**A Case Study of Selected Commercial Banks in the Borena pastoralist community of Ethiopia: Assessing the impact of Services for Digital Teller Machines on Performance of Banks with Customer Intent's as mediating function.**

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*Abstract: The intent of this study is to enhance understanding of the ways in which digital teller machine services affect bank performance in specific Ethiopian banking sectors from the perspective of the mediating role of customers' intentions. To achieve this, a cross-sectional type of one-time survey, a sequential explanatory design, and a mixed research approach were initially considered. The article uses a total sample size of four hundred respondents and responses. We utilized Amos SPSS version 26. Statistics that are descriptive of demographic parameters use male and female responses as the controlling variables. The survey's results, which were based on data analysis, demonstrated that digital teller machines greatly enhance bank performance. The findings suggest that bank executives should consider consumer needs when determining the services that digital teller machines should offer. Banks have been able to resolve issues about the services offered by digital teller machines thanks to the information on this page.* ***Key words:*** *client intention, bank performance, and digital teller machine services.*

**1. Introduction**

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Important stakeholders, including banks and academics, would benefit from the article, which could encourage further study, policy implementation, and enhancement of practice. The study's goal was to examine the impact of digital teller machine services on the banking industry with an emphasis on the mediation of client intention: a case of chosen financial institutions in Borena, southern Ethiopia. Services for digital marketing Through the use of specific software algorithms, technology can help consumers and digital banks manage their service operations, procedures, and lives more effectively. With apps in almost any location where customers are present, the quickly growing digital banking sector improves the delivery of quick services without regard to geographic restrictions (United Nations Economist Network policy paper, 2016; Regime, 2022).

1.1 **Literature review**

  According to Lee et al. (2020), competition for digital marketing services is growing as a result of the current economic climate, particularly in the banking industry. The services offered by digital marketing are still growing in the banking sector. The services that banks provide are significantly impacted by the rapid development of digital marketing technologies. In order to satisfy customer dynamics, raise their level of competence, and make a profit, businesses would be willing to go above and beyond to satisfy customer needs (Lyimo, 2019; Hichaim et al., 2020).

According to Tesfachow (2022), Ethiopia is presently going through technological progress in order to catch up to other emerging nations, particularly those that are late comers, in terms of technological development and economic performance. Of course, the banking family has invested much in technology integration to further improve the services they provide. Digital marketing services are being frequently used by 4.9 billion people worldwide (Union, 2021).However, the following problems with Ethiopia's digital banking services that still need to be addressed were supported by the Ethiopia Policy Review (2019): The country's attempts to establish a functional financial transfer system have encountered many challenges. Due to its lack of infrastructure, Ethiopia confronts several difficulties, such as erratic electricity supplies, trouble with telecommunications connections, and problems with internet connectivity (Ejigu, 2016; Ethiopia Digital Strategy Plan, 2020).

These services are not widely utilized by most Ethiopian banks. Fetu (2019) asserts that the current method of operation makes it difficult for the banking industry to provide effective services. Ethiopia's banking sector must begin planning for capacity building right away and modernize with global cutting-edge technology (Affecting et al., 2018). Without a modern system, the country's current banking system would not be able to keep up with the volume of international trade and relations as well as the increasing number of import-export enterprises (Kifle, 2021).

In order to improve knowledge of neo-marketing systems, this study was share its findings. It will also provide fresh perspectives on neo-banks and how they integrate digital marketing services, bank performance, and customer intention into service companies such as banks. Therefore, the purpose of this study is to respond to the accompanying research questions: RQ1. Does a bank's performance significantly change as a result of using digital teller machine services? RQ2. How do the services of digital teller machines affect the intention of customers? RQ3. Does the performance of banks depend on the intention of their customers? RQ4. How does the relationship between digital teller machine services and bank performance get mediated by client intentions? Developed hypothesis H1. Services provided by digital teller machines significantly impact customer intention H2. A digital teller machine significantly impacts the performance of banks. H3. Digital teller machines and bank performance have a strong mediation relationship with customer intention.

2. Material and Methods

A questionnaire was distributed to key informants and selected bank respondents as part of the mixed research methods that formed the basis of the empirical inquiry carried out for this project. The surveys contained both open-ended and closed-ended questions. The main sources of information were key informants, employees, and customers of a select few selected banks: CBE Bank, AB Bank, Aby Bank, Oro Bank, and Coop Bank. Five banks were chosen for the sample using the purposive sampling technique. Following bank-specific stratification, seventy-six staff and three hundred twenty-four customer respondents from chosen banks were included in the sample using a straightforward random sampling procedure.

### **3. Results and Discussions**

3.1 Responding to Research Inquiries

This part presents and analyzes respondent data in accordance with the study questions. Brief dialogue follows the presentation of the facts and findings.

|  |
| --- |
| **TABLE 1. Mean and SD** **Automatic Teller Machine Services** |
| (ATM7). | 400 | 1 | 5 | 4.06 | 1.193 |
| (ATM8). | 400 | 1 | 5 | 3.10 | 1.192 |
| (ATM9). | 400 | 1 | 5 | 4.02 | 1.214 |
| (ATM10). | 400 | 1 | 5 | 3.97 | 1.170 |
| (ATM11). | 400 | 1 | 5 | 4.13 | 1.112 |
| (ATM12). | 400 | 1 | 5 | 4.11 | 1.168 |

Table 1: Based on survey results at all selected banks from ATM7-ATM12, respondents agree that digital teller machines are easy to use (mean 4.06, SD 1.193), that they make their lives easier (mean 3.10, SD 1.192), that digital teller machine systems are easy to use for business (mean 4.02, SD 1.214), that they were satisfied with the services provided by digital teller machines (mean 3.97, SD 1.170), and that they regularly use the services. All respondents agreed that they trusted the services offered by digital teller machines, according to poll results from all selected banks (mean 4.11, SD 1.168). There are no outliers because every standard deviation number is higher than zero and less than two.

**Table 2 shows the findings of the pilot study's scale reliability coefficient for the bank performance items (BP), customer intention items (CI), and Automatic teller machine services items (AMS).**

|  |  |  |  |
| --- | --- | --- | --- |
| Alpha Cronbach's | Total Items | Standardized Items-Based Cronbach's Alpha | Interpretation |
| ATM .813 | 5 | .817 | Acceptable |
| CI .880 | 37 | .894 | Acceptable |
|  |
| BP .845 | 23 | .860 | Acceptable |

**Source: Own survey output, 2024**

**Table 3: Analysis of Automatic Teller Machine Services' Internal Consistency**

|  |  |  |
| --- | --- | --- |
| **Automatic Teller Machines** | **.753** | **0.726 0.572 0.755** |
|  | **(ATM9)** | **.880** |
|  | **(AM10).** | **.781** |
|  | **(ATM11).** | **.583** |

**Source: Own survey output, 2024**

The findings of the scale reliability tests, which vary in value from moderate (.583) to strong (.880), presented in Table 3 above, demonstrated that every item was internally consistent with every other item. All of the figures were considered acceptable because they were over the 0.39 weak correlation criteria, in accordance with the logic of Schober & Boer (2018) and Akoglu (2018). According to Yadav et al. (2017), the average variance retrieved for digital teller machines (AVE) was higher than the 0.50 threshold that was advised. This made sure that the study had discriminant validity. For discriminant validity, the square root average variance (AVE) value must be greater than 0.50. which is less than what is advised suggests that convergent validity is present. In more advanced stages, the Cronbach alpha value must be greater than 0.70, however values between 0.60 and 0.70 are acceptable. However, according to Yadav et al. (2017), a composite dependability rating of 0.95 or above is unquestionably bad. All digital teller machine composite reliability results were below 0.95, which was considered acceptable.

**3.2. Composite Reliability**

**Table 4: Convergent Validity (Ave) and Composite Reliability (Cr)**

|  |
| --- |
|  |
| Latent constructs CR AVE  |
| Automatic teller machines  (CR&AVE) 0.744 0.563 Customer intent (CR&AVE) 0.931 0.749 Performance of Bank (CR&AVE) 0.910 0.803 |

**Source: Field data, 2024**

According to A. Rashid and Rokade (2019), it is acceptable for composite reliability if CR > 0.70 and for convergent validity if AVE > 0.50. Table 4 shows that all constructs have CRs above 0.70 and AVE values between 0.503 and 0.804, all of which are above the suggested level.

**Table 5: Inter-Construct Correlation Matrix for Discriminant Validity**

|  |
| --- |
| The Latent constructs |
| Latent constructs B C D  |
| Automatic teller machines (B) .576\*\* .755 Customer intention (C) ..787\*\*  .841\*\* .870  Bank performance  (D) ..644\*\* .283\*\* .139\*\* 0.898 |

**Source: Field data, 2024**

|  |
| --- |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |
| \*. Correlation is significant at the 0.05 level (2-tailed). |

According to Yadav et al. (2017), models are considered to have discriminant validity if the square root of AVE is greater than the inter-construct correlations. Every AVE item in table 5 above is greater than the inter-construct correlations. Accordingly, the survey's findings demonstrate that our models' discriminant reliability was met.

**Table 6: Direct Effects of Research Hypotheses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hypothesis for the research model | The Path model | The loading Estimate | The loading P-value  | Decision |
| H1 The performance of banks is significantly impacted by Automatic teller machines. | BP < ATM | .010 | \*\*\* | Supported |
| H2 The intention of customers is significantly impacted by digital teller machines. | CI <ATM | .795 | \*\*\* | Supported |

**Source: Field data, 2024**

**Table 7: Results Model for Direct Effects**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Theory  | The Path model | The loading Estimate | The loading P-value | Decision |
| H1 | BP <- ATM | .010 | \*\*\* | Supported |
| H2 | CI <- ATM | .795 | \*\*\* | Supported |

**Source: Field data, 2024**

**3.2 Testing hypothesis one**

Digital teller machines significantly improve customer intention, according to survey results shown in the above table. With a p-value of 0.001 < 0.05, the standardized direct effect of a Automatic teller machine on consumer intention was.795. This indicates that a one standard deviation increase in digital teller machines results in a.795 increase in client intention. Digital teller machines significantly improve client intention, according to the research. Consequently, hypothesis H1 is supported. These results align with a study carried out in Thailand, where Terason (2021) proposed that customer value is a crucial strategic component that businesses use to draw in and keep clients.

**3.2 Testing hypothesis Two**

According to the survey findings shown in the above table, Automatic teller machine services significantly improve bank performance. A digital teller machine's services had a standardized direct effect of.010 on bank performance (p-value = 0.001 <0.05). This indicates that bank performance increases by.010 for every standard deviation increase in digital teller machine services. The data indicates that the performance of banks is significantly improved by Internet banking services. Hypothesis H2 is thus validated. Digitalization has changed the world in nearly every way over the past few decades, according to a study done in East Africa by Okkonen et al. (2019).

**3.3 Bootstrap analysis tests for mediation with a 95% confidence interval.**

**Table 8: The Mediation Analysis**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Relationships | Direct influence of beta value | The indirect effect of beta | The confidence interval | The value of P-  | Decision |
| The Low bound  | The High bound  |
| H3. Automatic teller machines 🡪 Customer intent 🡪 performance of banks | .935 | .041 | .021 | .046 | 0.005 | **Partial mediation**The direct impact p-value of.005 and the indirect effects of.021 and.046 are both significant due to PM, indicating that there is no zero between them. |

**Source: Field data, 2024**

**Table 9: Results of the Mediation Model**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| The relationships | Direct influence of beta value | The indirect effect of beta | The confidence interval | The value of P | Decision |
| Low | High |
| BP <- CI<-ATM | .935 | .041 | .021 | .046 | 0.005 | Partial mediation  |

**Source: Field data, 2024**

**3.2 Testing hypothesis three**

Table 9 above showed that customer intention acted as a mediator in the relationship between the independent internet banking services and the dependent variable, bank performance. P-value.005<0.05, bootstrap confidence intervals for low and high were.021 and.046 respectively, and the standardized regression coefficient value was.935 for the direct effect and.041 for the indirect effect. This suggests that there is a significant mediation effect of customer intentions on the relationship between internet banking services and profitability. According to Gunzler et al. (2016), partial mediation involves a direct relationship between the independent and dependent variables in addition to a significant relationship between the mediator and the dependent variable (Ali et al., 2021). Because the direct impact p-value (.005) is significant and the indirect effects (.021 and.046) do not indicate a zero between them, the mediations demonstrate partial mediation. Despite this, hypothesis H3 is accepted

**4. Results**

According to the survey's findings, computerized teller machines significantly improve bank performance. The results of the study indicate that banks' performance is significantly impacted by digital and automated teller machine services. These results are consistent with studies carried out in Ethiopia, where the World Bank Financial Inclusion Survey (2018) indicated that the Ethiopian government has been actively working to improve financial inclusion in recent years because it enables people to accumulate assets, boost asset security, make profitable investments for income growth, and lessen their susceptibility to changes in their income. The goals were to raise the number of point-of-sale (POS) machines to 120.4, agents to 229.4, and automatic teller machines (ATMs) to 25.4 per 100,000 adults in order to promote progress on this indicator.

The data also supports a study by Regime (2022) in India that demonstrates how Neo-banks have further specialized into offers aimed at consumers and small businesses, respectively. Additional conveniences that Neobank provides to the average customer are digital divides through its ATM, mobile applications through its business-to-business relationships, and even a credit line. Additionally, the study backs up Okkonen et al.'s research from East Africa. (2019) Over the past few decades, digitization has changed practically every element of life on Earth. In practically every nation, the availability of the internet and the rise in the use of mobile phones, social media, automated teller machines, and other ICT services have altered how people interact, communicate, study, and work while also improving performance.

In line with research conducted in Thailand, where Terason (2021) suggested that customer intention is considered an important strategic part used by companies to attract and retain customers, which means that every company must produce quality products or services at an affordable price to attract more customers and make more sales. The study's findings showed that digital teller machines have a significant effect on customer intention, indicating a positive association between digital teller machines and customer intention. Additionally, the study's findings showed that there is a positive and strong mediating relationship between digital teller machines and bank performance and consumer intention. These results are consistent with study from Kokkola, Finland, where Ranabhat (2018) proposed that the key to increasing corporate performance with customer loyalty is customer happiness. Customers will not come for servicing unless they are happy or satisfied with the product or service, as is well known. Customer intentions are the most important aspects of the business. They are crucial to the smooth and continuous operation of the business in the market. They also support a Chinese study carried out in Saudi Arabia by M. A. Khan and Alhumoudi (2022), which demonstrates that customer satisfaction affects performance within the organization and that e-service quality influences customer intention in banking.

5. **Conclusion**

According to the study's findings, there is a negative and substantial correlation between customer intention and banking performance. This suggests that customers' negative intentions toward bank services resulted in a drop in bank performance. The study's findings also suggested that there is a strong correlation between digital teller machine services and banking performance, suggesting that digital teller machines have a positive effect on bank profitability. The study's findings demonstrated that bank performance and digital teller machine services somewhat mediate client intention.

6. Recommendations

* In light of the results, the following substitute solutions might be pursued: Therefore, in order to increase their bank performance, banks must offer their customers value through digital channels and multi-channel services. By using the right digital marketing services, banks and their clients may perform better. Banks should take security and other issues extremely seriously since customers are still concerned about them.
* By expanding the scope of research on customer intention and bank performance in relation to digital marketing services, the present thesis contributes to the body of knowledge. Results show that digital marketing is effective in retaining current customers and attracting new ones.

7. Research Limitations

 This study examined the impact of Automatic teller machine services on the performance of a subset of Ethiopian commercial banks, with a particular emphasis on the mediating role of consumer intention. The study was limited in its geographic and organizational scope to a subset of Ethiopian commercial banks, limited to digital marketing services, and limited from service organizations to banks exclusively.

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**9. Reference**

**(1)** Abu-doleh, J., & Hijazi, N. (2011). The assessment of e-banking readiness in Jordan. October 2019. https://doi.org/10.1108/17538391111186564

(2) Adam, A. M. (2020). Sample Size Determination in Survey Research. Journal of Scientific Research and Reports, June, 90–97. https://doi.org/10.9734/jsrr/2020/v26i530263

(3) Ajibade, P. (2018). Technology Acceptance Model Limitations and Criticisms : Exploring the Practical Applications and Use in Technology-related Studies , Mixed- method , and Qualitative Researches.

(4) Alsamydai, M. J. (2016). Adaptation of the Technology Acceptance Model (TAM) to the Use of Mobile Banking Services. 2014, 2016–2028.

(5) Bang, Andreas ; Roos, C. etal. (2014). Digital Marketing Strategy within Manufacturing Industries, A qualitative case study. 93. http://www.diva-portal.org/smash/get/diva2:726192/fulltext02.pdf;jsessionid=25SUlQeo-Y2-JuqKFdRJ-BFZPcGih9I4NPdYS-\_\_.diva2-search7-vm

(6) Cajetan. (2018). Impact of online banking adoption on banks profitability. MBAMA, Cajetan Available.

(7) Case, T., Hu, P. J., Brown, S. A., Thong, J. Y. L., Chan, F. K. Y., & Tam, K. Y. (2009). Determinants of Service Quality and Continuance Intention of Online Services : Determinants of Service Quality and Continuance Intention of Online Services : The Case of eTax. February. https://doi.org/10.1002/asi.20956

(8) Devanathan, M. (2019). " Strategic model for predicting customer ’ s intention to purchase apparel online " Number Of References 0 Number Of Figures 0 Number Of Tables 0 Strategic model for predicting custom ... January 2008.

(9) Dolores, M., & Tongco, C. (2017). Definition of Purposive Sampling. A Journal of Plants, People and Applied Research, 5, 1–12.

(10)Economy, Ethiopia’s Digital, 2020. (n.d.). Ethiopia ’ s Digital Economy Ethiopia ’ s Digital Economy,2020.

(11)Fetu, A. (2019). DOI: 10.32602/jafas.2019.23 Opportunity and Challenges of Electronic-Banking System in Commercial Bank of Ethiopia (A Case Study on Gurage Zone). 106–122. https://doi.org/10.32602/jafas.2019.23

(12)Gusti, Y. (2020). The Influence Of Innovation, Customer Value And Customer Empowerment On Customer Satisfactionrjoas, 8(104), August 2020. 8(August), 88–95. Https://Doi.Org/10.18551/Rjoas.2020-08.11

(13)Taber, K. S. (2018). The Use of Cronbach ’ s Alpha When Developing and Reporting Research Instruments in Science Education Content courtesy of Springer Nature , terms of use apply . Rights reserved . 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

(14)Terason, S. (2021). loyalty in automobile business ” Customer value and customer brand engagement : Their effects on brand loyalty in automobile business. https://doi.org/10.21511/im.17(2).2021.09

(15)Transactions, S., Hinojo, P., Su, D., & Garc, B. (2022). Drivers of Consumer Participation in Online. 1–13.

(16)Trivsel, C., & Trivsel, S. (2017). Customer satisfaction and customer loyalty. November.

(17)Tuominen, S., Reijonen, H., Ecole, I. G., Buratti, A., & Laukkanen, T. (2021). Customer-centric strategy driving innovativeness and business growth in international markets. https://doi.org/10.1108/IMR-09-2020-0215

(18)Uvaneswaran, S. M. (2017). Challenges In E- Banking Services And Its Impact On Profitability Challenges In E- Banking Services And Its Impact On Profitability Of Public Sector Bank In Ethiopia. July. Https://Doi.Org/10.5281/Zenodo.834863

(19)Veleva, S. S., & Tsvetanova, A. I. (2020). Characteristics of the digital marketing advantages and disadvantages. IOP Conference Series: Materials Science and Engineering, 940(1). https://doi.org/10.1088/1757-899X/940/1/012065

(20)Vilgon, M. (2017). Customer Satisfaction and Links to Customer Profitability : An Empirical Examination of the Association Between Attitudes and Behavior. January 1999.

(21)Vu, Travis, M. (2021). Business Dissertation Lecturer : Ms . Marta Submission Date : 19th April 2021. March, 0–52. Https://Doi.Org/10.6084/M9.Figshare.17089454

(22)Wejnert, B. (2017). Integrating Models of Diffusion of Innovations : A Conceptual Framework Integrating Models of Diffusion of Innovations : A Conceptual Framework Author ( s ): Barbara Wejnert Source : Annual Review of Sociology , Vol . 28 ( 2002 ), pp . 297-326. 23(August). https://doi.org/10.1146/annurev.soc.28.110601.141051

(23)Yadav, S., Kunwar, A., Chen, L., Wang, M., & Ollinger, N. (2017). Discriminant Validity Assessment : Use of Fornell & Larcker criterion versus HTMT Criterion Discriminant Validity Assessment : Use of Fornell & Larcker criterion versus HTMT Criterion.

(24)Yamane, T. (1967). Yamane, Taro. (1967). Statistics: An Introductory Analysis: Vol. 2nd Editio (p. 886).

(25)Yaseen, H., Al-adwan, A. S., & Al-madadha, A. (2019). Digital Marketing Adoption Among Smes In Jordan : A Mixed-Method Approach Digital Marketing Adoption Among Smes In Jordan : A Mixed- Method Approach. February.

(26)Zea, & Civelek, M. E. (2018). Essentials of Structural Equation Modeling Essentials of Structural Equation Modeling.

(27) Zuo, L., & Strauss, J. (2021). The Digitalization Transformation of Commercial Banks and Its Impact on Sustainable Efficiency Improvements through Investment in Science and Technology.