of their research on money. Prior to modern "commercial" banking assuming significance in the framework of industrial society, an extremely serious discourse on money was generated. The law of gravity's pull. bimetallism, the relationship between money and prices, etc. are some examples of how money serves as an instrument of trade, a common basis of value, a standard of postponed payments, and a store of value. Arguments and disagreements surrounding rally money [3]. We assess the comparative effectiveness of US commercial financial institutions over a fifteen-year span from 1984 to 1998 using a sparse DEA model created by Siams and Barr (1998). Productivity and our inputs as well as outcomes are strongly and consistently correlated. Independent measures of bank performance. [4]. The stability of commercial banking has declined over time. We also provide evidence of how off-balance sheet activity development has dramatically altered banking. Thus, commercial banks continue with the overall procedure for information-intensive loan and liquid supply despite decreasing amounts of on-balance sheet assets. The history of the too-big-to-fail argument is also covered in this section; this notion, in our opinion, is one of several crucial elements essential to comprehending current banking issues. [5]. It is obvious that maintaining boundaries between various categories of financial services organisations is getting more and more challenging with time. The divisions between commercial financiers and other financial organisations are now irrelevant for regulatory reasons, and some national regulations specifically refer to credit institutions. To the greatest extent feasible, the article is based on research into the organisation, governance, and operations of commercial banks. Other financial services firms, including other depository institutions, are not subject to the same regulatory requirements as commercial banks are in the United States. This makes it easier to compare changes, and fresh offerings like basic banking remedies in other industrialised nations' financial institutions, No-frills accounts, Demat Financial Statements, Net Banking / E-Banking, Smartphone Banking, the debit Card/Credit Cards, Automatic Teller Machines (ATM), Protection, etc. are included. [6]

3. CUSTOMER RELATIONSHIP MANAGEMENT

The management of client relationships (CRM), a collection of information procedures and technological tools that facilitate the establishment of company-customer connections, has been applied by numerous businesses during the past ten years (Rogers 2005). How does CRM impact the efficiency of an organisation? The research in academia generally implies that CRM offers real strategic advantages, such as improved word-of-mouth marketing and improved client retention and satisfaction (Kumar and Shah 2004, Anderson 1996). Overall, there is an overwhelming consensus that CRM initiatives enhance company performance (see the CRM-specific section in the Bulletin of Marketing's October 2005 edition for more information). CRM has the capability to enhance business performance and consumer advantages through producing value, according to Boulding is and colleagues (2005). This point of view claims that CRM enables businesses to enhance the benefit they derive from consumers, while consumers gain more value by having their particular requirements met. [7]. Any CRM initiative should be founded on a clear understanding of the goals the firm has for its client relationship management initiatives. Consequently, concentrating on the value of customers should be an integral part of the CRM vision. We propose that an important field of vision should concentrate on the subject of value in light of the debate above. In actuality, the CRM vision seeks to establish an organization in which all operations maximiser the entire lifetime worth of each client to the business. [8]. Relationship with customers management: Predicting consumer behavior accurately and using that knowledge to reduce the cost of marketing. The main development that has even remotely enabled such previously unthinkable eventualities is the constantly growing skills of archives and their powerful analytical capacities. Companies now gather data on their clients, store it in the form of databases, analyses the data, make promotional judgements, and carry out marketing strategies on a scale that was previously only imaginable in science fiction. [9]. CRM is a developing topic that needs intensive study to give businesses advice on how to effectively apply their CRM strategies. We identify a number of topics in the wider strategic context in CRM that need more study. First, there is a misperception about the variables affecting CRM strategy in various industries. The available research is silent on the different ramifications, but studies like this one from McKinsey & Co. show that the effectiveness of CRM is tied on an obvious connection among the approach to CRM and the objectives of the company in question (Ebner et al. 2002). 25 test environments, 3 in 2009. In order to build a CRM strategy in contexts including between businesses markets, intermediate markets, the public industry, and FMCG, a thorough analysis of major concerns is required. [10]. Long-term CRM research calls for the creation of more comprehensive datasets. The advantages of databases like the PIMS dataset used in studies regarding marketing approaches & the one created by the C. Nielsen Scanners dataset utilized in investigation on brand equity are highlighted by Sheth and Parvathi (2001). To perform more in-depth CRM research and come to more solid and conclusive conclusions, CRM investigators ultimately need to produce or have access to organizational data of comparable number and quality. [11].

FIGURE 2. Customer Relationship Managements

4. DATA ENVELOPMENT ANALYSIS

A better method of getting suitable categories for this use would be the use of data envelope analysis (DEA), which evaluates the success of a company by turning inputs into outputs compared to its peers. DEA has the benefit of using actual sample data. Without knowing a priori what inputs and outcomes are most crucial to the valuation process, determine the effectiveness of the frontier that determines how each unit in the framework is valued. Instead, a mathematical procedure is employed to determine a DEA effectiveness score for each unit, which results in the creation of an efficient frontier [12]. One well-known method for evaluating the effectiveness of decision-making organizations (DMUs) is data envelopment analysis (DEA). The performance for financial institutions is frequently measured using this technique. Numerous studies on the effectiveness of banks utilising DEA are being released by journals, and many of these studies are readily accessible to consumers in international scientific journals [13]. According to Bostonians, Dyson, and Athanasius (1991), DEA is a technique for evaluating the performance of DMUs that uses linear programming methods to as tightly as possible close the measured the input-output vectors. Despite making any assumptions about the distribution of the data, DEA enables the simultaneous consideration of numerous inputs and outputs. Efficiency is determined by the proportional change in the inputs and outcomes in each situation. An output-oriented model maximisers outputs while necessitating any observable value for input, and an intake-oriented DET approach minimizes inputs while achieving at least specified output levels [14]. Due to the large number of articles that were published in this domain, we have divided the ranking systems described in this study into six main categories. These approaches have some characteristics and are not entirely mutually exclusive. After defining the DEA approach mathematically in the second section, Section 3 examines the cross-efficiency strategy, which rates DMUs both internally and externally and was first proposed in Sexton et al. (1986) [15]. Since the pioneering publications by Farrell (1957) and Charnes et al., the field of data envelope analysis has expanded at a rapid pace (see Seiford, 1996). (1978). There is a vast amount of educational literature as a result of the original concept of evaluating after-school programmes with diverse inputs and outputs. Numerous experts in this subject have worked to enhance the DEA's various capacities and thoroughly rate effective and ineffective units for making decisions [16].The main goal of all the statistical and mathematical approaches provided here is to strengthen the discriminative ability of data enveloped analysis with sorting judgement units [17].The efficiency and effectiveness of both manufacturing and service activities is being assessed and improved with the use of data envelopment analysis (DEA). In educational institutions, bank branches, manufacturing facilities, etc., it is frequently utilised in assessment of performance and comparison (Charnes et al., 1994). A new approach to DEA and several significant methodological advancements that have enhanced its functionality as a production analysis tool are provided in this study [18].

FIGURE 3. Data Envelopment Analysis

5. E-BANKING SERVICE

There is no denying that, like all other industries, the banking sector has benefited from technological innovation. One of them is the impact that the introduction of online banking services will have on overall banking operations. Mobile money transfer is one of the ways that the electronic banking network continues to benefit customers thanks to banks' deployment of self-service technology. Customers benefit from convenience, and they can access banking services outside of regular business hours. advocating a cashless society as a result. Each area of the economy, including the non-financial ones, is implementing electronic service delivery methods [19]. Due to its thoroughness and solid theoretical integration, which support user context, this model was chosen for widespread adoption and utilisation of online financial services. The UTAUT2 has, however, undergone adjustments. model to give a more thorough knowledge of electronic banking acceptance. The first modification relates to e-banking services' integration with various predictors and measurements. Perceived satisfaction with e-banking services was introduced as a component to the proposed study model to further boost its ability to explain [20]. E-banking solutions offer a variety of e-channels, including the internet, the phone, television, mobile devices, and computers, for conducting monetary transactions. Banking customer tastes and demands for service increase as technology develops and progresses. These days, the client wants to do all of his financial operations (purchases, bills, and shares) quickly and affordably without having to travel to the bank and outside of bank operating hours. In order to satisfy these desires, the standard of banking services should be characterized by independence, elastic modulus, freedom, and flexibility [21]. The electronic banking Service Excellence Scale (EBSQ) was created by researchers to assess and comprehend client expectations and impressions of the caliber of e-banking services. The effect of EBSQ characteristics on customer behavioral outcomes including satisfaction, intention to buy, loyalty, and retention, however, has hardly ever been studied. This study fills that gap [22]. According to Kim et al. (2009), quick and error-free money transfers are generally important to consumers. If consumers believe that e-banking services are precise and timely they will continue to utilize e-banking services since they have faith in them. Customers who are interested in adopting e-banking services have significant security and confidentiality concerns (Shankar and Kumari, 2016). Customers will view e-banking service suppliers as trustworthy and remain loyal to them if they offer a safe e-banking platform for carrying out monetary transactions and the privacy of their private data provided on the website (Cases et al., 2010). In order to promote consumer loyalty and happiness with systems for online banking during the lockout, this study concentrates on client preferences and wants from banking solutions. Furthermore, it aids institutions in making tactical decisions regarding COVID-19 and digital transformation, improve Pakistan's online banking the not-too and. This research was restricted to the e-banking context of Pakistani due to the participant's time constraints and access issues, despite the need and appreciation for quick research in these historic times. and there is comparatively very little research in this area. It was extremely challenging for us to establish an association between EBSQ characteristics and e-banking experience since we only took into account the mediating influence of e-banking customer happiness [24].

FIGURE 4. E-Banking Service

6. CORPORATE SOCIAL RESPONSIBILITY

Since corporate social responsibility (CSR) is something of an abstract concept, which is no one is currently able to exactly define its parameters. There is not a recognized term for this. Because businesses choose to do it deliberately and for financial gain. It is not legalistic to have a socially responsible stance. Every organization develops its own variations of the CSR idea through collaboration with the company's own clients [25]. Social responsibility as a company and ethical conduct in the workplace are not new concepts, but they have grown more relevant as the crisis has made it clear how important it is to incorporate moral values into the banking industry. The adoption of moral values in business is implied by knowledge that business practices to not be integrated with the managerial choices of organizations, and self-regulatory moral tools (such as CSR) utilized by businesses cannot be anticipated to be effective. The banking industry's experience with CSR implementation and ethical standards supports the idea that social obligation and package morals are viewed by management at banks as suitable marketing techniques for engaging with customers in general and are not included into policy. Business banks. Even the crisis experience demonstrated that bank managers make decisions without regard to moral principles [26]. Policies relating to corporate social responsibility have always been a component of ethical company conduct, but in recent years the idea has witnessed a startling increase in reverence. Nevertheless, there were disparate views regarding the concept's potential relevance and usefulness that persisted. Clement-Jones (2005) and Murray (2005) both argue that CSR undermines the focus on generating wealth and is incompatible with ethical business practices. CSR advocates, on the other hand, view it as crucial for profitable company operations and as a chance for corporations to go beyond their immediate financial interests in order to address greater social issues [27]. For business organizations, social responsibility as a whole represents a genuine paradigm change and a new century issue. The CSR movement appears to have gained enough traction to continue unchanged into the century to come, according to growing evidence. However, despite significant advancements in theoretical knowledge of CSR, empirical investigations are often scarce. Research on the idea and application of CSR in countries that are developing is particularly lacking. This research has attempted to present a preliminary evaluation of CSP of a few selected organizations functioning in Lebanon that are thought to be involved in CSR [28] based on Carroll's (1979) and Wood's (1991) concepts. This study looked at the connections between observed CSR, knowledge, and belief, as well as the impact of customer demographics and behavior. There are two suggestions for additional research to expand on this work and solve prior restrictions [29]. First, there are additional possible factors that might affect consumer response to CSR, like inventory levels and brand preferences. Consumer preferences for brands will unavoidably have an impact on how consumers respond to CSR. Therefore, it is important to research how CSR initiatives impact customers at various levels of recognition of the company. Second, studies in various nations and cultures should be incorporated into CSR research. Conclusions drawn from Western studies may not be applicable to other cultures, so CSR may be dependent on context [30].

FIGURE 5. Corporate Social Responsibility

7. CONCLUSIONS

These banks generate cash and do not maintain a portion of their deposits as money or readily exchangeable assets. The quantity of money that depositors hold is established by the bank's evaluation of their needs. Banks hold the reserve requirements of the Federal Reserve, the National Bank of Japan, and the European Central Bank (ECB) in trust. Banks produce money when they lend it to clients. Another bank may accept a portion of the funds that were spent on goods and services in exchange for a loan on the remaining amount. The re-lending procedure can be conducted again because to the multiplier impact. Lending facilitates cross-border transactions in addition to promoting trade between nations. This indicates that bank funds are also used to execute exchange rate contracts. Banks serve as specialists, advisors, and agents for significant industrialization initiatives. They have a favorable effect on the nation's economic growth. The banking system was established to offer security for growth in the economy. Consumers would have lost their savings if banks had been permitted to fail. If the sum of cash is taken out, there won't be enough money available for lending. It also goes by the name "bank run." Because of this, central banks function as lenders. The possibility that the Federal Reserve's finances can be incorrectly seen as being essential to its operation, as is the situation with a commercial banking institution, determines the requirement for financial resources. Less financial resources will be needed if consumers and influencers are better understood. If financial assets can be scaled to match an opportunity emergency requests, and large safeguards can be constructed up in ordinary circumstances, all of these factors are crucial, especially for monetary authorities with broader emergency preparedness responsibilities. These factors include excellent information about finances, straightforward clarification of links to rules and activities, and schooling of financial viewers, the public, as well as their elected officials. To ensure that governments have the ability to utilize them, such reserves should be on the book of accounts and accessible. From the standpoint of the public sector as a whole, it need not be exorbitant to do this with money placed in government securities. However, there might be restrictions on the total amount of public indebtedness and the ability of the central bank to keep it due to legal or practical considerations (such as market prices). Political dangers might also develop if it looks that there is an excessive amount of public money that could be used to sponsor beneficial enterprises. Accounting practices, distribution of earnings and reinvestment methods, capital targets, and risk-sharing agreements all have an impact on the quantity of financial reserves needed to guarantee continuous independence in operational and policymaking ability. These decisions must be made in connection with judgements regarding the independent

REFERENCES

[1]. Barr, Richard S., Kory A. Killgo, Thomas F. Siems, and Sheri Zimmel. "Evaluating the productive efficiency and performance of US commercial banks." *Managerial finance* (2002).

[2]. Haleblian, Jerayr, Ji-Yub Kim, and Nandini Rajagopalan. "The influence of acquisition experience and performance on acquisition behavior: Evidence from the US commercial banking industry." *Academy of management journal* 49, no. 2 (2006): 357-370

[3]. Manoharan, Hariprasath, Radha Krishna Rambola, Pravin R. Kshirsagar, Prasun Chakrabarti, Jarallah Alqahtani, Quadri Noorulhasan Naveed, Saiful Islam, and Walelign Dinku Mekuriyaw. "Aerial Separation and Receiver Arrangements on Identifying Lung Syndromes Using the Artificial Neural Network." Computational Intelligence and Neuroscience 2022 (2022).

[4]. Moulton, Harold G. "Commercial banking and capital formation: I." *Journal of Political Economy* 26, no. 5 (1918): 484-508.

[5]. Kumar Pandey, Rakesh, Asghar Gandomkar, Behzad Vaferi, Anil Kumar, and Farshid Torabi. "Supervised deep learning-based paradigm to screen the enhanced oil recovery scenarios." Scientific Reports 13, no. 1 (2023): 4892.

[6]. Barr, Richard S., Kory A. Killgo, Thomas F. Siems, and Sheri Zimmel. "Evaluating the productive efficiency and performance of US commercial banks." *Managerial finance* (2002).

[7]. Boyd, John H., and Mark Gertler. "US commercial banking: Trends, cycles, and policy." *NBER macroeconomics annual* 8 (1993): 319-368.

[8]. Aswini, S., S. Tharaniya, RJ Joey Persul, B. Avinash Lingam, and P. Kogila. "Assessment of Knowledge, Attitude and Practice on Immunization among Primi Mothers of Children." Indian Journal of Public Health Research & Development 11, no. 3 (2020): 583-587.

[9]. Barth, James R., Daniel E. Nolle, and Tara N. Rice. "Commercial banking structure, regulation, and performance: an international comparison." *Managerial Finance* 23, no. 11 (1997): 1-39.

[10]. Preethi, R., and M. Sughasiny. "AKCSS: An Asymmetric Key Cryptography Based on Secret Sharing in Mobile Ad Hoc Network." In Intelligent Systems Design and Applications: 18th International Conference on Intelligent Systems Design and Applications (ISDA 2018) held in Vellore, India, December 6-8, 2018, Volume 1, pp. 73-86. Springer International Publishing, 2020.

[11]. Krasnikov, Alexander, Satish Jayachandran, and V. Kumar. "The impact of customer relationship management implementation on cost and profit efficiencies: evidence from the US commercial banking industry." *Journal of marketing* 73, no. 6 (2009): 61-76.

[12]. Anand, Gaurav, Sharda Kumari, and Ravi Pulle. "Fractional-Iterative BiLSTM Classifier: A Novel Approach to Predicting Student Attrition in Digital Academia." SSRG International Journal of Computer Science and Engineering 10, no. 5 (2023): 1-9.

[13]. Emel, Ahmet Burak, Muhittin Oral, Arnold Reisman, and Reha Yolalan. "A credit scoring approach for the commercial banking sector." *Socio-Economic Planning Sciences* 37, no. 2 (2003): 103-123.

[14]. Mishra, Anamika A., Krushnalee Surve, Uttara Patidar, and Radha Krishna Rambola. "Effectiveness of confidentiality, integrity and availability in the security of cloud computing: A review." In 2018 4th International Conference on Computing Communication and Automation (ICCCA), pp. 1-5. IEEE, 2018.

[15]. Burianová, Lenka, and Jiří Paulík. "Corporate Social Responsibility in commercial banking-a case study from the Czech Republic." *Journal of competitiveness* (2014).

[16]. Adewoye, J. O. "Impact of mobile banking on service delivery in the Nigerian commercial banks." *International Review of Management and Business Research* 2, no. 2 (2013): 333.

[17]. Kumar, Rakesh, Neha Grover, Rajesh Singh, Samta Kathuria, Anil Kumar, and Aditi Bansal. "Imperative Role of Artificial Intelligence and Big Data in Finance and Banking Sector." In 2023 International Conference on Sustainable Computing and Data Communication Systems (ICSCDS), pp. 523-527. IEEE, 2023.

[18]. Yaseen, Saad Ghaleb, and Ihab Ali El Qirem. "Intention to use e-banking services in the Jordanian commercial banks." *International Journal of Bank Marketing* (2018).

[19]. Tasisa, Yirgalem Bekele, and Kogila Palanimuthu. "Psychosocial Impacts of Imprisonment among Youth Offenders in Correctional Administration Center, Kellem Wollega Zone, Ethiopia." Medico-legal Update 21, no. 2 (2021).

[20]. Frow, P. E., and A. F. Payne. "Customer relationship management: a strategic perspective." *Journal of business market management* 3 (2009): 7-27. Frow, P. E., and A. F. Payne. "Customer relationship management: a strategic perspective." *Journal of business market management* 3 (2009): 7-27.

[21]. Kumar, Ashish, Ketan Rathor, Snehit Vaddi, Devanshi Patel, Preethi Vanjarapu, and Manichandra Maddi. "ECG Based Early Heart Attack Prediction Using Neural Networks." In 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC), pp. 1080-1083. IEEE, 2022.

[22]. Kumar, Vineet, and Werner Reinartz. *Customer relationship management*. Springer-Verlag GmbH Germany, part of Springer Nature 2006, 2012, 2018, 2018.
[23]. Pulle, Ravi, Gaurav Anand, and Satish Kumar. "MONITORING PERFORMANCE COMPUTING ENVIRONMENTS AND AUTOSCALING USING AI."
[24]. Wang, Ke, Wei Huang, Jie Wu, and Ying-Nan Liu. "Efficiency measures of the Chinese commercial banking system using an additive two-stage DEA." *Omega* 44 (2014): 5-20.
[25]. Preethi, R., and M. Sughasiny. "Pbgtr: Price based game theory routing for minimum cost routing path in manet." In 2018 2nd International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC) I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC), 2018 2nd International Conference on, pp. 469-474. IEEE, 2018.
[26]. Ji, Yong-bae, and Choonjoo Lee. "Data envelopment analysis." *The Stata Journal* 10, no. 2 (2010): 267-280.
[27]. Adler, Nicole, Lea Friedman, and Zilla Sinuany-Stern. "Review of ranking methods in the data envelopment analysis context." *European journal of operational research* 140, no. 2 (2002): 249-265.
[28]. Gusain, Akshita, Tilottama Singh, Shweta Pandey, Vikrant Pachourui, Rajesh Singh, and Anil Kumar. "E-Recruitment using Artificial Intelligence as Preventive Measures." In 2023 International Conference on Sustainable Computing and Data Communication Systems (ICSCDS), pp. 516-522. IEEE, 2023.
[29]. Hammoud, Jamil, Rima M. Bizri, and Ibrahim El Baba. "The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector." *Sage Open* 8, no. 3 (2018): 2158244018790633.
[30]. Shankar, Amit, and Charles Jebarajakirthy. "The influence of e-banking service quality on customer loyalty: A moderated mediation approach." *International Journal of Bank Marketing* (2019).
[31]. Ambegaonker, Ajeenkkya, Utkarsh Gautam, and Radha Krishna Rambola. "Efficient approach for Tendering by introducing Blockchain to maintain Security and Reliability." In 2018 4th International Conference on Computing Communication and Automation (ICCCA), pp. 1-4. IEEE, 2018.
[32]. Haq, Inzamam Ul, and Tahir Mumtaz Awan. "Impact of e-banking service quality on e-loyalty in pandemic times through interplay of e-satisfaction." *Vilakshan-XIMB Journal of Management* 17, no. 1/2 (2020): 39-55.
[33]. Kumari, Sharda, and Gaurav Anand. "AR-Driven Customer Engagement: An Innovative Approach to CRM."
[34]. Jamali, Dima, and Ramez Mirshak. "Corporate social responsibility (CSR): Theory and practice in a developing country context." *Journal of business ethics* 72 (2007): 243-262.
[35]. Palanimuthu, Kogila, Eshetu Fikadu Hamba Yigazu, Gemechu Gelalcha, Yirgalem Bekele, Getachew Birhanu, and Birhanu Gutu. "Assessment of Stress, Fear, Anxiety and Depression on COVID-19 Outbreak among Adults in South-Western Ethiopia." Prof.(Dr) RK Sharma 21, no. 1 (2021): 440.
[36]. Tian, Zhilong, Rui Wang, and Wen Yang. "Consumer responses to corporate social responsibility (CSR) in China." *Journal of business ethics* 101 (2011): 197-212.
[37]. Vodova, Pavla. "Liquidity of Czech commercial banks and its determinants." *International Journal of mathematical models and methods in applied sciences* 5, no. 6 (2011): 1060-1067.
[38]. Kumar, Vivek, Kapil Joshi, Puneet Kanti, Jagdeep Singh Reshi, Gunjan Rawat, and Anil Kumar. "Brain Tumor Diagnosis using Image Fusion and Deep Learning." In 2023 International Conference on Sustainable Computing and Data Communication Systems (ICSCDS), pp. 1658-1662. IEEE, 2023.
[39]. Nsambu, K. Frederick. "Factors affecting performance of commercial banks in Uganda a case for domestic commercial banks." Proceedings of 25th International Business Research Conference, 2014.
[40]. Wozniewska, Grazyna. "Methods of measuring the efficiency of commercial banks: an example of Polish banks." *Ekonomika* 84 (2008): 81-91.
[41]. Rathor, Ketan, Keyur Patil, Mandiga Sahasra Sai Tarun, Shashwat Nikam, Devanshi Patel, and Sasanapuri Ranjit. "A Novel and Efficient Method to Detect the Face Coverings to Ensurethe Safety using Comparison Analysis." In 2022 International Conference on Edge Computing and Applications (ICECAA), pp. 1664-1667. IEEE, 2022.
[42]. Kim, Ji-Yub, and Anne S. Miner. "Vicarious learning from the failures and near-failures of others: Evidence from the US commercial banking industry." *Academy of Management Journal* 50, no. 3 (2007): 687-714.
[43]. Rambola, Radha Krishna, Mrunmayee Inamke, and Shloka Harne. "Literature review-techniques and algorithms used for various applications of educational data mining (edm)." In 2018 4th International Conference on Computing Communication and Automation (ICCCA), pp. 1-4. IEEE, 2018.
[44]. Alkhatib, Akram, and Murad Harasheh. "Financial performance of Palestinian commercial banks." *International Journal of business and social science* 3, no. 3 (2012).
[45]. Gutu, Birhanu, Genene Legese, Nigussie Fikadu, Birhanu Kumela, Firafan Shuma, Wakgari Mosisa, Zelalem Regassa et al. "Assessment of preventive behavior and associated factors towards COVID-19 in Qellam Wallaga Zone, Oromia, Ethiopia: A community-based cross-sectional study." PloS one 16, no. 4 (2021): e0251062.
[46]. Al-Khaddash, Husam, Rana Al Nawas, and Abdulhadi Ramadan. "Factors affecting the quality of auditing: The case of Jordanian commercial banks." *International Journal of Business and Social Science* 4, no. 11 (2013).
[47]. Ors, Evren. "The role of advertising in commercial banking." (2006).
[48]. Anand, Gaurav, and Bharatwaja Namatherdhal. "AN EFFICIENT FRAUDULENT ACTIVITY RECOGNITION FRAMEWORK USING DECISION TREE ENABLED DEEP ARTIFICIAL NEURAL NETWORK."

[49]. Duca, John V., and Mary M. McLaughlin. "Developments affecting the profitability of commercial banks." *Fed. Res. Bull.* 76 (1990): 477.

[50]. Rathor, Ketan, Sushant Lenka, Kartik A. Pandya, B. S. Gokulakrishna, Susheel Sriram Ananthan, and Zoheib Tufail Khan. "A Detailed View on industrial Safety and Health Analytics using Machine Learning Hybrid Ensemble Techniques." In 2022 International Conference on Edge Computing and Applications (ICECAA), pp. 1166-1169. IEEE, 2022.

[51]. Hsiao, Hsing-Chin, Hsihui Chang, Anna M. Cianci, and Li-Hua Huang. "First financial restructuring and operating efficiency: Evidence from Taiwanese commercial banks." *Journal of Banking & Finance* 34, no. 7 (2010): 1461-1471.

