

The Role of Fintech on the Performance of Manufacturing SMEs in Dar es Salaam City, Tanzania

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Abstract – The purpose of the study was to investigate the impacts of Fintech on the financial performance of manufacturing Small and Medium Enterprises (SMEs) in Dar es Salaam City, Tanzania. A cross-sectional survey research design was conducted to randomly sample 284 manufacturing SMEs from the population of 2867 SMEs located in Ilala District, which is situated in the Dar es Salaam City. In this quantitative study a questionnaire was used to gather data from SMEs owners/managers. The collected data were analysed using descriptive statistics such as mean, standard deviation and range to map the extent Fintech is adopted and used in SMEs; and the multiple regression model was performed to estimate the impact of Fintech on financial performance of manufacturing SMEs. The descriptive findings show that the adoption and use of digital banking, mobile money services and peer-to-peer lending is higher among manufacturing SMEs. The estimation of regression model revealed that, predictors; digital banking, mobile money services and peer-to-peer lending have positive and statistically significant impact on SMEs financial performance. Accordingly, this study concludes that Fintech are valuable to financial performance of manufacturing SMEs. Thus, it is recommended to SMEs to increase the application and utilization of digital banking, mobile money services and peer-to-peer lending platforms for the efficient business operations.

Keywords – Fintech, Digital Banking, Mobile Money, Peer-to-Peer Lending, Crowd Funding

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1 Introduction

The growth of new financial technology (Fintech) has brought far reaching impacts to the economies in a worldwide scale. The new financial technologies have simplified the way human conduct their financial activities and their way of life. In financial sector, the anticipation was that these new financial technologies will bring about novel financial innovations in conjunction with the conventional financial processes (Adimabua, 2015; Kadam & Memon, 2023). In the current digital economies, Fintech are highly utilised to serve the global population (Khiewngwamdee & Yan, 2019). According to a report that was published by PriceWaterhouseCoopers (PWC) in 2019, it anticipated that there will be a 52% increase in the global adoption of Fintech by 2021/2022. This has led to an increase in the number of transactions from 3.8 trillion USD in 2018 to 15.12 trillion USD in 2024 (Statista, 2024). Thus, with Fintech financial services in many economies become more diverse, competitive, affordable, efficient and all inclusive.

Internationally, vast adoption use of Fintech started in early 1990s due to the advancement in internet technology (Macha & Massawe, 2023). At the dawn of the 21st century, the adoption and utilisation of digital loans, mobile wallets, payment applications, and online banking made it possible for financial institutions to provide broad line of financial services (Silver, Smith, Johnson et al., 2019; Macha & Massawe, 2023). The current Fintech 4th industrial revolution has influenced tremendously changes that affect the way and means in which financial products and services are provided and the way in which customers are served (Brixiová, Kangoye & Yogo, 2020). At present, Fintech has become a crucial tool in business payment and loan acquisition, which offers users a reliable electronic financial platform that influences online transactions (John, 2018). The most outstanding Fintech includes mobile money services, credit and debit cards, internet banking, online lending platforms such as peer-to-peer and crowd funding and crowd investment (Mushtaq, Gull, & Usman, 2021; Mrindoko, 2022).

Prior to the emergence of Fintech people and businesses including Small and Medium Enterprises (SMEs), relied on tradition bank loans to get funding through borrowing. Most of SMEs have difficulties getting access to bank loans due to lack of adequate collateral, lack of access to information and higher loan cost (Quartey, Turkson, Abor & Iddrisu, 2017; Brixiová et al., 2020). Currently, Fintech are re-making deposits, withdrawals, payments, insurance, borrowing and financial management (Khiewngwamdee & Yan, 2019) for SMEs. Fintech have reduced the transaction costs of loan processing on both lender and borrower sides making digital lending to a great extent extra cheap (Kukk, 2022). Similarly, Fintech has brought convenience, security and fast accessibility to financial services (Macha & Massawe, 2023).

Globally, SMEs play an vital role in supporting economic growth by means of increasing production efficiency, creating employment, generating income, motivating innovation, learning and creativity (Lontchi, Yang & Shuaib,

2023). Worldwide, over 90 per cent of businesses are SMEs, and they employ approximately 70% of labour force as they are responsible for 7 of every 10 new jobs created (World Bank, 2019). Despite their importance, SMEs have a restricted access to financial resources, which is widely regarded as a primary barrier to their capacity for growth, profit, debt repayment, and expanding the scope of their activities, particularly in developing countries (Eça, Ferreira, Prado & Rizzo, 2022; Li, Ye, Liu, Tao & Jiang, 2024).

In Sub-Saharan Africa (SSA) about 60% of SMEs are acutely under-financed (Brixiová et al., 2020). In East Africa Fintech (mobile money) has dominated with 380 million registered accounts in 2022 with 115 active users, which is also the highest volume of transactions among African regions (GSMA, 2023; Taylor 2023). Despite that, the overall financial depth remains low in East Africa (Banna, Mia, Nourani & Yarovaya, 2022). Despite the significant role that Fintech plays in improving SMEs' access to finance, the vast majority still struggle with dwindling performance, and many start-up SME does not graduate to the next level. Disse & Sommer (2020) posit that SMEs in the region struggle to obtain funds, which is thought-out to be the most grave hindrance to SMEs' capability to carry out their business effectively.

Tanzania like other East African countries has made considerable expansion in Fintech since its onset early 2000s. Also, the country has conducted some outstanding financial system reforms and policy amendments to permit for adoption, application and development of Fintech in the economy (Disse & Sommer, 2020; Macha & Massawe, 2023). A notable turn was the enactment of Information and Communication Technology (ICT) policy of 2003 that fast tracked the adoption and use of mobile phone technology, which is the foundation of Fintech, and the most utilised device for Fintech applications (Mrindoko, 2022). As a result more than 35 million people or more than 40% of the country's population owns an active mobile money account (Osakwe, Humeau, Bavo et al., 2023; Roessler & Walsh, 2023), and fast increasing Fintech transactions. For instance transactions increased from 3.02 billion USD in 2019 to 3.75 billion USD in 2021 (Osakwe et al., 2023). This is an indication that Fintech has been an alternative funding for businesses.

However, Nkwabi and Fallon (2020) and Mrindoko (2022) have reported that performance of SMEs in Tanzania is not impressive, and they are still confronted with financing challenges. According to World Bank (2015), only three out of every five start-up SMEs are able to survive the first five months to one year after their establishment, and of those that are able to survive that long, 80% fail by the fifth year. Since financing is considered as the main blockade for SMEs' performance in developing countries including Tanzania, thus the widespread adoption of Fintech would be expected to enhance the general performance SMEs. Therefore, the purpose of this study is to investigate the extent that SMEs have adopted Fintech in terms of digital banking, peer-to-peer lending and mobile money services, and analyse the impact of Fintech on the overall performance of SMEs in Dar es Salaam City, Tanzania.

The Role of Fintech on the Performance of Manufacturing SMEs in Dar es Salaam City,
Tanzania

2 Literature Review Based on Empirical Studies

2.1 Digital banking and performance of SMEs

Fintech innovation generates lasting opportunities for the SMEs (Lu, 2018), and enhances their performance and sustainability (John, 2018; Kadam et al., 2023). Because of the rapid changes in the digital world, SMEs must enhance and strengthen dynamic capability activities to gain a competitive advantage in innovation performance among companies through Fintech (Nurdana & Suryawati, 2021). Empirical study conducted by Meher et al. (2021) found that digital banking had positive and significant relationship with the growth of MSMEs in India. Moreover, Ajayi (2023) analysed impact of Fintech on the growth of small and medium-scale enterprises in Nigeria. The results show that Fintech has a positive impact on the growth of SMEs and most SMEs in Nigeria increases their sales and revenue by using Fintech solution.

Okello, Munene and Koech (2023) examined the relationship between mobile banking adoption and the financial performance and the moderation effect of Technological efficiency of SMEs in Kajiado County, Kenya. The results showed that mobile banking adoption significantly predicts SME's financial performance and this relationship is partially mediated by technological efficiency. Moreover, Mue (2021) determined the impact of mobile banking on the performance of SMEs in Nairobi County. The results revealed that positive, significant and strong correlation between use of mobile banking services and performance of SMEs. Wanjiru, Kirui and Kiano (2024) examined the effect of digital banking on the financial performance of micro and small enterprises in Nairobi County, Kenya. The authors found positive and significant effect of digital payments, digital saving and digital credits on financial performance of SMEs. Also Iravonga and Iravo (2018) revealed that Fintech increases accessibility, efficiency and convenience of transaction, which were found to have positive and significant relationship with financial performance of SMEs. Other studies with similar results includes Obunga, Ombaba and Mwanza (2021)

In Tanzania, Kingu and Gomera (2022) assessed the impact of digitalization of microcredit services among micro and small enterprises. The findings indicate that the digitalization of microcredit services is beneficial to micro and small enterprises, and thus, SMEs satisfaction and attitude toward digital finance have a direct influence on continuance usage of mobile banking among SMEs in Tanzania. a study by Mbowe, Shirima and Kimolo (2019) assesses the extent to which financial innovations contribute to improving micro small and medium enterprises (MSMEs) access to credit in Tanzania. The authors found that factors which influence MSMEs to borrow money through innovative channels comprise the need for meeting business start-up, operational, and expansion costs. Other factors are in respect of ease of access; convenience; short loan process; and a relatively high degree of control of the loan process by the borrower. Based on the reviewed empirical

literature of prior studies, it is hypothesized that; *H₁: There is positive and significant association between digital banking and financial performance of SMEs*

2.2 Peer-to-peer lending and performance of SMEs

Peer-to-peer as an online lending services has been reported to benefits SMEs. This study has acknowledged that P2P lending is beneficial to SMEs. Cumming, Farag, Johan and McGowan (2022) found that P2P had positive and significant effects on SMEs' performance. Moreover, Kukk (2022) posit that P2P lending increases access to finance for SMEs and entrepreneurship, and thus enhances their productivity and growth. Aney (2021) investigated how peer-to-peer lending to SMEs can increase access to capital. The author found that peer-to-peer influences healthy growth and development of SMEs. Edward, Fuad, Ismanto, Atahau and Robiyanto (2023) examined the impact of loan information (ranking, estimated profit shares, and financing duration) on the amount of crowded funding. This study revealed that ranking and duration of financing significantly affect the success of the P2P sharia lending platform, nevertheless profit share estimation is not significant. Loans that operated in short, tend to raise more funding, and vice versa. Loan ranking can provide the lender with instant information about the borrowers' condition. Lenders tend to avoid low rankings loans due to the potential failure of loan payments.

Purwanto, Isnanto and Widodo (2023) identified the benefits of P2P lending on micro, small and medium enterprises. The results indicate that P2P lending benefits MSME by offering easier and faster access to financing, which helps MSME get loans from traditional banks. Moreover, P2P lending platform offers flexibility in loan terms that can be tailored to the unique needs of each MSME, increasing their chances of obtaining financing. Also, Wahyuningrum and Yuhertiana (2023) examined the influence of Digital Payments, Peer To Peer (P2P) Lending, and Marketplace on the development of micro, small, and medium enterprises (MSMEs) during the Surabaya City pandemic. The results of this study indicate that digital payments have no effect on the development of MSMEs during the pandemic but Peer-to-Peer Lending has an effect on the development of MSMEs during the pandemic. Furthermore, Nurdana and Suryawati (2021) analysed the impact of peer-to-peer lending on business expenses, business turnover, total employment, total sales of products, and profits. The study revealed a significant difference between business expenses, business turnover, the amount of labour, the number of product sales, and profit before and after obtaining a peer-to-peer lending loan.

Moreover, the study by Eca et al.(2021) estimated how P2P has become alternative sources of financing in SMEs. The results show that SMEs obtaining P2B loans are higher quality firms as they are grow fast, more profitable, with higher sales growth, higher bank debt, and lower default rates. The results imply that SMEs use the availability of P2B to reduce long-term

bank debt, while they increase short-term bank debt following P2B lending. In addition, SMEs increase the number of lending relationships and reduce their dependence on a single bank, in particular those with less stable funding and lower liquidity. The findings suggest that FinTech lending complements the debt financing choices of SMEs and allows them to diversify away from traditional banks. However, Kim and Stähler (2020) investigated the impact of peer-to-peer lending on the small business loans. The results show that the entry of crowd lending can induce a switching effect as well as a credit expansion effect. Moreover, the study revealed that the platform entry reduced the small business loans originated by banks, in particular, in the low- or moderate-income tracts as well as in the distressed middle-income tracts with a high poverty rate. Thus, this study suggests that the crowd lending entry may have reduced the aggregate lending volume to small businesses. Thus, based on the empirical findings of previous studies we hypothesize that: H_2 : *There is positive and significant correlation between peer-to-peer lending and financial performance of SMEs*

2.3 Mobile money services and performance of SMEs

Mobile money is an industry that continues to be at the front of modernization and innovation in financial system (Mrindoko, 2022). World Bank (2020) acknowledges that mobile money contributes to the development and performance of SMEs by increasing their participation to capital market (by narrowing financing gap). Empirical researches show that mobile money has positive influence on SMEs' performance. For instance, Ngaruiya, Bosire and Kamau (2017) examined how mobile money transactions affected SMEs in Nakuru Town's bustling commercial core. They investigated whether mobile money use affects profits of small businesses, and found that mobile money transfers significantly impacted revenue of small businesses. Besides, Kamau (2018) found that perceived cost savings, security, simplicity, and dependability of mobile money services had a significant impact on SMEs' entry to international trade. Masocha and Dzomonda (2018) investigated the drivers of the adoption of mobile money services and the subsequent performance of Small and Medium Enterprises (SMEs) in Zimbabwe. The study established that subsequent adoption of mobile money services has an influence on the performance of SMEs

In Cameroon, Talom and Tengeh (2019), investigated the effects of mobile money payment and receipt services on the financial performance of SMEs. A mixed method study collected data using a questionnaire and in-depth interview. The findings show that mobile money payment and receipt services positively and significantly influenced turnover of SMEs. This study confirms the positive relationship between mobile money services and SME's growth. Chale (2015) examined the role of mobile money services on growth of small and medium enterprises in Kinondoni, Tanzania. The study findings revealed that small and medium enterprises use mobile money services in various ways for business purposes, which include sales transac-

tions, efficiency in purchase of stock, receiving payment, payment of goods and services, savings as well as money transfer that influenced their business growth. Also, John (2018) analysed the impact of mobile money services usage on small and medium enterprises (SMEs) operations in Tanzania. The author found that perceived usefulness and perceived risk on MMS usage are significantly influencing SMEs Operations. However, perceived trust on MMS was found to be insignificant.

Moreover, Conwell and Stanslaus (2020), investigated the contribution of mobile money services on internationalisation of SMEs. The study indicated that perceived cost saving, perceived security and perceived convenience and reliability had positive and significant influence on SMEs internationalisation. Mrindoko (2022) examined impact of use of mobile money microcredit on profitability of SMEs in Tanzania. A cross-sectional design study collected quantitative data from 240 small business owners/managers through a structured questionnaire and qualitative data from mobile money services providers using an interview guide. The collected data were analysed using descriptive statistics and a multiple linear regression model. The results of this study indicate that mobile money microcredit accessibility, affordability, convenience and flexibility were found to have a positive and significant impact on small businesses' financial performance. This means accessibility, affordability, convenience and flexibility of mobile money microcredit are important predictors of small businesses' profitability. Thus, it is hypothesized that: *H₃: There is positive and significant relationship between mobile money services and financial performance of SMEs*

3 Methodology

3.1 Research Design and Approach

This research employed cross-sectional survey research design to conduct this pure quantitative study (Creswell, 2014). The choice of pure quantitative approach was informed by the need to analyse the impact of Fintech on SME's financial Performance. Thus, employing a quantitative technique resulted in the creation of a quantitative relationship between Fintech and SME's financial Performance. The survey design was selected because can accommodate quantitative research methods rather effectively as it engage the use of questionnaire as data collection tool (Kothari, 2019).

3.2 Study Area, Population and Sampling

This study was conducted in Dar es Salaam City in Tanzania. The Dar es Salaam City was selected because it is a commercial centre of the country and thus most SMEs are located (Nkwabi & Fallon, 2020; Lunogelo, Songora, Lasway & Kihenzile, 2021). It is estimated that there are 2867 SMEs in the City (Kenya Climate Innovation Centre, 2020). Specifically, the proposed

study is intended to take place in Ilala District. The district has been chosen purposively due to high presence of SMEs compared to other districts in the region (Sutton & Olomi, 2012). The respondents were selected using simple random sampling methods from a population of 2867 SMEs. The sample size was approximated using Yamane formula. A total of 284 SMEs were randomly selected from the list of registered SMEs using a random number generator. From every selected SME, manager/owner was the unit of enquiry. All, 284 questionnaires that were distributed were used in data analysis.

3.3 Data Collection

The data was collected using a structured questionnaire with closed-ended questions. The questions were in five point Likert scale in order to measure the extent SMEs have adopted Fintech, and gauge its impact on performance of SMEs. During data collection the researcher distributed the prepared self-administered questionnaire to the respondents and collected it in 15-30 minutes after being filled. The questionnaire was designed to be self explanatory. The aim of the study was explained to respondents and a request to participate in the study was forwarded by the researcher, and upon respondent's consent to participate, the questionnaire was given to respondents to be filled.

3.4 Data Analysis

The Statistical Package for the Social Sciences (SPSS), a statistical software application, was used to examine and analyse the data. This study adopted descriptive statistics and multiple linear regression model. Through descriptive statistics, this application was used to estimate measures of central tendency and dispersion. Descriptive statistics was used to map the extent of Fintech adoption and use by SMEs. The multiple linear regression model was used to estimate the impact of Fintech on performance of SMEs. According to Tranmer, Murphy, Elliot and Pampaka (2020), multiple linear regression model is best predicting the value of a dependent variable based on the values of two or more independent variables. In this study the dependent variable is financial performance of manufacturing SMEs in terms of return on asset (ROA), and the independent variables included digital banking, peer-to-peer lending and mobile money services.

3.5 Validity and Reliability

In one hand, to secure the validity of data collection instrument and the data, in this study pilot test was conducted to 10 SMEs located in neighbouring district Kinondoni, also located in Dar es Salaam City. Moreover, a pre-test was conducted by consulting statisticians to evaluate the questionnaire to determine if it can produce the expected results. Their comments were

applied in improving the data collection tool (questionnaire) prior to being administered to respondents. On the other hand, Cronbach's alpha coefficient was applied to determine internal reliability of the questionnaire. The results in section 4.1 show that the data collection instrument was reliable, hence the data.

4 Findings and Discussion

4.1 Cronbach's alpha coefficient

Table 1 shows Cronbach's alpha values for items digital banking, P2P lending and mobile money services were 0.812, 0.774 and 0.737 respectively. As a result, it is evident that all constructs had Cronbach's alpha values greater than the required minimum of 0.70. This implies that the study data collection instrument was reliable, and as a result, the data acquired were as well.

Table 1: Reliability based on Cronbach's Alpha Coefficient (N=284)

S/No.	Construct	No. Items	Cronbach's alpha coefficient
1	Digital banking	8	.812
2	Peer-to-peer (P2P) lending	9	.774
3	Mobile money services	11	.737

4.2 Demographic features

Table 2 show that 66.55% were male and 33.45% were female. The finding is similar to Mrindoko (2022). The author reported that, male entrepreneurs have higher propensity to adoption and use of new technology than women entrepreneurs. Meanwhile based on their age, majority of SMEs owners/managers were between 18-35 years of age, who comprised of 52.11% (n=148) followed by those with 36-50 years with 34.85% (n=99). Those with above 50 years were 13.08% (n=37). Besides, the findings show that the adoption rate of Fintech is higher in Dar es Salaam City since 96.83% of owners/managers of surveyed SMEs were happy to acknowledge that they apply Fintech in the management of their financial issues as well as in capital acquisition through micro-credits and loans.

Table 2: Distribution of Respondents Characteristics (N=284)

Variable/parameter	Measurement	Frequency	Percentage
Sex	Male	189	66.55
	Female	95	33.45
Age	18-35 Years	148	52.11
	36-50 Years	99	34.85
	50+ Years	37	13.08
Education level	Primary	45	15.84
	Secondary	128	45.07
	Cert/Diploma	32	11.27
	Graduate	61	21.47
	Post-Graduate	18	06.34
Experience	1-2 Years	79	27.82
	>2-5 Years	118	41.55
	>5-10 Years	57	20.07
	10+ Years	30	10.56
Do you use Fintech to access and manage fund?	Yes	275	96.83
	No	9	03.17

Furthermore, in Table 2 majority 45.07% (n=128) of SMEs owner/managers had secondary education followed by graduates (bachelor degree) who comprise of 21.47% (n=61), and the fewest possess master's and doctoral degrees (postgraduate) who amount to 6.34% (n=18). In case of owner/managers' business experience, majority 41.55% (n=118) of SMEs owners/managers have experience of greater than 2 years but not more than 5 years followed by those with 1-2 years experience who comprises 27.82% (n=79) of the surveyed owners/managers of SMEs. Few of them about 10.56% (n=30) have higher experience. As such majority of owners/managers have good experience to understand Fintech benefits and run businesses effectively. These findings corroborate with Otieno (2015) and Mrindoko (2022).

4.3 Extent of Fintech adoption and use in SMEs

The findings in Table 3 show that, mean scores of digital banking (M=4.05, SD=.9664; range 1-5), peer-to-peer lending (M=4.63, SD=.77138; range 2-5) and mobile money services (M=4.51, SD=.69970; range 2-5) indicate that SMEs owners/managers strongly agree that they use Fintech to access different financial services online, and for financial management of their firms. The lower deviation suggests that significant number of SMEs adopt and use Fintech for funding from many people via online platforms. These findings suggest that the adoption and use of Fintech among SMEs in Dar es Salaam City, Tanzania is higher.

The Role of Fintech on the Performance of Manufacturing SMEs in Dar es Salaam City, Tanzania

The findings corroborate with Bank of Tanzania (2019), Talom and Tengeh (2019), Disse & Sommer (2020), Mrindoko (2022) and Macha and Massawe (2023) who found that financial technologies are highly used by SMEs to access capital, conveniently make financial transactions and manage their financial matters, and has helpful outcome on the overall performance of SMEs. Given that larger number of surveyed SMEs had between 1-3 years since established, peer-to-peer lending as reported by Tanzanian Start-up Association [TSA] and Capital Markets and Securities Authority [CMSA] (2023) is most suitable funding option for start-up and young enterprises. Also, Kukkk (2022) found similar results.

Table 3: Mean, Range and Standard Deviation of Fintech Adoption and Use (N=284)

Item	Min	Max	Mean	Std. Dev.
Digital Banking	1	5	4.05	0.9664
Peer-to-Peer Lending	2	5	4.63	.77138
Mobile Money Services	2	5	4.51	.69970

4.4 Inferential results

Multiple Regression Model Summary

The outcome variable SME financial performance, and three predictors, namely digital banking, peer-to-peer lending and mobile money services were analysed in this study. According to the results of the multiple regressions in Table 4, the correlation ($R=0.941$) between the predictors and the outcome variable is a very high correlation (94.1%), and it means that Fintech reliably predicts financial performance of SMEs. The R-Square value of 0.882 indicate that 88.2% of variation in financial performance of SMEs is caused by the three predictors namely, digital banking, P2P lending and mobile money services. Thus, 11.8% of the variation of financial performance of SMEs is caused by factors other than the predictors included in this model. Since, Adjusted R Square 88% is greater than 33%, the effect of Fintech on financial performance of SMEs is strong in this regression model. Since, the difference between R-squared and Adjusted R Square is small ($=.002$) signify that the model fits well to the data.

Table 4: Multiple Regression Summary (N=284)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.941	0.882	0.880	0.27601

The results in Table 5 shows estimation of the impact of digital banking on financial performance of SMEs was ($\beta=0.451$, $t=10.969$, $p (.000) < 0.05$). Therefore, this study accepted the hypothesis ***H₁: There is positive and significant association between digital banking and financial perfor-***

mance of SMEs. These results conclude that the digital banking had a significant positive impact on financial performance of SMEs. Like the findings of this study Meher et al. (2021), Kingu and Gomera (2022) and Okello et al. (2023) found positive impacts of digital banking on SMEs' performance.

Table 5: Multiple Regression Coefficients (N=284)

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.005	0.102		0.052	0.960
Digital banking (DB)	0.451	0.042	0.410	10.969	0.000
Peer-to-Peer Lending (P2P)	0.345	0.042	0.363	8.713	0.000
Mobile money services (MMS)	0.230	0.034	0.236	6.673	0.000

Furthermore, the result of the impact of peer-to-peer lending on financial performance of SMEs in Dar es Salaam City was ($\beta=0.345$, $t=8.713$, $p (.000) < 0.05$). This finding signify that Peer-to-Peer lending had a statistically significant and positive impact on financial performance of SMEs. Thus, the hypothesis ***H₂: There is positive and significant correlation between peer-to-peer lending and financial performance of SMEs*** was accepted. Similarly, Mue (2021), Cumming and Hornuf (2022), Kukk (2022) and Purwanto et al. (2023) found positive impact of peer-to-peer lending and SMEs' performance.

Besides, there is a direct relationship between mobile money services and SMEs' performance in Dar es Salaam City ($\beta=0.230$, $t=6.673$, $p (.000) < 0.05$). This finding signify that mobile money services had a statistically significant and positive impact on financial performance of SMEs. Thus, the hypothesis ***H₃: There is positive and significant relationship between mobile money services and financial performance of SMEs*** was accepted. The finding corroborates with Talom and Tengeh (2019), Conwell and Stanslaus (2020) and Mrindoko (2022) that mobile money services influence SMEs' performance.

5 Discussion

The study investigated how digital banking services affect SMEs' performance. This study found that digital banking services positively and statistically significantly impact small and medium-sized enterprises. Empirical research on the impact of Fintech on performance of SMEs, have recorded that the most crucial support was in facilitating payment, providing convenience, reduce transaction cost and financing role (Obunga et al., 2020).

Fintech helps SMEs to automatically document sales transactions and generation of weekly or monthly sales reports, which enables them to improve their financial performance (Hau, Huang, Shan & Sheng, 2021). Likewise, Lontchi et al. (2023) assessed performance of SMEs in Cameroon and found that SMEs' performance was significantly impacted by application of Fintech. In addition, the results of Lontchi and others show that financial literacy positively and significantly mediates the relationship between Fintech services and the performance of SMEs. Similarly, Thanki, Govindan & Thakkar (2016) investigated how digital technology's use improves firm performance while mediated by digital transformation strategy and organizational innovation, and their results show that digital technology positively impacts digital transformation strategy and organizational innovation, influencing firm performance.

Digital banking services have made it easier for SMEs to carry out financial transactions and manage their finances on the go. Digital banking has removed the necessity for SMEs to physically visit banks to make financial transactions, reducing the time and costs associated with these activities (Ajayi, 2023). Digital banking activities boosts productivity for SMEs in a sense that reduces time lost at bank queues, reduces financial transaction cost and speeds up the transactions. According to Masocha and Dzomonda (2018), internet banking gives SMEs a competitive edge in domestic and international market. With digital banking payments, withdrawals, deposits and acquisition to loan has been made easier than before for SMEs (Chen, 2020). This study confirmed previous findings of Lyke-Ofoedu et al. (2022) who investigated how online banking affects SME productivity. The authors found that internet access significantly improved SMEs' operational efficiency. Moreover, Masocha and Dzomonda (2018) examined how online banking helps Zimbabwean SMEs and found that online banking strongly affects performance of SMEs.

Peer-to-peer as an online lending services has been reported to benefits SMEs, which more than not the owners are the sole decision makers. According to Purwanto et al., (2023), P2P lending is fast, cheap and best online lending platform for SMEs without collateral and that cannot meet the requirements of formal banking system. In developing countries as well as most of emerging economies SMEs have been not attractive borrowers in conventional lending system of commercial banks. This study has acknowledged that P2P lending is beneficial to SMEs. Cumming, Farag, Johan and McGowan (2022) found similar effects of P2P on SMEs' performance. Loan flexibility and processing, loan amounts and costs, and interest rates are critical compelling factors for SMEs' adoption of P2P lending. SMEs with low leverage ratio, low risk, low levels of prior capital expenditures and small assets are likely to seek financing from P2P platforms rather than banks (Purwanto et al., 2023). Thus, Kuk (2022) posit that P2P lending increases access to finance for SMEs and entrepreneurship.

The mobile money services use cellular phones to access digital banking services technology to make transactions such as withdrawals, deposits,

savings, payments, receive money and balance checking, cutting out the long-established intermediaries such as banks. This has made it easier for individuals and SMEs to access credit, mainly those who are underserved by conventional financial institutions (Talom and Tengeh, 2019; Ajayi, 2023). The findings of this study match those of other researchers studying mobile money's impact on SMEs' productivity. Ngaruiya, Bosire and Kamau (2017) examined how mobile money transactions affected SMEs in Nakuru Town's bustling commercial core. They investigated whether mobile money use affects profits of small businesses and found that mobile money transfers significantly impacted revenue of small businesses. Besides, Kamau (2018) found that perceived cost savings, security, simplicity, and dependability of mobile money services had a significant impact on SMEs' entry to international trade.

Financial technology is a conceptual shift within financial and business arena. Fintech is an industry that continues to be at the forefront of innovation (Mrindoko, 2022). The groundwork of this revolution is innovation in business models (Gomber, Kauffman, Parker, Weber, 2018). Fintech innovation generates lasting opportunities for the SMEs (Lu, 2018), and enhances their performance and sustainability (Gomber et al., 2018). Because of the rapid changes in the digital world, SMEs must enhance and strengthen dynamic capability activities to gain a competitive advantage in innovation performance among companies through Fintech (Lu, 2018).

Through their activities Fintech contributes to the development of non-banking financial institutional, which help in closing a gap in the capital market (financing gap) for disadvantaged such as SMEs (World Bank, 2020). The SMEs face obstacles in raising capital and accessing financial services due to information asymmetry, high transaction costs and lack of collateral (Macha & Massawe, 2023). Weak financial sectors and tight bank lending standards contribute to SME's financing constraints (World Bank, 2020). It is expected that Fintech lending platforms, along with its easy access to funding, can help increase SMEs' funding (Eça et al., 2022). Fintech developments have made gathering and sharing information easier, changed how funds are mobilized and allocated, and increased capital-raising activities (Disse & Sommer, 2020).

Through AI technology, cloud computing and big data technologies, Fintech solutions and digital decision tools analyse huge and complex data to assess creditworthiness of borrowers, therewith disrupting the entire conventional lending chain (Li et al., 2024). Thus, conventional requirements for obtaining a loan, such as solid financial accounts and strong collateral, are less applicable for Fintech providers, benefitting especially SMEs (Eça et al., 2022). Empirical studies have acknowledged that adoption and use of Fintech services by SMEs in making payments, deposits, withdrawals and borrowing have increased rapidly (Lontchi et al., 2023; Kadam and Memon, 2023; Okello et al., 2023; Edward et al., 2023; Purwanto et al., 2023)

According to Brixiova et al. (2020), the rise of Fintech in most developed countries was motivated by the regulatory and compliance requirements of the post-2008 worldwide financial crisis. Other factors that influence Fintech

acceptance across countries consist of unmet demands for capital, demographic transformation, competition in financial services, convenience of getting financial services, changes in cost of financing and other micro and macroeconomic factors (Mrindoko, 2022; Kingu & Gomera, 2022). In China, it has been ascertained that SMEs' access to financing and banks' operational efficiency has increased due to emerging Fintech (Chen, 2020). Even though penetration of Fintech continues to be low in SSA countries, previous studies (World Bank, 2020; Macha & Massawe, 2023) have established that Fintech contributes significantly to the SMEs' performance and financial inclusion of all, and the ownership of mobile phones facilitates the use of financial services through Fintech.

6 Conclusion and Recommendations

6.1 Conclusion

The use of Fintech by SMEs is of great importance to their performance. The use of digital banking is similarly important for the SMEs; the convenient and cost-effective means of facilitating transactions through mobile banking plays a great role in enhancing SMEs' operations and hence improve their performance. Peer-to-peer lending platforms enables SMEs to secure fund for investment and other business operations, thus increases the chance for SMEs to perform better. Empirically, this study has proved that peer-to-peer lending is an important determinant of SMEs' performance. It offers an improved level of access to finance to SMEs through micro-credits. A wide range of SMEs secure micro-credits from lending digital platforms. The credits are useful for boosting the business operations and hence improve the level of profitability. The use of mobile money for facilitating business transactions such as sales, purchases and money transfer smoothens the business operations for the SMEs. This in turn enhances the sales level and profitability of the businesses.

6.2 Theoretical Contribution

This study has contributed and substantiated the literature of Fintech research, in the context of influencing operations, productivity and performance of business firms. Based on the findings this study has confirmed that Fintech in fact have impact on firm performance through digital banking, lending and mobile financial services. Specifically, the study has substantiated the theoretical foundation of wallet theory that Fintech provides convenience and cost reduction in making transactions.

6.3 Recommendations

Based on the findings this study recommends to SMEs to enhance the use of mobile money services for their business. Since SMEs are striving to get better performance for their business operations, it is important that they make use of mobile money services for sales, purchases, bills payment and savings. This will make their business operations convenient and smooth. Moreover, SMEs are recommended to enhance the use of digital banking for their business operations. The platform is found to be cost efficient and convenient. Therefore, it will be possible for them to reduce the running expenses and improve their profitability. Furthermore, it is recommended that SMEs use the available digital lending opportunities such crowd funding and P2P lending platforms to access credits. Majority of the SMEs are struggling to access external financing to boost their operations. Therefore, the use of credit facilities from the digital platforms will be useful for them.

6.4 Suggestion for further study

There are many aspects that in the field of Fintech and SMEs' performance that need be investigated. This study has focused on peer-to-peer lending, which is mostly for individuals and thus SMEs can participate as owners or managers in most cases are sole decision makers unlike larger firms. Thus, there is a need to investigate business-to-business lending platforms and how they impact performance of firms. Also, this study applied only quantitative methods. Thus, to obtain robust results it is recommended for a further study to be conducted using both qualitative and quantitative approaches of research. It is expected that if the Fintech companies were included in the interviews it will help to have a better perception about financial technologies and how they affect SMEs performance. Besides, combination of qualitative and quantitative methods is also expected to increase the value in the empirical findings, and gain reliable and detailed explanations.

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