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MOBILE APPLICATION BANKING AND BUSINESS PERFORMANCE IN DEPOSIT MONEY BANKS

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ABSTRACT

This study examines the relationship between mobile application banking and business performance in deposit money banks. An explanatory research design was adopted. Fourteen (14) deposit money banks were enlisted for study, drawn from Nigeria Stock Exchange as represented in Port Harcourt. However, our cross-sectional data were collected from 140 individuals, 10 purposively selected from each of the 14 banks. The findings of the study showed that mobile application banking does not significantly relate to business performance. Based on the findings, it was concluded that mobile application banking has a dual impact on business performance. Based on this, we recommended that mobile application banking and other innovative approaches improving the mundane applications as well, ensuring efficiency in delivery and improved site traffic positively.

KEYWORDS:

Mobile Application Banking. Business Performance. Deposit Money Banks.



Introduction

Drawing from the most recent happenings, it is not out of place to align our thoughts to the seemingly fierce financial space, as it is no longer ranging in a predictable stance. Indeed, it has witnesseddynamic change in decades ago and information and communications technology has constantly revolutionized the banking service delivery. A banking industry's characteristic has been progressively becoming more competitive as service delivery has gone digital (Asongu& Nwachukwu, 2018). With the help of technological developments, banks have been able to take up the challenges by validating new technology, which focuses to satisfy the customers by providing the best technology-based banking services while minimizing operating costs (Riyadh et al., 2019; Sultan et al., 2018). Mobile phones have become a device for daily usage, which can make a chance for the improvement of banking services to reach customer through mobile banking services (Maulana et al., 2019). Services provided by the banks are evaluated by the customers for their satisfaction and this evaluation are based on many factors such how efficient is their delivery, privacy/security, accessibility, adaptability and lot more (Sohail & Abdullah, 2019). In his study "digital technologies and service delivery, he further noted that digital technologies are transforming present day economies and service delivery, also aid in gathering regular feedbacks from users of various services, which has greatly impacted on level of service quality.

Mobile application banking (MAP) has emerged as a wireless communication channel for creating value by customers in banking transactions. Today, the main focus has been the field of modern methods of digital services delivery of banks, supply of banking and financial services using mobile phones, it is a few years the use of mobile phones for banking and financial affairs, but in the short term, significant progress has been made in this field. It could be a lot of promise in this new way of banking future. MAP is a service that will enable customers' information, such as your bank account balance and be informed of through your cell phone. This is done with high security. As usual in banking services, MAP services that are offered through the mobile network. Factor that the bank has focused heavily on the issue; could unique mobile services at reduce cost banking services. Mobile application banking is a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smartphone or tablet. Unlike the related internet banking it uses software, usually called an app, provided by the financial institution for the purpose. Mobile application banking is usually available on a 24-hour basis. With the advancement in the technology most of the banks have gone ahead with the concept of the mobile banking which has become a necessary must for them (Tavlas, 2015). The concept of mobile application banking that is proposed for the deposit money banksenvisages to achieves significant improvements in the overall operations of the company. The concept of MAP is basically an application that will be downloaded by the bank customers through their smartphones from Apple iOS and or Google Android system. They can alternatively also use the web browser to log in to the online system.

Mobile applicationbanking is systems utilized by customers to do transactions with banks over mobile phones. Mobile banking indicates to banking transaction by mobile devices like smartphones, personal digital assistant, and other devices excluding the laptops(Lee & Chung, 2009). There has been a great diversity in the earlier research on electronic banking services, which measure the direction of consumers towards ATMs and understanding the social goal to utilize versatile financial administrations(Luarn& Lin, 2005). Adoption and quality of online banking issues (Baabdullah et al., 2019). With the aid of internet enabled platforms, suchlike smart-phones, social network platforms, websites, e-mail (g-mail), customer-oriented banks have shifted from intermittent and stressful brick and mortar of transactions to blistering, more handy and stress-free digital operations in order to be apparent and link with customer that majorly leaves in the digital community (Onwuegbuchi, 2015; Oni et al., 2014).

Numerous of studies have been conducted on MAB and business performance. Abdulsatar et al. (2019) investigated on the determinantseffecting the adoption of m-banking service among Cihan Bank Customers in the Kurdistan Region of Iraq. Adewoye (2013) conducted a study on how Nigerian deposit money banks' service delivery was affected by mobile banking (m-banking); Similarly, Ikegwuiro (2017) investigated application of internet service delivery in selected special libraries in Kaduna Metropolis. From the foregoing, several factors are based with which the study departs. Mainly, on point would be to investigate the nexus between mobile application and business performance of deposit money banks in Nigeria, with emphasis on

industry technology on consumer negating the role of such devices on organizations. Also, the choice of the study to adopt mobile application banking and bank efficiency and site traffic as missives of both variable (predictor and criterion) as a media were additional gap in the study. The choice of these sub-variables is motivated by the fact given, to ascertain the relative implication of technology-based Mobileapplication banking is a form of banking service that is provided to customers via electronic channels, especially in the banking sector. Similarly, increased presence of digital platforms in performing bank transactions and have aided in remedying the reoccurring issues of rubbing banks customers who move about with huge sums; it also incorporatesensuring quality financial service delivery, transparency and swift service performance. However, despite these perceived achievements of digitalized banking and the cashless policy, many customers still carry physical cash around, while others are still skeptical about having their money saved in banks due to the issue of security in the digital platforms haven been proliferated in the Nigerian society.

As of present the customers are relying on the manual mechanism of doing banking. For example, if the customers who want simple statement of accounts or even their balance need to come all the way to the bank, wait in a queue for a length of time depending on the time and business activity of that day. And then when their times they must wait for another fifteen to thirty minutes to get their statement of accounts when all this can be easily done by the customer themselves at any given point of time with the fraction of the costs that is incurred both the customer and business side. In the process of doing all these transactions which doesn't has any monetary value associated with it the actual business of the bank takes a backseat. The overall quality of the banking service provided is below the industry standard which has been set at a high bar.

Given that reasonable amount of research exist on digital marketing focusing on the banking industry, but little attention was accorded to business performance. Therefore, the objective of this current study was to examine the nexus between mobile application banking and performance of deposit money banks business in Nigeria.

Literature Review

Theoretical Review

Technological Determinism Theory (TDT): Technological determinism theory (TDT) underpins this study was propounded in 1964 by Marshal McLuhan (Asemah et al., 2017). TDT suggests to a protracted and yet working conventional means of evaluating what impact communication and technology share into common (McQuail, 2010). Driving motive behind TDT happened that business space is transfigured to expect new inventions to enhance operational efficiency in organisations. Consequently, what govern the behaviour of establishments and ecosystem is rooted in embracing inventions popularly recent or new. To transverse along the above elucidation amid how new technologies is becoming the key interesting factors in the societal way of life and patterns, this current study is concerned on what TDT can offer to MAP as a chunk of new-town invention introduction sustainability and its manifestation has orient establishments doings. Mobile application banking has now migrated on from the old way of service delivery to the internet-driven (e-banking). Thus, it is not a mirage that new inventions has shifted the dynamism of doing business in the world today and how TDT helps them operate is phenomenal as against how it is being done in the olden days banking.

(Tian et al., 2015; Bach et al., 2020).

Conceptual Review

Mobile Application Banking

Mobile application banking entails engagement in monetary transactions that ought to facilitate or aid by the use of mobile phones and the applications therein. Mobile phone has for long becomes part of the digital services that are used to facilitate digital marketing operations in the banking business. Customers can use their mobile phone to access banking offerings such as account balance inquiry, money transfer, paying of bills, financial statement and transaction history (Agwu & Carter, 2014). Banks may now supply their offerings to both banked and unbanked consumers thanks to mobile subscribers and network operators. Mobile banking appears to have gained popularity, particularly among traders in Nigeria's urban regions. Dikit et al. (2012) propose that mobile gadget carriers partner with banks to deliver services to customers at a lower cost. In the Nigerian banking environment, service congestion and flexi-security challenges are important instrumental contingencies limiting the efficacy of m-banking services.

Another aspect of mobile application banking is the SMS (short-message-service) that consents users to send and obtain mobile messages limiting to 140-160 characters. The SMS center belonging to a service provider handles the dissemination of mobile-driven short messages. The SMSC receives and routes the information from the mobile gadgets to the terminus gadgets. It is possible that a business establishments or an exact service provider maintains its own SMSC to generate mobile-driven short messages. As a result, a DMB might produce SMS from DMB data such as account balances or transaction flows and send it to a customer's mobile apps (Pousttchi & Schurig, 2004). Also, Ali et al. (2019) noted that m-banking symbolizes admittance to banking info via an accommodated application (app) on a mobile gadget such as a smart-telephone or a tablet, as well as notifications through text messaging/short message service (SMS). Lee and Raghu (2014) conducted a study on the intriguing forces that militate against the success of mobile apps. They discovered that extraordinary earlier ranking, regular quality upgrades, high usage volume, and high user ranking scores are precarious benchmarks using data from three hundred charts in the App Store. Because of their services, they believed that the multiplicity of mobile apps would take into effect on an improvement in competitiveness (example, adopting a scan bar code reader app for price judgment).

Efficiency: Efficiency is the measurement of the association between inputs and outputs and/ or how successful those inputs have been transformed into outputs. Efficiency in terms business operation and processes reveals the performance of input and output ratio, and it could improve organization performance with regards to managements, productivity, quality and productivity (Demartini&Paeloni 2011). Efficiency represents a pinnacle height of performance that employs the smallest volume of efforts to accomplish the maximum sum in productivity. Efficiency demonstrated as a quantifiable phenomenon being resolute in employing the fraction of useful productivity to aggregate input. Further reduces the unwanted use of resources like time, energy and physical materials, while fulfilling the needed productivity (Caroline & Michael, 2020). Efficiency entails bringing the number of superfluous inputs employed to create an assumed productivity including individual's energy and secretive time.

Site Traffic: Banks make heavy investment on their online banking activities in order to attract more customers to their site and they use those sites in performing their banking needs. Site traffic is fundamentally the lifeblood of any organization, especially those domiciled online. This is because the higher and increased visit to the company's site, the higher chances you have engaging with a lead or customers. Specifically, the more better services banks are able to provide online the higher tendencies that more customers would make first trail, and thereby, increasing usage rate of the website. According to Pratik et al. (2014), traffic begins with high-extent activities of clicking a link and increases with low-extent activities like wandering through network switches and cables. When customers visit different bank web applications to carry out different activities, that is where traffic begins and by so doing, the long effect will be reflecting positively on the performance of the firm. There are several rationales in which site traffic increases, these determinants include: the PEOU, not unavailability of graphical user interfaces for traversing the site, machine language, transferring documents via site and editor's support devices (Pratik et al., 2014).

Business Performance

Business performance is the cause of constant fight that industry player is involved in: it is the main reason for establishing any business strategy. Business performance is used to indicate the (in)tangible output or result of a business establishment which is measured against its predetermined output or goals and objectives (Upadhays et al., 2014). Business performance is defined as the operational ability to satisfy the desires of the organization's key stakeholder's (Smith & Reece, 1999). According to Didier (2002) holds that performance involves the achievement of goals that were stated in line with company's orientations: it is the difference between outcome and objectives. This means that before me or an organization is said to have performed, there is always a performance standard set by the organization, and the standard needs to be adequately adhered to. According to Michael (1995), performance is generally measured result, usually greater than those provided or arising from prior results.

Roistadas (1998) opined that performance is a complex association that involves seven strong factors: effectiveness, efficiency, quality, productivity, qualify work, innovation and profitability. It shows that these criteria are important performance indicators that every performing and even non-performing organization

should pay keen attention to. Omar and Zineb (2017) hold that business performance dwell mainly by focusing on the capability of and ability of a business establishment to efficiently utilize its available resources to the actualization of desired results which are consistent with company's objectives.

Empirical Review

Mobile Application Banking and Business Performance

Scholars have found and reported that mobile apps are now presented as a major instrument used in generating value for business enterprises, not only that they are relevant as means for shopping for retailing organizations but they are presents can be used for promotional activities (Taylor & Levin, 2014). It was asserted that mobile apps are used to create relationship between customers and their service providers; it's equally used for facilitating brand engagement (Florina & Alexandra, 2017). Mobile apps have become among the most effective channels for delivering banking products and services to clients: it has resulted to an increasing competitiveness among firms in the banking industry with increasing demanding clients (Shaik &Karjaluoto, 2015). Laukkanen (2007) stated that apps have gained more attention due to the benefits it provide to banks in terms of comfort and ease of usage when transactions are being performed, it increases market coverage as well as service quality. There is a suggestion that bank apps that are easy to use have higher changes of attracting customers to use them; and this has positive and significant connection between effort expectancy and ease of use, and this perception of consumers would directly influence clients- friendliness of the apps (Hew et al., 2015).

METHODOLOGY

Research design: To examine the impact of mobile application on business performance, the study adopted quantitative research method. Also, the positivism philosophy, which is the foundation of deductive and quantitative methods, emphasizes the existence of objective reality that is independent of the object being observed. The main objective was to validate the theoretical view that mobile application banking is a significant element of business performance.

This study is a bank-level empirical research, focusing on listed deposit money banks that have their branches in Port Harcourt. Information obtained from the Nigerian stock exchange show that there are 14 listed deposit money banks in Nigeria. As a result, our population includes these 14 listed firms since they are all represented in Port Harcourt.

For quantitative analysis, our sample includes all the 14 banks in our study population, while census sampling method was employed. The cross-sectional data was collected from 140 individuals, 10 purposively selected from each of the 14 banks. The study collected a cross-sectional data, which was collected primarily from the selected deposit money banks in Port Harcourt. Each respondent was administered a copy of the questionnaire by hand at their preferred location. This was followed by follow-up by visits and/or reminder text messages.

A pilot study was conducted to scrutinize the validity/reliability of the MABBPQ instrument. The pilot study would involve 14 persons that are purposively selected from the sampled banks. The pilot study results would be employed to ascertain both the reliability and construct validity of the research instrument, and hence, would not be included in the main thesis results. Furthermore, CFA were conducted in validating statement items on all the studied variables and to determine the construct validity of research instrument.

Diverse inferential statistics and relative econometric methods were employed to analyze the collected quantitative data. Descriptive statistics method was used in representing demographics with frequency, percentages, tables and graphic representation would be used to analyze the demographic bio-data of the participants. Finally, simple regression analysis was employed analyzing the specified hypotheses that states the nexus among proxies.

RESULTS AND DISCUSSION

It was analyzed that male participants constituted approximately 56.3% of our sample, while female participants constitute approximately 43.7%. For educational qualification, participants who had first degree (62.5%) constituted the largest study group, followed by participants who had second degree (18.8%), while participants

who indicated others and those who had PhD respectively represent approximately 12.5% and 6.3% of our sample. None of the participants indicated WAEC/NECO. For work experience, respondents who had been with their current bank for 9 years or above constituted the largest study group, representing almost 38% of the sample, followed by respondents who had 3–5 years of experience (28.13%), while those who worked with their current bank for 6–8years constitute about one quarter of the sample. The smallest study group comprises participants who have 0 – 2years' work experience. For job position, the respondents who worked in the technical unit constituted the largest study group, representing approximately 34% of the sample, while respondents who functioned as human resource managers and those who worked in the customer service department respectively represented 22.5% and 20% of the sample. Also, the statistics showed that participants who are accountants represented about 13.8% of our sample, while the smallest study group comprised respondents who indicated others.

Confirmatory Factor Analysis (CFA)

Construct	Item	Loading	CR	AVE	A
MAB	MAB1	0.818			
MAB	MAB2	0.889	0.909	0.715	0.845
MAB	MAB3	0.903			
MAB	MAB4	0.764			
BEF	BEF1	0.878			
BEF	BEF2	0.733	0.799	0.514	0.773
BEF	BEF3	0.759			
BEF	BEF4	0.412			
ST	ST1	0.866			
ST	ST2	0.854	0.920	0.741	0.885
ST	ST3	0.888			
ST	ST4	0.836			

As evidenced in Table 1, the study witnessed all the observed variables (statement items) loaded was high against their elemental factors (latent variables), owing to factor loadings ranging from 0.733 to 0.903 with only one having 0.412. Except one item, these values are all above the suggested minimum of 0.6, implying that they are valid measures of their latent factors. Also, for all cases, CR, AVE and Cronbach Alpha (α) are higher than their suggested threshold values of 0.6 respectively. All these imply that our data achieve convergent validity. For discriminant validity, we follow the usual procedure by comparing the Cronbach Alpha (α) with the pairwise correlation coefficient between the constructs. The measurement analysis shows that automated records and payment portal securities are all objectively and validly measured by their respective statement items contained in our research instrument.

Hypotheses Testing

Table 2: Regression Analysis showing the relationship between mobile application banking and bank efficiency

	R	R Square	Adjusted R Square	F	Unstandardized Coefficients (Beta)	Sig.	Durbin Watson
	.2383ª	.0568	.0267	1.8875			1.6602
Constant					2.6766	0.0002***	

Mobile application banking					0093	.9282	
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Dependent Variable: Bank Efficiency

Source: Data Output from SPSS (2022)

H₁: Mobile application banking does not have significant relationship with efficiency of deposit money banks in Nigeria. The relationship between mobile application banking and bank efficiency results are reported in Table 2. Hence, our focus is on the estimated coefficient on *MAB* and its associated p-value in Table 2. The 5% level of significance is preferred.

Decision rule: Reject H_1 if the p-value associated with $MAB(\beta_1)$ is lower than 5% or 0.05. Otherwise, do not reject H_1 . From Table 2, the beta on MAB has an estimated value of -0.0093 while its associated p-value is 0.9282, which is higher than 0.05. This implies that the t-test is not statistically significant, indicating no statistical evidence against H_1 . Therefore, we do not reject hypothesis one, leading us to conclude that mobile application banking has no significant effect on bank efficiency.

Table 3: Regression Analysis showing the relationship between automated records, payment portal security and site traffic

	R	R Square	Adjusted R Square	F	Unstandardized Coefficients (Beta)	Sig.	Durbin Watson
	.2504ª	.0627	.0328	2.0984			1.8758
Constant					2.2713	0.0005***	
Mobile application banking					.1499	.1248	

Dependent Variable: Site Traffic

Source: Data Output from SPSS (2022)

H₂: Mobile application banking does not have significant relationship with site traffic of deposit money banks in Nigeria. The relationship between mobile application banking and site traffic results are reported in Table 3. The focus is on the estimated coefficient on *MAB* and its associated p-value in Table 3. Again, the 5% level of significance is preferred.

Decision rule: Reject H_2 if the p-value associated with $MAB(\lambda_1)$ is lower than 5% or 0.05. Otherwise, do not reject H_{04} . From Table 3, the beta on MAB has an estimated value of 0.1429 while its associated p-value is 0.1248, which is higher than 0.05. This implies that the t-test is not statistically significant. Hence, we do not reject H_2 , leading us to conclude that mobile application banking has no significant effect on site traffic.

Table 4: Summary of the Main Regression Results

S/n	Null Hypothesis	Results	Decision	Remark
1	Mobile application banking does not have significant	t-statistic is not	Not	No Impact
	relationship with efficiency.	significant	Rejected	
2	Mobile application banking does not have significant	t-statistic is not	Not	No Impact
	relationship with site traffic.	significant	Rejected	

Discussion of the Findings

Mobile application banking significantly and positively correlates with business performance and as such enhances indices such as bank efficiency and site traffic.

MAB, without reservation, a development worthy of mention, as it has flourished in grinding down most of the mitigating parameters of conventional way of banking to mention but few: long queue within the banking premises, using number to identify each customer, noise, scams, physical handling of monetary transactions, ineffectiveness and inefficiency. Overall, the regression analyses indicate that *MAB* were a much weaker predictor of the measure of business performance than what other researchers suggested. It was expected that digital service delivery would capture larger portions of the variance in business performance, as this outcome specifically describes how customers feel about themselves in relation to their usage of the service offered.

Hypothesis one (H_1) stated that mobile application banking does not significantly relations with bank efficiency in DMBs in Nigeria. The outputs from regression analysis revealed a negative of -0.023 relationship between MAB and BEF. The R and R^2 of 0.2383 and 0.0568 respectively shows weak relationship between MAB and BEF. This shows that bank efficiency is a negative function of mobile application banking. As evidenced in Table 4.20, the beta on MAB has an estimated value of -0.0093 while its associated p-value is 0.9282, which was higher than 0.05. This implies that the t-test is not statistically significant, indicating no statistical evidence against H_{01} . Therefore, we do not reject hypothesis one, leading us to conclude that mobile application banking has no significant relationship with bank efficiency. However, the \bar{R}^2 of 0.0267 shows that the estimated model is very poorly fitted with mobile application banking accounting for only approximately 3% of the observed cross-sectional variation in bank efficiency can be linked to other factors that are not considered by the researcher. Also, the R^2 (= 0.0568) is very low as against Durbin Watson Statistic (DW = 1.6602) which output is close to 2, implying that the relationship between MAB and bank efficiency as specified in our model is not spurious.

Hypothesis two (H2) states that, MAB does not have significant nexus with site traffic of DMBs in Nigeria. The result from beta regression analysis revealed a positive relationship of 0.151 between MAB and ST. The R and R² of 0.2504 and 0.0627 respectively shows weak relationship between MAB and ST. This shows that ST is a positive function of mobile application banking. As evidenced in Table 3, the beta on MAB has an estimated value of 0.1429 while its associated p-value is 0.9282, which was higher than 0.05. This implies also t-test is not statistically significant, indicating no statistical evidence against H_{02} . Therefore, we do not reject hypothesis two, leading us to conclude that mobile application banking has no significant nexus with site traffic of DMBs in Nigeria. From Table 3, the R^2 (= 0.2504) displayed that the estimated model has a moderate fit. However, like the case of model 1, the \bar{R}^2 of 0.0328 shows that the estimated model is very poorly fitted, with mobile application banking accounting for only approximately 3% of the observed cross-sectional variation in bank site traffic can be linked to other factors that are not considered by the researcher.

Our findings revealed a no significant implication of MAB on business performance through bank efficiency and bank site traffic. Findings from the empirical reviewed supported these present results, from Nader (2011), who found that the mobile application banking does not significantly correlates efficiency. The findings is consistent with Malhotra and Singh (2009) where outcomes revealed insignificant correlation between MAB and profitability as well as a significant negative nexus between MAB and risk profile of banks in India. Abubakar (2014) provided strong empirical evidence to support that positive relationship exist between mobile application banking and total deposits and also between mobile application banking and total asset. Siam (2006) found that mobile application has a negative impact on profitability and therefore insignificant. Contrary to our findings are the research conducted by Adudu and Kingoo (2012) and Akpan (2012) that mobile application banking has a significant impact on banking performance. In support to Adudu and Kingoo (2012) and Akpan (2012), found that MAB produced significant positive nexus with purchase intention. Ali et al. (2016) who conducted a study on customers' satisfaction and loyalty influence from e-banking services quality (Case Study: Agricultural Bank of Khuzestan Province found that MAB has a positive repercussion on customer satisfaction and loyalty.

Similarly, Ho and Ko (2008) also found strong positive and significant effect of mobile application banking on business performance. The work of Cudjoe et al. (2015) found that PU and PEOU positively impacted intention to adoptMAB service device. Supported to Cudjoe and co. was Vaidya (2011), who agreed that the populaceadoptedMAB due to their ability to check transaction in the form of deposits, paying for an offering offered, transferring money to a third party, and MAB offers a benefitthat a user can transact anywhere at any given time and therefore a significant nexus exist between MAB and customer satisfaction.

Study Implications

The subject of mobile application banking has become of a great value to all banking customers, to the staff of the banks, the government and the parties having interest in the financial sector. The study also established that while the mobile application banking is of value generally, will improve the service to customers and firms in the banking industry. The result of the findings on mobile application, contributes significantly and insignificantly towards achieving business performance of DMBs in Nigeria. In light of this, we opine that mobile application banking in deposit money banks in Nigeria has a lesser impact on bank efficiency as well, do not impact significantly on site traffic.

The result of this study is suitable for any kind of organization having great challenges on bank efficiency and site traffic. The study recommended that the state of technology-in-use should be such that could be upgraded to allow for bank efficiency of the system and ensure a functional cashless society. Also, the study suggested that Mobile application banking should be improved to ensure efficiency in service delivery and improved site traffic. It was noted that the system (software) will help banks to access customers' record with ease and facilitates smooth workmanship, sensitization through various positive means to improved self-assured on the use of mobile application banking and security guide system. It is equally recommended that there should be homogeneity in the technology application and improving customers' rapport to ensure efficiency in the system.

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