DIGITAL FINANCIAL SERVICES AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A DESCRIPTIVE & CORRELATIONAL APPROACH

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Abstract

Digital Financial Services (DFS) has been credited with having imperative role in contributing to banks' profitability and customer's satisfaction independent of banking hours and locations. However on the contrary, Kenya banking sector have been registering declined performance. Studies on digital financial services on bank performance across the globe have reported mixed results - explained by variability in specification of analysis constructs which are relative to regions and author's objectives. Therefore, this study explored the effect of digital financial services on financial performance of commercial banks in Kisumu County. A descriptive research design, target population of 172 managers at the 43 bank branches in Kisumu County and a census survey was adopted by the study. Primary data was collected using structured questionnaire and analysed using both descriptive and correlational statistics. Results showed that mobile financial services has a strong and significant positive correlation (r=0.633, p<0.05) with financial performance of commercial; online financial services recorded a moderate and significance positive correlation (r=0.372, p<0.05) with financial performance; card financial services registered strong and significant positive correlation (r=0.595, p<=0.05) with financial performance and digital financial information services recorded a very strong and positive significant correlation (r=0.748, p<0.05) with financial performance of commercial banks in Kisumu County.

Keywords: Digital financial services, Mobile financial services, Online financial services, Card financial services, Digital financial information services, Financial performance

INTRODUCTION

Digital Financial Services (DFS) has been credited with having imperative role in contributing to banks' profitability and customer's satisfaction (CBK, 2018). The assimilation of digital technology in finance services provision has today enabled consumers (business and individuals) to transact independent of banking hours and locations (account inquiries, payments settlement, account deposits and funds transfers) (Bayero, 2015) and enabled a cashless global market in which no-need-for-hard-cash to conduct business transactions (payments and receipts) has been created thus transforming banking operation globally, Kenya included.

The Kenya financial service sector has shown tremendous transformation towards digital revolution and financial inclusion in the last decade. Notable revolutionized digital service provision sector innovation, namely M-PESA, Agency Banking, Online Banking, ATM credit/debit cards, M-Shwari have been registered (Heyer & King, 2015), and accounts for more than 76% of banking transactions, and distinctively, commercial banks credit advanced through mobile platform stand high at 81% according to FinAccess Digital Credit Tracker (2017). This is a clear indication that DFS could be driving banks financial performance. However on the contrary, Kenya banking sector have been registering declined performance, with pre-tax profit decreased by 9.6%, total income decreased by 3.1%, total expenses; and a consistent decline in RoE and RoA at an average rate of 0.6% and 3.8% respectively since late 2016 CBK, 2018). Further to that, share of fees and commission – mainly earned from DFS - has consistently been on a downward trajectory, declining from about 25% in 2016 to 14% by the end of 2018 (KBA, 2018). Therefore, there could be a possibility that decline in the industry could be as a result of decline in the non-interest income generated from DFS.

Research Problem and Objective of the Study

Studies on digital financial services on bank performance have been conducted across the globe and mixed results have been reported, with construct of DFS having significant effect on financial performance (Mohamed, 2019; Waiganjo, 2018; Too, Ayuma & Ambrose, 2016; Mabwai, 2016; Ngaruiya, Bosire & Kamau, 2014) and contradictory findings of insignificant or negative effects (Michelle, 2016; Dzombo, Kilika & Maingi, 2018; Ali, 2018). The variation in results could be explained by variability in specification of constructs, which appears relative to regions and author's objectives, necessitating an empirical exploration of the same on digital service delivery platforms – relatively standardised across the globe - as oppose to service products. Thus, the study empirically explore the mobile financial services, online financial

services, card financial services and digital financial information services constructs of DFS on financial performance of commercial banks.

The objective of the study therefore was to determine the effect of digital financial services on financial performance of commercial banks in Kisumu County.

LITERATURE REVIEW

Concept of Digital Financial Services

DFS can be linked to the development of 'Fin Tech' – 'financial' and 'technology' - which is the integration of modern internet-related technologies with business processes and activities in finance services industry (Gomber, Koch, & Siering, 2017). Fin Tech can be construed to innovation disruptors in that finance industry, who exploits advantage of universal communication provided by automated information processing and the internet to deliver the basic and sophisticated financial relates merchant services and models promising greater opportunities, flexibility, efficiency and security in financial services provision better than established conventional financial services (Lee, 2015). Therefore, digital finance – though no standard definition - encompasses a magnitude of new financial products, financial businesses, finance related software, and novel forms of customer communication and interaction delivered by FinTech companies and innovative financial service providers (Gomber, Koch, & Siering, 2017). It encompasses all products, services, technology and/or infrastructure that enable individuals and companies to have access to payments, savings, and credit facilities via the internet (online) without the need to visit a bank branch or without dealing directly with the financial service provider.

Theory of Financial Innovation

The study was anchored on the Theory of Financial Innovation, proposed by Silber in 1983, and premised on the idea that expansion of money related foundations is the key reason of financial inclusion (Sekhar, 2013). The theory view financial related innovations as new resolutions or customary means in which latest component of development has been offered to enhance firms' liquidity as well as expand new applicants, due to their qualifications on the situation. Thus, financial innovation is a critical motivating force of the financial system, which leads to better economic competence and enhanced economic advantage derived from the new and frequent changes. The theory characterised financial innovations as developments by coming up with new ways of technological solutions creating better return rates and improving competitive edge, thus promoting growth of financial entities through improved allocation, efficiency and a reduction of financial and administration costs (Radcliffe & Voorhies, 2012). This theory was

critical to the study in defining and itemizing the financial services innovations and developments in technological solutions options available for banking sector service through digital financial service's products and delivery platforms.

Empirical Review of Digital Financial Services and Financial Performance

Plethora of studies have been conducted on the digital financial services and performance of financial institutions across the globe and mixed results have emerged. First, studies on mobile banking services or platform and financial performance have that the number of users of mobile banking do influence financial profitability of the banks to a very great extent (Waiganjo, 2018); mobile money transactions have a significant effect on sales revenue (Ngaruiya et al, 2014); mobile banking (banking and withdrawal, loan/credit, fund transfers, and bills payment) have significant relationship with financial performance (Too et al, 2016); mobile banking access, mobile banking loans and mobile banking risks have significant effect on financial performance (Mohamed, 2019). Similarly, the number of mobile banking transactions, capital adequacy, markets share and the size of the assets had a positive influence on the financial performance of commercial banks (Mabwai, 2016); and mobile banking has significant positive effects on performance of banking institutions (Oyomo, 2018).

Studies on OFS and financial performance have reported online banking fees and commission and financial performance have weak correlation effects (Ali, 2018); unit change in e-banking/online banking causes 0.233 change on financial performance (Barasa et al, 2017); internet banking has positive effect on financial performance of commercial banks (Ogutu & Fatoki, 2019); e-Banking (mobile banking, agency banking, ATM banking and online banking) have positive effect on financial performance and a descriptive result that internet banking affects the financial performance of commercial banks (Kombe & Wafula, 2015). Other results are significant relationship among customer experience, satisfaction and loyalty, which is related to financial performance (Mbama, 2018); online banking transaction significantly and positively predicted ROA and that an increase online banking transactions led to increase in ROA (Wadesango & Magaya, 2020). Similarly, studies on CFS on financial performance have reported that debit card services (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) had a statistically significant positive effect on the financial performance (Wadesango & Magaya, 2020).

RESEARCH METHODOLOGY

The study adopted a descriptive research design. The target population was 172 managers at the 43 bank branches in Kisumu County. A census survey was adopted due to small size of the

population. Primary data was collected using structured questionnaire. The questionnaire was designed with Likert scale questions, which allowed managers to express their agreement or disagreement with item statements, based on their experience. Pilot test was conducted to check on internal consistency and an alpha value of 0.872 indicated internal consistence was achieved and the data collection instrument was reliable. Qualitative data analysis methods namely descriptive and correlation were adopted.

RESULTS AND DISCUSSION

Descriptive Analysis Result

Mobile Financial Services and Financial Performance

Table 1: Descriptive statistics for MFS statements and financial performance

Item No.	Item statements for mobile financial services	Responses					Mean rating	
		SA %(f)	A %(f)	I %(f)	D %(f)	SD %(f)	Mean (μ)	SD (σ)
DFS 1	MFS is frequently used to conduct banking transaction.	62.1%(64)	29.1%(30)	8.7%(9)	0.0%(0)	0.0%(0)	4.53	0.564
DFS 2	MFS is frequently used to conduct payment transaction.	31.1%(32)	60.2%(62)	0.0%(0)	8.2%(9)	0.0%(0)	4.53	0.319
DFS 3	MFS is frequently used to conduct fund remittance transaction.	15.5%(16)	36.9%(38)	38.9%(40)	8.7%(9)	0.0%(0)	3.29	0.857
DFS 4	MFS is frequently used to conduct credit transaction services.	35.0%(36)	22.3%(23)	34.0%(35)	8.7%(9)	0.0%(0)	3.83	1.011
DFS 5	MFS is frequently used to conduct insurance services and risk mitigation transaction.	28.2%(29)	43.7%(45)	9.7%(10)	18.4%(19)	0.0%(0)	3.63	1.386
DFS 6	MFS has been recording a growth trend in the past five years	69.9%(72)	20.4%(21)	9.7%(10)	0.0%(0)	0.0%(0)	4.65	0.897
Average Scores							**4.077**	**0.839**

Table 1 presents descriptive results on MFS item statement. The item statement DFS1 assessed the use frequency of MFS for banking transaction by bank customers. Result shows that 62.1% [N=64] of managers strongly agreed with the statement; 29.1% [N=30] of agreed with the statement; and 8.7% [N=9] of mangers were indifference, that is, neither agreed nor disagreed with the statement. Mean result of the statement was μ=4.53 with a std dev. of

σ=0.564 suggesting managers are in strong agreement that customers frequently use MFS for banking transactions in Kisumu County.

Item statement DFS2 assessed the use of MFS for payment transactions by bank customers. Result shows that 31.1% [N=32] of managers strongly agreed with the statement; 60.2% [N=62] of managers agreed while 8.9% [N=9] disagreed. Mean result of the statement was µ=4.53 with a std dev. of σ=0.319 implying managers were in strong agreement that bank customers frequently use MFS for payment transactions in Kisumu County.

DFS3 assessed how frequent bank customers use MFS for funds remittances transactions in Kisumu County. Respondents results indicated that 15.5% [N=16] of mangers strongly agreed; 36.9% [N=38] of managers agreed; 38.9% [N=40] neither agreed nor disagreed while 8.7% [N=9] of managers disagreed. The mean rating for the item statement on use of MFS for remittances transaction was µ=3.29 with a std dev. of σ=0.857, implying managers were indifferent or expressed diverse opinion regarding use MFS for funds remittances transactions by bank customers in Kisumu county.

Question statement DFS4 was constructed to assess how frequent do bank customers use MFS for credit or fund borrowing transactions. Results shows that 35% [N=36] of managers strongly agreed with the statement; 22.3% [N=23] agreed with the statement; 34.0% [N=35] and 8.7% [N=9] of managers were indifference and disagreed respectively with the statement. The mean results revealed µ=3.83 with a std dev. of σ=1.011, which could suggests that MFS are frequently used for credit transactions by bank customers in Kisumu County.

DFS5 statement assessed the extent to which bank customers uses MFS for insurance and risk mitigation transactions. Result indicated that 28.2% [N=29] of managers strongly agreed; 43.7% [N=45] of managers agreed; 9.7% [N=10] of managers neither agreed nor disagreed (indifference) and 18.4% [N=19] of managers disagreed with the statement that MFS is frequently used for insurance and risk mitigation transactions. The mean result of item statement DFS6 revealed µ=3.63 with a std dev. of σ=1.386, implying bank managers were in divergent view regarding use of MFS for insurance and risk mitigation transactions.

Lastly, the item statement DFS6 assessed the growth of MFS use in the past five years to 2018. Result of managers growth estimation, as rated on a five point Likert scale, revealed that 69.9% [N=72] of managers strongly agreed that MFS use have grown in the past five years; 20.4% [N=21] of managers agreed with the statement; and 9.7% [N=10] of managers were indifferent. Mean result for MFS growth in the past five years was µ=4.65 with a std dev. of σ=0.987, which indicated that banks in Kisumu County have recorded growth in MFS use in the past five years.

The average result of descriptive analysis for mobile financial services as a construct of digital financial services was µ=4.077 with a std dev. of σ=0.839. This result suggested that

bank managers were in agreement that MFS, as a construct of DFS, influence financial performance of commercial banks in Kisumu County. The finding are in agreement with Waiganjo (2018) who reported that mobile banking do have great influence of financial profitability of banks to a great extent; Ngaruiya et al (2014) study which reported mobile money transaction have great effect on sale revenue; and Too et al (2016) study which too reported mobile banking have great effect on bank performance. Other studies that corroborated this finding are Ngaruiya et al (2014), Mohamed (2019) and Mabwai (2016), all who reported that mobile banking has great effect on performance of commercial banks.

Online Financial Services (OFS) and Bank Financial Performance

Table 2: Descriptive statistics for OFS statements and financial performance

Item No.	Item statements for online financial services	Responses					Mean Rating	
		SA %(f)	A %(f)	I %(f)	D %(f)	SD %(f)	Mean (μ)	SD (σ)
DFS 7	Frequent use of OFS for banking transaction.	44.7%(46)	29.1%(30)	5.8%(6)	11.7%(12)	8.7%(9)	*3.99*	0.714
DFS 8	Frequent use OFS for payment transaction.	29.1%(30)	38.8%(40)	11.7%(12)	11.7%(12)	8.7%(9)	3.87	0.919
DFS 9	Frequent use OFS for fund remittance transaction.	69.0%(70)	12.6%(13)	0.0%(0)	11.7%(12)	8.7%(9)	4.09	0.692
DFS 10	Frequent use OFS for credit transaction.	12.6%(13)	29.1%(30)	0.0%(0)	44.7%(46)	10.7% (11)	2.93	1.135
DFS 11	Frequent use of OFS for insurance services and risk mitigation.	42.7%(44)	31.1%(32)	26.2%(27)	0.0%(0)	0.0%(0)	4.07	0.818
DFS 12	OFS transactions has been recording a growing trend in the past five years	0.0%(0)	26.2%(27)	31.1%(32)	42.7%(44)	0.0%(0)	2.72	0.855
Average Scores							**3.61**2	**0.855**

The item statement DFS7 sought to examine how frequent does bank customers in Kisumu County uses OFS for banking transactions. Results shows that 44.7% [N=46] of managers strongly agreed bank customers frequently use OFS for banking transactions; 29.1% [N=30] of managers agreed with the statement; 5.8% [N=6] of managers were indifference with 11.7% [N=12] and 8.7% [N=9] of managers disagreed and strongly disagreed respectively with the statement. The mean result for the item statement was μ=4.29 with a std dev. of σ=0.714, which suggested that majority of managers agreed that OFS are frequently used for banking transactions.

DFS8 statement examined the use of OFS for payment transactions among customers of commercial banks in Kisumu County. The result of frequency of used indicated that 29.1% [N=30] and 38.8% [N=40] of managers strongly agreed and agreed respectively with the statement; 11.7% [N=12] of managers were indifference; 11.7% [N=12] of managers disagreed while 8.7% [N=9] of managers strongly disagreed that OFS are frequently used for payment transaction services. The mean result was µ=3.87 with a std dev. of σ=0.919, which implied majority of managers were in agreement that OFS are frequently used for payment transactions by bank customers in Kisumu County.

DFS9 statement examined the frequent use of OFS for fund remittance transactions in Kisumu County. Result indicates that 69.0% [N=70] of managers strongly agreed that bank customers frequently remit funds through online financial services; 12.6% [N=13] of managers agreed with the statement; 11.7% [N=12] and 8.7% [N=9] of mangers disagreed and strongly disagreed respectively with the statement. Mean finding for DSF9 revealed µ=4.09 with a std dev. of σ=0.692, implying that majority of managers were in agreement that bank customers frequently uses OFS to conduct fund remittances transactions in Kisumu County.

The study constructed item statement DFS10 to assess how frequent bank customers uses OFS to access credit or loan transactions within banks in Kisumu County. Result indicates that 12.6% [N=13] and 29.1% [N=30] of managers strongly agreed and agreed respectively that bank customers frequently access credit transactions through OFS; while 44.7% [N=46] and 10.7% [N=11] of mangers disagreed and strongly disagreed respectively with the statement. Mean finding for DSF9 revealed µ=2.93 with a std dev. of σ=1.135, implying that majority of managers were in disagreement that bank customers frequently uses OFS to conduct credit or loan transactions in Kisumu County.

DFS11 sought to examine how frequent customers of banks in Kisumu County conducts insurance services and risk mitigations transactions through online financial services. Rating of managers experience showed that 42.7% [N=44] of managers strongly agreed; 31.1% [N=32] of managers agreed while 26.2% [N=27] of managers were indifferent, that is neither agreed nor disagreed. Mean rating result revealed µ=4.17 with a std dev. of σ=0.818, and this implied that majority of managers were in agreement that bank customers in Kisumu County frequently conduct insurance and risk mitigation transactions through OFS.

Last item statement for OFS construct (DFS12) intended to assess whether OFS have recorded a growth in use over the past five years from 2014 to 2018. Result revealed that 26.2% [N=27] of managers agreed that OFS have grown in the past five years; 31.1% [N=32] of managers were indifferent while 42.7% [N=44] of managers disagreed that OFS have been growing; Mean result for OFS growth in the past five years was µ=2.72 with a std dev. of

σ=0.855, which indicated that banks in Kisumu County have not recorded growth in OFS use in the past five years.

The average descriptive result for online financial services as a construct of digital financial services was μ=3.612 with a std dev. of σ=0.855. This result suggested that bank managers were in slight agreement that OFS, as a construct of DFS, slightly influence financial performance of commercial banks in Kisumu County. This finding is corroborated with result of Ali (2018) found online banking accessibility to influence bank performance to great extent. Similarly, the finding also concurred with Njoroge and Mugambi (2018) who reported that electronic - banking affects financial performance of commercial banks in Kenya; Barasa et al (2017) study that reported a positive effect (Mean.4.27 and std dev.0.592) of internet banking on financial performance of commercial banks; Mateka et al (2016); and Ogutu and Isola (2019) whose study reported positive effect of online banking on financial performance.

Card Financial Services (CFS) and Financial Performance

Table 3: Descriptive Statistics for CFS statements and financial performance

Item No.	Item statements for card financial services	Responses					Mean Rating	
		SA %(f)	A %(f)	I %(f)	D %(f)	SD %(f)	Mean (μ)	SD (σ)
DFS 13	Frequent use CFS for banking transaction.	52.4%(54)	22.3%(23)	25.2%(26)	8.2%(9)	0.0%(0)	4.67	0.842
DFS 14	Frequent use of CFS for payment transaction.	49.5%(51)	41.8%(43)	8.7%(9)	0.0%(0)	0.0%(0)	4.35	0.637
DFS 15	Frequent use CFS for fund remittance transaction.	0.0%(0)	53.4%(55)	18.4%(19)	11.7%(12)	16.5% (17)	3.09	1.147
DFS 16	Frequent use CFS for credit transaction.	50.5%(52)	12.6%(13)	8.7%(9)	28.2%(29)	0.0%(0)	3.85	1.309
DFS 17	Frequent use CFS for insurance services and risk mitigation.	9.7% (10)	25.3%(26)	52.4%(54)	0.0%(0)	12.6% (13)	3.08	1.191
DFS 18	CFS transactions has been recording a growing trend in the past five years	0.0%(0)	41.8%(43)	49.5%(51)	8.7%(9)	0.0%(0)	3.12	1.327
Average Scores							**3.693**	**1.075**

The descriptive results for card financial services item statement are presented in Table 43. Result for item statement DFS13 which assessed how frequent bank customers use CFS for banking transaction showed that 55.4% [N=54] of managers strongly; 22.3% [N=23] of

managers agreed; while 25.2% [N=26] and 8.2% [N=9] of mangers were indifference and disagreed on how frequent bank customers used CFS for banking transaction. Mean result for the statement was μ=4.67 with a std dev. of σ=0.842, thus suggesting majority of managers strong agreement that their bank customers frequently use CFS for banking transactions.

Item statement DFS14 looked at how often bank customers utilize CFS to make payment transactions for their merchandise purchases. Analysed result indicated that 49.5% [N=51] and 41.8% [N=43] of managers strongly agreed and agreed respectively to the effect that bank customers frequently make merchandise payment transactions through CFS; while 8.7% [N=9] of managers disagreed. Mean result of the statement was μ=4.35 with a std dev. of σ=0.637, which implied majority of managers were in strong agreement that bank customers frequently use CFS for payment transactions in Kisumu County.

DFS15 assessed how frequent bank customers use CFS to conduct funds remittances transactions in Kisumu County. Managers responses to the question indicated that 53.4% [N=55] agreed; 18.4% [N=19] were indifferent; 11.7% [N=12] and 16.5% [N=17] disagreed and strongly disagreed respectively. The mean rating for the item statement on frequent use of CFS for remittances transaction was μ=3.09 with a std dev. of σ=1.147, and this suggested that managers of banks in Kisumu county indifferent or expressed diverse opinion regarding use CFS for funds remittances transactions.

The statement DFS16 assess the prevailing use of card financial services to borrow funds or conduct credit related transactions by bank customers. Manager response to the question showed that 50.5% [N=52] strongly agreed; 12.6% [N=13] agreed; 8.7% [N=9] were indifferent and 28.2% [N=29] of managers disagreed with the position of the statement. The mean results indicated μ=3.85 with a std dev. of σ=1.309, implying bank customers frequently use CFS for credit transactions. This could further indicate most bank customer in Kisumu County do have credit or visa cards and conduct most of credit transactions through these cards.

DFS17 statement evaluated the extent to which bank customers uses CFS to conduct insurance and risk mitigation transactions. Result in Table 4.9 showed that 9.7% [N=10] of managers strongly agreed with the statement; 25.3% [N=26] of managers agreed; 52.4% [N=54] of managers were indifference with the position of the statement and 12.6% [N=13] of managers totally disagreed with the statement. The mean result revealed μ=3.08 with a σ=1.191, implying bank mangers expressed divergent opinions regarding frequent use of CFS by customers to conduct insurance services and risk mitigation transactions in Kisumu County.

The growth of card financial services use among commercial banks in Kisumu County from 2014 to 2018 was assessed by item statement DFS18. Analysed result showed that 41.8%

[N=43] of managers strongly agreed CFS use have grown in the past five years; 49.5% [N=51] of managers neither agreed nor disagreed; and 8.7% [N=9] of managers disagreed. Mean result for CFS growth was µ=3.12 with a std dev. of σ=1.327, which implied that not all banks in Kisumu County have recorded growth in CFS use in the past five years.

Finally, the average descriptive results for card financial services as a construct of digital financial services was µ=3.693 with a std dev. of σ=1.075. This result implied that bank managers were in disagreement regarding CFS, as a construct of DFS, influence on financial performance of commercial banks in Kisumu County. The finding are in agreement with Ogutu and Isola (2019) who reported ATM banking affects financial performance; Muiruri (2014) who reported great impact of card financial service on bank performance; and Mugo et al (2019) whose analysis of debit and credit card reported great effect SACCO's performance.

Digital Financial Information Services (DFIS) and Financial Performance

Table 4: Descriptive Statistics for DFIS Item Statements on Financial Performance

Item No.	Item statements for Digital Financial Information Services	Responses					Mean Rating	
		SA %(f)	A %(f)	I %(f)	D %(f)	SD %(f)	Mean (µ)	SD (σ)
DFS 19	Frequency of alert notification and mini statements requests through digital platforms.	85.4%(88)	14.6%(15)	0.0%(0)	0.0%(0)	0.0%(0)	4.85	0.354
DFS 20	Frequency of PIN management and authorization alert requests through digital platforms.	61.2%(63)	29.1%(30)	9.7%(10)	0.0%(0)	0.0%(0)	4.51	0.670
DFS 21	Frequently of security and reminder alerts to customers through digital platforms.	68.9%(71)	31.1%(32)	0.0%(0)	0.0%(0)	0.0%(0)	4.69	0.465
DFS 22	Frequently of use of digital platforms to conduct market research.	50.5%(52)	14.5%(15)	23.3%(24)	11.7%(12)	0.0%(0)	3.92	1.341
DFS 23	Frequently of use of digital platform to conduct trading of securities.	33.9%(35)	24.3%(25)	9.7%(10)	32.0%(33)	0.0%(0)	3.60	1.255
DFS 24	Frequently of use of digital platforms to conduct forex exchange services.	50.5%(52)	21.4%(22)	28.2%(29)	0.0%(0)	0.0%(0)	3.94	1.282
DFS 25	DFIS transactions has been recording a growing trend in the past five years.	66.0%(68)	17.5%(18)	16.5%(17)	0.0%(0)	0.0%(0)	4.33	1.106
Average Scores							**4.26**3	**0.925**

Table 4 above presents managers response to DFIS item statement. The item statement DFS19 was designed to assess how frequent bank customers make alerts notification and mini statement request through digital financial platform. Analysed results indicate that 85.4% [N=88] of managers strongly agreed and 14.6% [N=15] of managers agreed with the statement position. The mean rating result for DFS19 item statement was µ=4.85 with std dev. of σ=0.354, which suggested that bank managers strongly agreed that customers frequently make notifications and alerts requests through DFS platforms in Kisumu County.

DFS20 item statement assess the extent to which bank customers request for PIN management and authorization services through DFS platforms. Results reveals 61.3% [N=63] of managers strongly agreed with the statement, 29.1% [N=30] of managers agreed with the statement and 9.7% [N=10] of managers neither agreed nor disagreed (indifference) with the statement. Mean result for the item statement was µ=4.51 with std dev. of σ=0.670, implying that majority of managers strongly agreed that bank customers frequently request PIN management and authorization services through DFS platforms.

The prevalence to which customers request banks to make security alerts and reminders on their standing instructions was assessed by item statement DFS21. The result of managers response showed that 68.9% [N=71] and 31.1% [N=32] were in strongly agreement and agreement respectively with the position of the statement. Further result on mean and standard deviation for DFIS3 revealed 4.69 and 0.465 respectively. This result implied bank mangers were in strong agreement that their customers frequently make security alerts and reminders through DFS platforms.

DFS22 item statement analysed how frequent bank customers embrace DFS platforms to conduct market research. Results shows that 50.5% [N=52] of managers strongly agreed; 14.6% [N=15] of managers agreed with the statement; 23.3% [N=24] of managers were indifference; while 11.7% [N=12] of managers disagreed with the position of the statement. Mean result was µ=3.92 with a std dev. of σ=1.341. This finding implied majority of managers agreed bank customers frequently use DFS platforms to conduct market research in Kisumu County.

The item question DFS23 assessed how regularly do bank customers use DFS platforms to conduct securities trading. Results from Table 4.10 shows that 33.9% [N=35] of managers strong agreed; 24.3% [N=25] of managers agreed with the statement; 9.7% [N=10] of managers were indifference; and 32% [N=33] of managers disagreed with the statement on conducting forex transaction through DFS platforms. Mean rating of DFS 23

was µ=3.60 with a std dev. of σ=1.255, suggesting that majority of managers were fairly in agreement that bank customers frequently use DFS platforms to conduct security trading in Kisumu County.

DFS24 item statement analysed how frequent bank customers use DFS platforms to conduct forex exchange services (purchase and sales of currency). Results revealed that 50.5% [N=52] of managers were in strongly agreement with the statement; 21.4% [N=22] of managers were in agreed with the statement; and 28.2% [N=29] of managers disagreed with the statement. Mean result the statement item DFS24 was µ=3.94 with a std dev. of σ=1.282, suggesting managers were in agreement that bank customers moderately use bank's DFS platforms to conduct forex exchange services in Kisumu County.

Item statement DFS24 examined the growth of use of DFIS transactions in the past five years. Analysed results shows that 66.0% [N=68] of managers strongly agreed; 17.5% [N=18] of managers agreed that DFIS have grown in the past five years; while 16.5% [N=17] of managers neither agreed or disagreed regarding growth of DFIS. The mean result of the item statement was µ=4.33 with a std dev. of σ=1.106. This finding implied majority of managers agreed that DFIS have been growing in the past five years.

Average descriptive result for digital financial information services as a construct of digital financial services revealed a mean of µ=4.263 with a std dev. of σ=0.925. The average result implied that bank managers were in agreement that DFIS, as a construct of DFS, influenced financial performance of commercial banks in Kisumu County. This finding is corroborated with result of Cajetan (2018) who found customer experience, satisfaction and loyalty greatly affects financial performance. The study findings also collaborated with Kato, Otuya et al (2014) whose study on mobile banking transactions including balance inquiry, information inquiry and interbank transfers reported great influence on bank performance.

Correlational Analysis Results for Effect of Digital Financial Services and Financial Performance

The study employed Pearson product moment correlation coefficient to establish the existence or non-existence of significance relationship and the strength of association between the items statements of DFS and financial performance of commercial banks in Kisumu County. Result of bivariate correlation through Pearson correlation coefficient are tabulated in Table 5, followed by the discussion on the same thereafter.

Table 5: Correlation statistics of the effect of DFS Constructs on Financial Performance

Correlation of Digital Financial Services Constructs		Financial Performance	MFS	OFS	CFS	DFIS
Financial Performance (FP)	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	103				
Mobile Financial Services (MFS)	Pearson Correlation	.633**	1			
	Sig. (2-tailed)	.001				
	N	103	103			
Online Financial Services (OFS)	Pearson Correlation	.372*	.542**	1		
	Sig. (2-tailed)	.000	.000			
	N	103	103	103		
Card Financial Services (CFS)	Pearson Correlation	.595**	.141	.206*	1	
	Sig. (2-tailed)	.000	.155	.037		
	N	103	103	103	103	
Digital Financial Information Services (DFIS)	Pearson Correlation	.748**	.306**	.473**	610*	1
	Sig. (2-tailed)	.000	.002	.000	.000	
	N	103	103	103	103	103
Digital Financial Services (DFS)	**Pearson Correlation**	**.713****				
	Sig. (2-tailed)	**.000**				
	N	**103**				

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

From the analysis results in Table 5, it can be seen that mobile financial services recorded a strong and significant positive correlation of r=0.633 (p=0.01) with financial performance of commercial; online financial services recorded a moderate and significance positive correlation of r=0.372 (p=0.03) with financial performance; card financial services registered strong and significant positive correlation of r=0.595 (p=0.03) with financial performance and digital financial information services recorded a very strong and positive significant correlation of r=0.748 (p=0.000) with financial performance of commercial banks in Kisumu County. Correlations are significant at the 0.01 and 0.05 levels (2-tailled).

From these results therefore the study can reasonably suggests that mobile financial services have strong and significant correlation with financial performance of commercial banks in Kisumu County. This finding is supported by Waiganjo (2018) who's study reported a strong positive and significant correlation between number of users of mobile banking and financial profitability of commercial banks; Too, Ayuma and Ambrose (2016) whose findings were positive and significant relationship between mobile banking and financial performance (r=0.309). Moreover, the findings are also in agreement with Mohamed (2019) result of positive correlation of 0.531 between mobile banking financial performance; Mabwai (2016) results of

significant correlation between mobile banking and financial performance of commercial banks (r=0.619).

Online financial services have strong and significant relationship with financial performance of commercial banks in Kisumu County. This finding too is supported by the finding of Ali (2018) of a positive correlations between online banking accessibility and risk management strategies with RoA; Ogutu and Isola (2019) study which reported a strong positive correlation (r=0.6902,p<0.0001) between mobile banking and performance.

Card financial services have strong and significant positive relationship with financial performance of commercial banks in Kisumu County. This finding collaborates with by Muiruri (2014) who found a positive of 0.446 between card banking and financial performance; Mugo et al (2019) who reported Saccolink debit card services (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) had a statistically significant correlation with financial performance of Deposit Taking SACCOs in Kenya.

Digital financial information services have a strong positive and significant relationship with financial performance of commercial banks in Kisumu county. This result is supported by Kato et al (2014) finding of a positive relationship between mobile banking transaction on balance inquiry, bills payment, information inquiry and interbank transfers with performance of commercial banks.

CONCLUSION

Based on the findings, the following conclusion are drawn: first, MFS, as a construct of DFS, have strong and significant correlation and therefore influences financial performance of commercial banks in Kisumu County. This influence is caused by the high frequency of MFS use by customers and growth of product in the past five years. Second, OFS, as a construct of DFS, have moderate and significant relationship with financial performance, thus slightly influence financial performance of commercial banks in Kisumu County. The slight influence is as a result of low use and growth of the digital service in the last five years. Third, CFS, as a construct of DFS, strong and significant positive relationship with financial performance, and thus influence financial performance of commercial banks in Kisumu County as attributed by relative frequency of use and growth in the past five years. Last but not least, DFIS, as a construct of DFS, also have a strong positive and significant relationship with financial performance of commercial banks in Kisumu county, as attributed to fast growth of digital financial services in the county

LIMITATION AND SUGGESTION FOR FURTHER STUDY

The study independent variables, digital financial services required qualitative data hence, the researcher opted to measure financial performance qualitatively in order to effectively regress the variables, however financial performance are measured quantitatively. Future researcher should consider quantitative approach in similar studies.

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