The Impact of Fintech Solutions on Firm Performance in Sultanate of Oman: A Quantitative Analysis of Digital Payments, Digital Lending, and Mobile Banking

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Abstract- This research aims to analyze the effects of the financial technology or fintech solutions such as the digital payments, digital lending, and mobile banking on firms’ performance in Sultanate of Oman. The study adopted a quantitative research design to gather information from 180 firms with the help of structured questionnaire. These solutions portray different levels of impact on firm performance as elucidated by the results. Mobile banking was also identified to be a major positive factor that affected the firm performance across operational and financial indicators. Ever however, the firm performance had a negative correlation with digital payments wherein it seemed to point at challenges or inefficiency. Digital lending had a low positive relationship with the clerk’s job performance, which implies that there was some improvement, but not significantly so. The study show that mobile banking has a positive effect on the firm performance and it highlights the major issues faced in the process of adopting digital payments and digital lending. Issues for firms and policymakers’ recommendations include opportunity to improve mobile banking, to tackle the Digital payment and to effectively improve the digital Lending. Thus, these results present a solid basis for decision making for the promotion of financial inclusion and the enhancement of firm performance by applying sophisticated fintech solutions in Sultanate of Oman.

Index Terms- Fin-tech, Firm Performance, Digital Payments, Digital Lending, Mobile Banking

I. INTRODUCTION

The financial sector in SULTANATE OF OMAN has started to significantly transform within a short time due to the increased uptake of fintech. Fintech, which refer to various digitally provided and facilitated services related to financial services, is among the key sectors enabling the Sultanate’s economic diversification as well as the Vision 2040 goals. There is this vision that needs to be achieved here in Sultanate of Oman which hold the foci of decreasing the country’s reliance on oil, diversifying the economy by creating a focus for the private sector, and transforming the Sultanate into a knowledge-based economy. As one of the major channels of creating such opportunities, the focus should be placed on improving the access to funds and performance of firms by means of introducing various financial services (Soriano, 2017).

Financial inclusion can therefore be described as the ability of people to access basic financial services, especially by the economically sidelined from formal banking networks. Through the use of Fintech, people who have limited to no access to financial facilities around them can be linked to the financial market hence enhancing on the rates of inclusive economic growth (Ediagbonya & Tioluwani, 2023). Sultanate of Oman has also experienced the fintech disruptive technologies like digital payments, digital lending, and mobile banking as having a positive impact in increasing the firm’s financial access and performance. This paper explores the impact of fintech adoption on firm performance in Sultanate of Oman by focusing on three specific dimensions: they comprise digital payments, digital lending, and other forms of digital and mobile banking. The research adopts a quantitative research methodology to examine the effects that these services have on other measures like revenues, profits, and satisfaction among firms. The study seeks to offer practical information concerning the impact of fintech in enhancing business performance and supporting general economic goals.

Problem Statement

Although there has been growth in the development of financial technology (fintech), several firms in Sultanate of Oman have not benefited fully from these technologies to improve their operations. So although tools like digital payments, digital lending, as well as mobile banking indicated a large capacity for changing the business processes and financial administration, there is a little quantitative information on precisely how these technological improvements in the field of Sultanate of Oman affect the firm outcomes (Thomas & Hedrick-Wong, 2019). Analyzing the differential consequences of these fintech solutions is essential for companies that plan to adapt the fin-tech solutions to their firms’ strategic monetary plans or for authorities that are eager to promote fin-tech solutions’ implementation (Venet, 2019). This paper aims at filling this gap by providing a quantitative examination of the effects of digital payments, digital lending and mobile banking on Sultanate of Oman firms’ performance with the view of availing relevant solutions to practitioners and policy makers.

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Research Objectives
1. To assess the impact of digital payments on firm performance in Sultanate of Oman
2. To examine the influence of digital lending on firm performance in Sultanate of Oman
3. To determine the effect of mobile banking on firm performance in Sultanate of Oman

Research Hypothesis:
The research is guided by the following hypotheses:
1. H1: Digital payments have a positive impact on firm performance.
2. H2: Digital lending has a positive impact on firm performance.
3. H3: Mobile banking has a positive impact on firm performance.

II. LITERATURE REVIEW

Financial Inclusion and Fintech
Access to affordable and useful formal financial services or products also remains an important cornerstone in goals for economic development and poverty alleviation. These include transactions, payments, savings, credit, and insurance and are offered efficiently while being sustainable (Ali & Abdullah, 2020). Financial technology (Fintech) has been revealed as a patents ruler in increasing the access to financial services globally.

Global Perspective on Fintech and Financial Inclusion
Fintech entails the utilization of digital tools in providing unique solutions to existing and emerging financial service needs that are convenient, cheap, and faster than banks. The global financial technology, or fintech as it is commonly referred to, has arguably been the unsung hero in the increase of financial inclusion in emerging markets through digital payments, mobile money, and even online lending according to the World Bank (2019). Exemplary, these services have been even more efficient in remote areas, mainly the poor and the low-income earners or the small businesses that are hardly served by conventional financial institutions (Gabor & Brooks, 2020).

Other areas of growth include; Digital payments which has changed the way transactions are made through the reduction of the use of cash and making secure and instant payments possible. Online lending operates based on big data and complicated analyses of risks; therefore, it enables the extension of credit to those who cannot receive credit from traditional credit systems. Mobile banking increases the accessibility of banking services that can be provided through a mobile phone minimizing on the need for physical sub-stations (Sha’ban, Girardone, & Sarkisyan, 2021).

Fintech in the Middle East and North Africa (MENA) Region
The MENA region including Sultanate of Oman has seen increased uptake of Fintech following high mobile subscription levels and favorable political factors (Khalaf, Awad, Ahmed, & Gharios, 2023). There is a rapid expansion in the number of fintech startups in the MENA region where the financial services that it extends encompasses services for the unbanked and underbanked as reported by MENA Fintech Association 2020. In Sultanate of Oman, factors such as the Sultanate of Oman Fintech Initiative, under the Vision 2040 plan have fostered growth of the fintech industry (Lukonga & blockchain, 2021).

Impact of Digital Payments on Firm Performance
One of the most popular examples of innovations of Fintech is the digital payments that have been developed and expanded for secured facilitation of monetary transactions through digital media. Such Payment facilitation involves mobile money, e-wallet, online banking, and credit/debit card payments. Another advantage of utilising digital payment is that agencies are able to manage a large number of transactions, hence increasing their efficiency (Abbasi & Weigand, 2017). Companies, suppliers, and customers can get rid of many inefficient forms and optimize their payment systems to avoid significant risks involved in the handling of money.

One of the ways through which firms can increase their customer base is through offering payment options that the customers would find more convenient to use in making their purchases with no cash involved. It can achieve higher sales and thus high revenues (Al Kurdi, Antouz, Alshurideh, Hamadneh, & Alquqa, 2023). The chances are that the digitalization of payments allow firms to monitor their cash flow and analyses financial awards and prospects in real time (Kwabena et al., 2019).

In Sultanate of Oman, some of the digital payment solutions that have been adopted include STC Pay, Apple Pay among others given that customers have urged for better means of making their payments. Promoting the availability and convenience of digital payments is forecast with bolstering the performance of companies to conduct the number and quality of transactions and satisfaction of customers (AlMulhim, 2021).

Impact of Digital Lending on Firm Performance
Digital lending platforms are methods of extending credit to borrowers through the use of technology in financing options than a traditional banking system. Such platforms make use of non-traditional means including analytics and algorithms, as well as big data and machine learning as well as new credit scoring frameworks in order to determine borrowers’ credit worthiness and ensure they get credit at the right time (Cuadros-Solas, Cubillas, & Salvador, 2023).

Online credit facilities increase the population’s borrowing ability for the SMEs and individuals who normally cannot access financial services within the banking institutions because they cannot provide credit scores or security (Ochieng, Wamwayi, & Administration, 2023). It can make it possible for businesses to fund their growth strategies and therefore boost their profitability. This is because through the adoption of technology in the lending process, digital lenders are able to cut on the number of expenses in processing loans and hence extending the ability of offering cheap credit to the borrowers (NYABUTI, ANDREW, & ONWONGA, 2023). Technology helps in timely accreditation and disbursal of loans hence providing businesses with quick funds they need to run and expand their operations (Muthomi, 2021). In the case of SULTANATE OF OMAN, applications like Maroof and Entkhb have played a significant role of offering credit to SMEs and other unbanked populations in boosting growth of businesses and in turn the economy.
Impact of Mobile Banking on Firm Performance

Mobile banking consequently defines the utilization of mobile devices to carry out activities of banking like account balance check, transfer of funds, payment of bills, and other services including planning and investment. It is a subsector of financial technology that acts as a tool that boosts the delivery of financial services and the performance of firms (Mabwai, 2016). The paper demonstrated that mobile banking enables the customers to access banking services at their convenient time and thus enhance customer satisfaction as suggested by (Cleveland, 2016). To the businesses, this will give them an easier way of managing money by transacting through mobile devices. Mobile banking eliminates the geographic branches, and thus, related operating expenses. thus allowing banks and financial institutions to deal with a large number of customers more effectively, whereby the customers on their part will benefit from reduced fees (Tam & Oliveira, 2016).

Mobile banking apps contain special services like financial recommendation, application for budgeting, and messaging for important transactions that will improve the use and devotion of the clients (Bagudu, Mohd Khan, Roslan, & Sciences, 2017). Banking countries especially in the Middle East, like Sultanate of Oman has registered tremendous advantages since the continuing emergence of mobile banking services by various banks such as Bank Muscat and Sultanate of Oman Arab Bank provide way of enhancing the overall financial inclusion along with the enhanced performance of organizations.

III. METHODOLOGY

This research uses a quantitative research methodology to examine the effects of fintech on firm performance in Sultanate of Oman with special reference to three subsectors: payment systems, lending services, and mobile banking. Information gathering entails the use of primary research methods (Petrov & Valov, 2019). The main data collection technique will include self-administered questionnaires and surveys to be conducted on SMEs and financial institutions in SULTANATE OF OMAN. These surveys will provide findings on the level of penetration of fintech, frequency of using digital payment, credit, and mobile banking, and various performance indexes, such as growth rate of revenue, profitability, and customers’ satisfaction, among others. More so, multiple regression analysis will be used to analyze the data to test the relationship between the variables of which digital payments, digital lending, and mobile banking will be the independent variables while firm performance will be the dependent variable. The regression model will measure the extent of the relationship between the independent and dependent variables thus enable the researcher to determine the contribution of each fintech dimension toward firm performance. The model specification is as follows:

$$ FP=\beta_0+\beta_1DP+\beta_2DL+\beta_3MB+\epsilon $$

where FP represents firm performance, DP denotes digital payments, DL stands for digital lending, and MB refers to mobile banking. The coefficients ($\beta_1$, $\beta_2$, $\beta_3$) will indicate the magnitude and direction of the relationships. To determine the general features of the data collection, descriptive analyses will be carried out and regression diagnostics will be performed in order to confirm the adequacy of the model. This methodology enables us to carefully analyze the relationship between the adoption of fintech services and firms’ performance, and hence provide nominal evidence about the position of digital financial services in the economy of Sultanate of Oman.

Population and Sample Size

The target population for this study is the Sultanate of Oman domestic companies. What is needed for external validity is a random sample to justify the reliability and validity of the results obtained. The sample size is inflated to mitigate non-response, although the increasing number of companies that can be reached electronically will allow for a minimum of 180 companies to be surveyed. This will build a strong empirical groundwork on how the adoption of fintech influences the performance of the firm and financial accessibility within the Sultanate of Sultanate of Oman.

IV. FINDINGS AND RESULTS

Descriptive Statistics

The descriptive statistics provide an overview of the data collected for the independent variables (Digital Payments, Digital Lending, Mobile Banking) and the dependent variable (Firm Performance).

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Payments</td>
<td>18</td>
<td>3.00</td>
<td>11.00</td>
<td>7.0944</td>
<td>2.00474</td>
</tr>
<tr>
<td>Digital Lending</td>
<td>18</td>
<td>3.00</td>
<td>13.00</td>
<td>6.9667</td>
<td>2.10320</td>
</tr>
<tr>
<td>Mobile Banking</td>
<td>18</td>
<td>3.00</td>
<td>14.00</td>
<td>6.0889</td>
<td>2.22803</td>
</tr>
<tr>
<td>Firm Performance</td>
<td>18</td>
<td>5.00</td>
<td>25.00</td>
<td>11.0222</td>
<td>3.69653</td>
</tr>
</tbody>
</table>

The means of the independent variables indicate moderate usage of digital payments (7.0944), digital lending (6.9667), and mobile banking (6.0889) among the surveyed firms. The standard deviations suggest a reasonable spread in the responses, indicating variability in the adoption levels of these fintech solutions. Firm performance has a mean score of 11.0222, with a standard deviation of 3.69653, suggesting variation in performance outcomes among the firms.

Reliability Statistics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
<td>.767</td>
</tr>
<tr>
<td>Number of Items</td>
<td>14</td>
</tr>
</tbody>
</table>

The Cronbach's Alpha value of 0.767 indicates acceptable internal consistency for the questionnaire items, suggesting that the scale is reliable.

Correlation Analysis

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The correlation matrix reveals the relationships between the variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Digital Payments</th>
<th>Digital Lending</th>
<th>Mobile Banking</th>
<th>Firm Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Payments</td>
<td>1</td>
<td>.132</td>
<td>-.218**</td>
<td>-.205**</td>
</tr>
<tr>
<td>Digital Lending</td>
<td>.132</td>
<td>1</td>
<td>.371**</td>
<td>.191*</td>
</tr>
<tr>
<td>Mobile Banking</td>
<td>-.218**</td>
<td>.371**</td>
<td>1</td>
<td>.739**</td>
</tr>
<tr>
<td>Firm Performance</td>
<td>-.205**</td>
<td>.191*</td>
<td>.739**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Significance Levels:** **.** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

- **Digital Payments** shows a significant negative correlation with Firm Performance ($r = -0.205$, $p < 0.01$).
- **Digital Lending** shows a significant positive correlation with Firm Performance ($r = 0.191$, $p < 0.05$).
- **Mobile Banking** shows a strong significant positive correlation with Firm Performance ($r = 0.739$, $p < 0.01$).

**Regression Analysis**

The regression analysis examines the impact of the independent variables on Firm Performance.

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.745</td>
<td>.555</td>
<td>.547</td>
<td>2.48668</td>
</tr>
</tbody>
</table>

The model explains 55.5% of the variance in Firm Performance, indicating a substantial impact of the independent variables on the dependent variable.

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1357.603</td>
<td>3</td>
<td>452.534</td>
<td>73.183</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1088.308</td>
<td>176</td>
<td>6.184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2445.911</td>
<td>179</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ANOVA table indicates that the regression model is statistically significant ($F(3, 176) = 73.183, p < 0.001$), suggesting that the independent variables collectively predict Firm Performance.

**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>4.713</td>
<td>Std. Error</td>
<td>.996</td>
<td>4.730</td>
</tr>
</tbody>
</table>

- **Digital Payments**: The coefficient is not statistically significant ($B = -0.046$, $p = .638$).
- **Digital Lending**: The coefficient is not statistically significant ($B = -0.160$, $p = .103$).
- **Mobile Banking**: The coefficient is highly significant ($B = 1.273$, $p < 0.001$) and positively related to Firm Performance.

**Hypothesis Testing**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Digital payments positively impact firm performance.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H2: Digital lending positively impacts firm performance.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H3: Mobile banking positively impacts firm performance.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

**Summary of Findings**

- The descriptive statistics suggest moderate adoption of fintech solutions among firms in Sultanate of Oman.
- The reliability analysis confirms the internal consistency of the questionnaire.
- The correlation analysis indicates that digital payments are negatively correlated with firm performance, while digital lending and mobile banking are positively correlated.
- The regression analysis reveals that only mobile banking has a significant positive impact on firm performance.
- Hypothesis testing results show that H1 and H2 are not supported, while H3 is supported.

V. CONCLUSIONS

This paper examined the role of the selected fintech solutions; digital payments, digital lending, and mobile banking on the performance of firms in Sultanate of Oman. Thus, the paper gives important findings in terms of the role of these technological innovations in the improvement of firm performance and demonstrates the differences in the impact of each identified fintech solution on the business performance.

The descriptive statistics demonstrated that the Sultanate of Oman firms are at a moderate level of implementing digital payments and digital lending, mobile banking. The mean scores show that despite these options being used, there is relatively large variation in utilization of these fintech solutions by firms. The reliability in terms of internal consistency of the instrument used in this study, the questionnaire was considered adequate with a Cronbach’s Alpha co-efficient of 0.767. The correlation analysis indicated that, in fact, there was a negative and statistically significant link between the level of implementation of digital payments and the firm’s performance, which might indicate...
certain issues or difficulties related to the application of these solutions. Digital lending can be seen to have a least moderated positive correlation with the measure of the firm performance, thus implying that there are benefits of this option but not highly influential. Mobile banking had a positive and significant relationship with the increase in firm performance, which underlined the significance and efficiency of this method in the context of improving the company’s work and its financial results. This analysis gives a regression value of 55%. The results give credit to the fintech solutions since these variables predetermine 5% of the variances in the firm performance, which is a relatively higher value, meaning they make up a big percentage of the causes of the performance. Out of the independent variables the most important determinant that positively affected the level of firm performance was mobile banking at a significant level of (0.768). The findings also emphasize that mobility is an essential factor for firm performance in Sultanate of Oman concerning mobile banking. The positive findings of mobile banking indicate that since firms in developing countries, who utilise these services can effectively control for their financial transactions, then there should be gains in the operational performance and financial returns. This shows that firms need to improve their focus on mobile banking adoption and better engage in the use of mobile money tools. On the contrary, the negative relation between performance and digital payments implies some existing problem or ineffectiveness in the current forms of digital payments that firms employ. It can mean a great many things, including high transaction costs, security problems, or integration into business processes. Likewise, the weak positive for the digital lending possibility suggests that while it may possess a certain level of utility, it might not significantly affect the firm performance likely due to factors such as access, usability or competitors’ loan rates.

VI. RECOMMENDATIONS

In the case of firms, it is suggested that they should improve the integration of processes with mobile banking by investing more in mobile banking technologies and making organizational efforts to ensure their employees use these tools and frameworks to better manage the financial aspect of their businesses. Companies should also recognize digital payment disadvantages by evaluating them for the related problems that result from digital payment to maximize on the advantages of digital payment and minimize on the effects of the disadvantages on the performance levels. Moreover, firms should also look at the different types of digital lending by researching on the best digital lending platforms with the best and more favorable terms to be incorporated in the firms’ financial plans.

For policymakers, it is recommended that they promote mobile banking by providing a conducive environment in terms of laws and policies, incentives, and promotion of technological advancement of mobile banking solutions. Authorities must also focus on developing the digital payment infrastructure by updating security, optimum performance as well as compatibility of the digital payment systems to make the use of those convenient and efficient tools to the businesses. Also, supporting digital lending through making policies that help in enhancing its popularity among businesses such as supporting the proper legislation regarding fintech and improving the condition in the legislations that impact the digital lending industry.

FUTURE RESEARCH

Further research ought to focus on explaining the extent of the negative influence of digital payments and the lackluster influence of digital lending. Furthermore, research can look at ways on how fintech affects firm performance since technology and financial systems are always in a constant state of evolution. Extending the study to different sectors and comparing the result could also be useful to get broader understanding of the issue.

Therefore, though mobile banking appears to have the strongest influence on firm performance in Sultanate of Oman there is room to improve on the opportunities brought about by the fintech movement by tackling the issues surrounding digital payments and by aligning the process of digital lending. This research work will facilitate a benchmark for both the practitioners and policymakers to take right actions towards enhancing the targeted firms’ performance through value addition derived from an appropriate use of Fintech platforms.

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