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Fintech: Controversies and Complexities around Device Size for Mobile Banking

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Abstract

The choice between a smaller device (SD) and a bigger device (BD) such as a laptop for example, for banking impacts on the concept of mobile banking (m-banking) and its success in the financial technology (FINTECH) sector. Yet, only a handful of studies have been done on the mediating controversies and complexities between these two devices. Knowledge of m-banking can be used to remind people of how the concept can curb overcrowding in the banking hall, and how it offers other benefits. These notwithstanding, studies show that this new revolution of m-banking regarding has not reverberated well enough among banking clients. One of the reasons, is the impact of the size between the m-device types and their functionalities. Unfortunately, studies on these impacts have been ignored by the research community. This paper, was meant to: (i) identify the functionalities and (ii) technological factors mediating between SD and BD. A quantitative test of over 1000 users of m-banking, enabled by the Partial Least Squared-Structural Equation Modelling (PLS-SEM) confirmed that users have preferences over SD and BD devices. The first (i) results which participants gave for preferring SD over BD were identified as: portability (easy to carry around), weight, and ease of use. The outcome which participants gave for preferring BD were: larger screen and better resolution, easy to key in data than with smaller devices, comfortability, durability of power, and technological functionality. For the second (ii) investigation, which looked at technological impact, the participants mentioned that: trust in technology, system quality and satisfaction played a concrete role in m-banking continuance intension and usage in the Fintech industry. The paper concludes that, banks can use these outcomes to increase m-banking acceptance and usage behaviour when they pay attention.

Keywords: Actual usage, BD, mobile (m), m-banking, m-device, m-phone, SD

1. Introduction

Banking has gone through major transformational processes until this day, whereby it is now changing the face of the financial technology (Fintech) industry through mobile (m) - computing technology. A m-computing device is any portable device using m-components, like m-hardware and applications. It can execute and supply solutions and applications like a

typical computing device that might come in various sizes from palm top or handheld device to a laptop computer. This concept has become known among researchers as mobile banking or m-banking for short.

The calendar year 2000 saw the introduction of this m-banking concept but was met with many challenges, making the encounter unpleasant for consumers. Compared with online banking, m-technology misfunctioned due to restricted handsets attributes and narrow bandwidths, and this had consequences on the patronage degree. These, together with security issues to provide a guaranteed mode of data transmission again made this brand-new concept even more frightening and uncertain to use (Dasgupta et al., 2011; Wang & Li, 2012; Hanafizadeh et al., 2014).

The introduction of alternative m-phones like tablets, Ultra-mobile personal computers (UMPCs), m-internet devices and personal digital assistants (PDAs) had similar functions to most primary computers and laptops in terms of ability and usability. This impacted and changed consumers' mindset, raising the question of whether m-banking will be enhanced through a smaller device (SD) or a bigger device (BD). M-web browsing speeds have increased dramatically due to broadband Internet access at attractive prices. These factors have contributed to a resurgence and enormous patronage of m-use, though not at the expected levels. The rippling effects of all the above dynamics are felt in the banking sectors, and banks are also rolling out for m-banking. The above notwithstanding, analysis of m-phone sizes and their effects on m-banking has not reached a critical level. Many researchers (Gerpott, 2011; Gerpott et al., 2013; Planing, 2014; Kapoor et al., 2014; Dwivedi & Williams, 2015) have echoed the need for such investigation but to no avail.

The banking institutions` business is to create profit out of the deposits they receive from their clients and give out as loans. Nevertheless, in recent times, the banks' activities have grown into other financing activities. For example, in South Africa, the banks finance cars, furniture, household utensils and even m-phones. This study wants to believe that m-phones' financing is meant to drive the global phenomenon of m-banking.

This notwithstanding, minimal empirical studies inform the banks about the type of gadgets customers prefer to use for their m-banking activities. In a time of keen global competition with such phenomenon, one would expect that, not only will research into this concept be considered a matter of gaining a competitive advantage but also to help the banks fight the traditional norm of walk-in-banking. Knowing the exact kind of device size that appeals to clients' m-banking desires plus the factors that work well for m-banking will prevent the banks from investing in the wrong direction. This will help their clients enjoy this new time-saving practice as well as promote it. In line with the above researchers call for more studies, this paper begs the following question:

(i) What functionalities mediate between SD and BD for m-banking? And (ii) what technological factors impact on SD and BD m-banking?

2. Influence of SD and BD on customers' m-banking continuance usage

There is an agreement that m-telephones and laptops are the two most widely used devices to access the m-Internet (Gerpott 2011: 2153). Okazaki (2005: 4) earlier on had quoted a survey indicating that roughly 70 million people in Japan (55 % of the population) signed up for Internet access from their cellular telephones, compared to just 12 % of the population the USA. Thus, the Japanese see cellular telephones or "Keitai" as a device for surfing the Internet, while Americans use their laptops.

A similar situation was witnessed in South Africa, where a study asked respondents to indicate the device, they use most often to access the Internet. The results show that most use laptops (62.9 %) (Mentz, 2011: 273). These are indications that there are preferences between these two devices for m-banking. Wireless connection to the Internet can be accomplished through one of the following two possibilities:

(a) Numerous points of access to the existing web and Internet in a more limited or constrained way. (b) Wireless use of the Internet due to the smaller screen sizes, lack of colour, limited or non-existent keyboards, and other limitations of SDs (Waters, 2000). Additionally, the communication content with these devices is unique due to bandwidth constraints by public frequency limitations. Their nearly ubiquitous capability enables straight software support and information access for many new business functions in real-time that were previously unsupported by IT (Tarasewich et al., 2002: 43).

Investigations of accessing the Internet through m-devices have concentrated more on the m-telephones than laptop devices (Cruz et al., 2010; Yu, 2012). This can be misleading to assume that m-banking is accessed mainly through m-telephones. However, evidence suggests that laptops are still used to access m-Internet and banking services (Mazzucchelli et al., 2018), and this is shown above. Many industry practitioners and consultants have also emphasised that m-devices' capabilities and usability substantially impact m-Internet acceptance (Gerpott, 2011: 2143). The proponents of such assertions, according to Gerpott, believe that a better understanding of m-Internet diffusion patterns may be obtained by showing the differences between customers who access the m-Internet through m-telephones or laptops. Thus, this study is deemed useful to show how differences in this accessible media influence continuance behaviour. The findings will drive home the study's uniqueness and the m-devices, to settle the arguments of whether continuous access to m-banking is induced by m-telephones or laptops. The outcome could also provide vital information to banking practitioners, manufacturers of m-devices and network providers to make m-banking successful.

2.1 Devices and sizes

Laptops and handheld devices are different, with the following distinguishing features: weight, physical dimensions, size, resolution and touch sensitivity of the display keyboard, battery operating and standby time, data storage capacity and computing performance (Mazzucchelli et al., 2018). Through the laptops, m-banking offers larger screens, easy data key-in, and a "look and feel" (Gerpott, 2011: 2154) scenario akin to the desktop computers at home or the office.

In contrast, m-telephones are easy to carry around for unobtrusive m-banking access. Due to their size, laptops have the advantage of better resolution, and bigger font size suitable for ageing eyes whereas m-telephones seem to appeal to the young and restless youth who would like to listen to music and chat even while on the move. The short message service (SMS) for m-telephone devices is not considered an Internet technology (Puspitasari & Ishii, 2016), giving these devices the capability to remain in touch even without an Internet connection. The recent additional SMS functionality, popularly known as 'WhatsApp', seems to have augmented this attitude of the youth even further.

2.2 The concept of this study

In conceptualising a m-banking, this study believes that the phenomenon is driven by users' preference of m-device together with users' trust in technology (TrTec), system quality (SysQ), and user`s overall satisfaction (OvalSat) obtained from m-banking, which influence m-banking continuance intention (MBCI) before users decide their actual usage (ActUsg). The above variables turn out to generate some controversies on two m-devices because of their sizes, and this remains the focal point of this study. This is intriguing and thought-provoking, and this must induce practitioners to gain a clear and detailed appreciation of the kind of devices they should promote for m-banking. As a theoretical framework, the following vital factors are usually used to study technological innovation and adoption of m-banking. These will help to determine why the same factors cause different m-devices reactions.

2.2.1 Trust in technology

Many researchers have concentrated on various trust issues in electronic-business (Erkan & Evans, 2016; Zhang & Benyoucef, 2016) and indications are that people's trust in the online vendor is positively related to attitudes towards buying through a virtual setup (m-banking). The trust giver, normally pertains to the user of m-banking (customer) while the trust receiver is the bank offering the services and the technology through which the user performs the banking transactions. Hence, if the user perceives BD such as a laptop to have the maximum computing power, a bigger screen than a smartphone and more convenient when it comes to travelling (because of its power durability), then, it is likely that they will prefer BD and not SD for m-banking whilst they are on the move.

Trust is a very significant factor of loyalty that cannot be taken for granted. Many people worldwide refused to accept vaccines against COVID-19 because they did not trust its contents. The same phenomenon plays out on e-loyalty when users do not trust the bank that provides technology for banking. A study conducted in South Africa by Wentzel, Yadavalli and Diatha (2013: 670) found that people's trust in technology-enabled financial services was one of the most crucial constructs after attitude and perceived benefits. Trust in the Internet seeks to evaluate the degree of trust required, at which humans will perform a financial act relying on a machine in the Fintech industry. For illustration, the theory of reasoned action (Fishbein and Ajzen, 1975) thinks that beliefs directly affect attitudes and for that matter the higher the level of trust, the more favourable the attendant attitude (Farivar et al., 2017).

Following trust in e-vender theory, it could be said that the website (technology) representing the bank as a salesperson, as well as the BD (laptop) guaranteeing trust for the user, needs to be trusted to ensure complete formation of intentions. Hence, considering SD versus BD, if the customer is a Japanese who prefer SD (Okazaki, 2005: 4) compared to an American who prefers BD, then the choice for m-banking will be obvious.

2.2.2 System quality

Service quality is met when a given service meets customer expectations. This is very important in today's world of Fintech and creating customer loyalty. Quality could be attributed to the availability of a sound network required by users. Nevertheless, others may measure quality in terms of information and its accuracy. System quality involves reliability, response speed, ease of use, and navigational issues regarding users' m-devices.

Assume the m-device used for m-banking was unreliable, difficult to use and had slower network capabilities, which made users wait for longer times to receive information and services, they will be dissatisfied and discontinue its usage. Suppose abrupt service interruptions occur, and users have to begin transaction processes again. In that case, their behavioural outcomes will be compromised, and such occurrences will undermine users' experience and perception. Guo and Poole (Shahpasandi et al., 2020) find that perceived complexity affects the flow in conducting online shopping. Furthermore, a system of inferior quality may reduce users' perceived usefulness for it. For example, difficulty accessing banking sites through laptops (BD) compared to Ultra-mobile PCs (UMPCs) (SD), which is the most powerful computing device in the smallest form will compel the customer to go for the UMPC. UMPCs can be described as a mini-computer or mini-tablets (with touch screen/stylus/keyboard input options). It has a screen display of 7" or below and sometimes weighs less than 2 pounds, making it very attractive for m-banking. UMPCs are proper pocket device and offer full-fledged operating systems like Windows XP, and Vista, yet much smaller in form than laptops or netbooks. These make it preferable for m-banking.

2.2.3 Satisfaction decisions

In the cognitive model of satisfaction decisions (Oliver, 1981), satisfaction is postulated as an antecedent to post-exposure attitude and an immediate inner state ensuing when the passion neighbouring disconfirmed hope is attached with a consumer's initial expressive state about the consumption experience. These satisfaction decisions are usually built on perceived enactment. When this perceived enactment of expectation exceeds actual enactment, it is confirmed. Otherwise, it is disconfirmed and this affects future usage intention. The satisfaction decisions nevertheless fail to expose what brings satisfaction to the consumer. This could be the kind of gadget that was sold to the customer for m-banking, the credibility and trust of the e-vendor, or the quality of IT network used to sell m-banking services and products to the customer. This study seeks to determine how these impart satisfaction to users, thus affecting their intention to use m-banking continuously.

2.2.4 Continuance intention (CI)

Continuance intention is a well-established proxy for actual usage (Assensoh-Kodua, 2019). This is because continuance intention can lead to customer loyalty to generate a competitive advantage for firms seeking sustainable profitability. An understanding of the factors which influence continuance behaviour is, therefore, critical. M-banking user retention will ensure m-banking continuity and vice versa. Both IS continuance intention, and repurchase intention are influenced by the initial use or purchase experience and could therefore be applied to m-banking. Nevertheless, IS continuance (in this case, m-banking continuance intention) emphasises the continued use of banking websites to perform banking transactions, instead of using a physical building while online repurchase underlines consumer behaviour. Given the importance of m-banking, retention and continuity of the phenomenon become crucial, and all efforts must be put in place to ensure that m-device sizes are not creating discontinuation. This is vital because continuance usage is needed for business and investment purposes. M-banking continuance usage is an individual's intention to continue using a m-banking instead of just initial use or acceptance. It is worth mentioning that continuance intention is not the same as actual usage.

2.2.5 Actual usage

Actual usage is about inspiring a habit of m-banking in the Fintech sector among clients after the acceptance stage. When the need to perform banking arises and the circumstances that induce the customer to make such banking through the appropriate m-device is enabled, actual usage can be created. When it becomes a habit among banking customers irrespective of the cost, we can talk about actual usage. Thus, for practitioners to inspire m-banking actual usage among their clientele base, it is crucial that they first understand the type of device that is likely to ensure this goal when the slightest cues to use are triggered without thinking about

usage consequences. Until we create this situation and get past it, actual usage will remain a mirage.

For actual usage to be maintained, it is very necessary that we investigate the controversies and complexities around m-banking in the Fintech industry. Why the Japanese like to user SD for m-banking as against the USAs who prefer the BD need to be studied and a common ground found for all if m-banking is to be upheld as a sustainable development agenda. Even in a country specific context of South Africa, which was used as a case study for this paper, opinions for preferring SD over BD must be noted for further study to conceptualise the phenomenon for better.

3. Methodology and Data

3.1 Data collection procedure and participants

The constructs were formulated based on pre-validated studies and tailored to target clients who have ever used any form of m-device, be it small or laptop, to undertake banking transactions. This was after a pilot study among some eleven (11) staffs and workers at Durban University of Technology. The survey model was limited to a 5-point Likert scale set of responses that range from (1) strongly disagree to (5) strongly agree to ensure that only respondents within the said samples could find it meaningful. A total of 1 800 lists were surveyed, and 1 262 responses received, representing a 70 percent response rate. The 5-point Likert scale questionnaire also sought to gather data on the appropriate m-banking device that respondents use to do m-banking. All handheld m-banking devices were grouped into an SD and assessed against laptop as a BD.

3.1.1 Descriptive statistics

The participants for this study were m-banking customers who prefer m-banking because of its convenience 555 (88%), better prices 10 (2%) and time-saving 59 (10%). These were accessed through an online agent in South Africa, where the study was based. South Africa is also known to be number two after China in terms of global adoption of m-banking (Assensoh-Kodua and Msosa, 2020).

If it needs to be meaningful in a study, the sample size must be at least ten (10) times the maximum number of indicators associated with an outer model (Hair et al. 2016). This study's participants of 1 262 valid responses (56% males) meet this requirement. Except for 34% of respondents, who indicated that they have no formal education, all the participants were educated and 2% have PhD degrees. A reasonable percentage of 36 have associate degrees. Most of the respondents (42%) fall within the ages between 36 and 45, followed by that of the 26 to 35-year age group (30%). This revelation supports a recent study by the Pew Research Centre (2015), which notes that there has been a drastic change in technological usage patterns amongst senior adults lately compared to some years ago. True to this

statement, the current study has noticed a 69-point bulge from 8% in 2005 to 77% today. This is among the age group of 30 to 49. This group is the working class, spending between 0-15 minutes per week on m-banking (655).

3.1.2 Confirmatory factor analysis and measurement model evaluation

An exploratory analysis was undertaken from the extant literature to identify constructs and theories for this study then, the confirmatory factor analysis (CFA) technique of SmartPLS 3 (Ringle et al., 2015) content filtering system was used to confirm these factors. The study uses hierarchical modelling techniques, whereby values of the lower levels form proxies for those on each higher level and are defined by these lower levels. Therefore, the hierarchical structure was tested using CFA (Robinson et al., 2017). Before reporting the outcomes with PLS-SEM, reliability and validity were considered (Nitzl, 2016).

To assess reliability and validity, the CFA served as a data filtering system to cut through all constructs' noise to present the study with only those that meet the widely established cut off points. The reliability test reflected the actual scores on the factors relative to it error (Ooi & Tan, 2016) through the Cronbach's alpha's (α) estimation and the composite reliability (CR) offered overall reliability for stability and equivalence (Arpaci, 2016) to estimate correlations between the item and the factor (Henseler, 2017). The validity was measured by the estimate of convergent validity and discriminate validity. Convergent validity shows the extent to which items of a specific factor represent the same factor, and is measured using standardised factor loading, which should be greater than 0.707 and significant at 95% (Benitez-Amado et al., 2017). As shown in Table 3.1, all items exhibited loadings higher than 0.707 on their respective factors except (0.592^{**}) to provide evidence of acceptable convergence validity.

Table 1: Construct scores, Cronbach's (α), rho_A, CR and AVE for SD

	Loadings		**VIF**		**Cronbach's Alpha (α)**		**CR**		**AVE**	
	SD	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**
Trust in technology					0.916	0.910	0.947	0.944	0.857	0.848
TrTec1	0.914^{***}	0.838^{***}	3.011	3.240						
TrTec2	0.943^{***}	0.877^{***}	3.982	3.900						
TrTec3	0.920^{***}	0.919^{***}	3.140	2.646						
System quality					0.891	0.904	0.925	0.933	0.755	0.776
SysQ1	0.840^{***}	0.849^{***}	2.171	2.254						
SysQ2	0.826^{***}	0.795^{***}	2.053	2.318						
SysQ3	0.907^{***}	0.876^{***}	3.673	3.642						

SysQ4	0.901***	0.830***	3.550	3.109						
Overall satisfaction					0.945	0.964	0.956	0.969	0.845	0.886
OvalSat1	0.840***	0.860***	2.679	4.236						
OvalSat2	0.826***	0.943***	3.858	**5.730**						
OvalSat3	0.907***	0.966***	8.238	**9.287**						
OvalSat4	0.901***	0.961***	9.240	**10.318**						
M-banking continuous intention					0.844	1.000	0.899	1.000	0.750	1.000
MBCI1	0.766***	1.001***	1.834							
MBCI2	0.882***	**0.592****	2.063	1.000						
MBCI3	0.940***	0.756***	2.419							
Actual Usage					**0.655**	1.000	**0.812**	1.000	**0.590**	1.000
ActUsg1	0.756***		1.173	6.749						
ActUsg3	0.754***	1.000***	1.379	1.000						
ActUsg5	0.793***		1.396							

**The values of CR and Cronbach's alpha are above 0.7, indicating that the factors have good reliability (Fornell and Larcker, 1981; Henseler, 2017; Bagozzi and Yi, 2012). [ns] (non-significant) weights were not deleted to keep the content and face validity of the concerned constructs (Benitez-Amado, Henseler and Castillo, 2017).*

Since the study's model was combined with the "Mode B" formative, multicollinearity should be assessed (Benitez-Amado et al., 2017) to know if there are unnecessary repetitions of items amongst constructs measures. This is done through the variance inflation factor (VIF) values. VIF values greater than 10 indicate multicollinearity, which should be a source of grave concern for any study. As observed from Table 3.1 results only OvalSat4 (10.318) exhibited slightly higher values. Thus, multicollinearity is not a problem in this study (Benitez-Amado et al., 2017). The average variance extracted (AVE) is the most accepted measure of convergent validity of factor models. AVE greater than 0.500 means that reflective constructs are unidimensional (Fornell & Larcker, 1981). Discriminate validity tells the reliability of measures and the extent to which a given construct is genuinely distinct from other constructs. A commonly used statistical measure compares the AVE with the correlated squared root (Fornell & Larcker, 1981) and when the AVE is greater than the square root of the inter-factor correlations (Fornell & Larcker, 1981) then discriminant validity test is passed.

Table 2: Fornell and Larcker (1981) criteria for SD

	ActUsg		**MBCI**		**OvalSat**		**SysQ**		**TrTech**	
	SD	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**
Act Usg	**.768**	**1.00**								

MBCI	.199	.139	**.866**	**1.00**						
Oval Sat	.108	.190	.542	.252	**.919**	**.941**				
SysQ	.155	.181	.563	.278	.675	.695	**.869**	**.881**		
TrTech	.148	.117	.425	.185	.421	.440	.563	.484	**.926**	**.921**

Note: Values in a bold along the diagonal is the square root of AVE for each factor.

Table 1 and 2 show that all the AVEs (values on the diagonal) are more significant than the square root of the inter-factor correlations, thus demonstrating reliability for the measures. This displays the uniqueness of the factors.

However, recently, research providing a more reliable discriminant validity test - the Heterotrait-Monotrait (HTMT) ratio, has been advanced. This maintains that discriminant validity scores should be <0.85 amongst the square root of the inter-factor correlations. Again, from the test results provided in Table 3 it is shown that this criterion is met. Therefore, the factors of the research instrument are genuinely distinct from each other (Henseler, 2017).

Table 3: Heterotrait-Monotrait ratio (HTMT) SD

	ActUsg		**MBCI**		**OvalSat**		**SysQ**		**TrTech**	
	SD	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**	**SD**	**BD**
Act Usg	.345	.103								
MBCI	.274	.192	.589	.254						
Oval Sat	.135	.190	.638	.293	.425	.730				
SysQ	.206	.135	.480	.324	.439	.451	.424	.591		
Tr Tech	.192	.056	.657	.074	.654	.402	.563	.505	.354	.558

4. Analysis of the control variables:

4.1 Controversy I

Demographic factors of age, gender, income level, education and location (Foroudi et al., 2018; Alhidari et al., 2018), because of their inherent psychological effects on users' decision-making regarding m-device size in the extant literature, have been used to moderate many studies. This moderation, just looks at the outcome but not the content. In other words, the particular reasons that influence the individual device size are overlooked by these demographic properties. In light of this, the current study used, why m-banking users prefer a particular m-device size over others to control the study to help the banks make the right decisions over their investments in m-devices. The operationalisation of the scale items for these control variables is shown below.

The reasons why I prefer SD for m-banking is because:

a. It is easy to carry around
b. It is portable, I can sit anywhere and do banking

c. It is not heavy, I can stand anywhere and do banking
d. Technologically, it is easier to use than a laptop
e. I do not have a laptop

Table 4: Descriptive statistics of the SD users

Constructs	Question	Mean	Std Dev	Median	Min	Max	Kurtosis	Skewness
Small Device reasons	SD Res1	4.473	0.689	5	1	5	6.241	-1.883
	SD Res2	4.508	0.663	5	1	5	7.594	-2.038
	SD Res3	4.406	0.749	5	1	5	4.197	-1.655
	SD Res4	3.808	1.097	4	1	5	-0.363	-0.656
	SD Res5	2.088	1.386	1	1	5	-0.390	1.019

Std Dev= standard deviation

The reasons why I prefer BD, such as a laptop is because:

a. A larger screen and better resolution make it comfortable to use
b. It is easier to key in data than with smaller devices
c. I feel in-control when I use a laptop than with smaller devices
d. When fully charged, laptops last longer, which enables me to do banking at my own convenient time in the day anywhere
e. Technologically, it is easier to use than a cell phone or other smaller device

Table 5: Descriptive statistics of the bigger device users

Constructs	Question	Mean	Std Dev	Median	Min	Max	Kurtosis	Skewness
Big Device reasons	BD Res 1	4.205	0.696	4	1	5	1.100	-0.762
	BD Res 2	3.856	1.069	4	1	5	0.225	-0.942
	BD Res 3	4.020	0.874	4	1	5	0.582	-0.832
	BD Res 4	3.794	0.945	4	1	5	0.029	-0.596
	BD Res 5	3.710	1.010	4	1	5	-0.206	-0.653

Std Dev= standard deviation

4.2 Analyses of Kurtosis and Skewness

4.3 Controversy II

The kurtosis and skewness of the two devices indicate that these devices' users have different peculiar preferences. This is of interest to this study because, usually, no attention is paid to the kind of device used to undertake m-banking. The results indicate that the two users participate somewhat differently in this practice. Putting in perspective, the Std Dev of

the SD tends to move out (4) of the mean compared to the BD, which tend closer to the expected mean value (3). However, the IPMA for the reasons of SD indicates that the impact performance was 87.462 with an important path of 0.603 as opposed to 78.743 and 0.553 for BD.

The concept of kurtosis and skewness statistics presupposes that there will be the normal distribution between these two gadgets whose peculiar differences one will not be so keen on when deciding for m-banking. However, this was not to be. The standard model relevant to analysing kurtosis and skewness is that a normal distribution will have the same means and medians with 68% of data falling into one std deviation from the mean, 95% within two std deviations and 99.7% within three std deviations. Nevertheless, we see a different picture. The BD has skewness that looks like a normal distribution (-0.5 and 0.5), making it more predictable with lower skewness than the SD. In the same vein to the skewness, the BD's kurtosis is far from a normal distribution (value less than 4 or 5) compared to SD.

5. Discussion and Implications

It is known that m-phones and laptops surpass all other m-device used to access the m-Internet (Chhonker et al., 2018; Sudarsono et al., 2022; Gerpott et al., 2013; Planing, 2014; Kapoor et al., 2014; Baptista & Oliveira, 2016; Dwivedi & Williams, 2015). A case in point is the reference of the survey between Japanese (55% for SD) and the USAs (12% for BD) (Okazaki, 2005; Shaw & Sergueeva, 2019). This attests to device size preferences, which could lead us to new scientific discoveries when investigated thoroughly. As evinced from table 1 and 2, the two different device types' kurtosis and skewness are entirely different, giving some credence to the above authors.

This study has also shown that both SD and BD users see the service quality as the most influencing considerations but with some reservations regarding the importance and performance. The path coefficient between interaction quality and perceived quality of both SD and BD at -0.001 means that they do not consider their bankers' interactions as important and instead serve as a deterring factor in their m-banking experience. This could be due to the numerous advertisements from the e-vendor during the waiting period for a consultant. Research needs to be done to know what kind of messages will serve users' best interest during this waiting time instead of promoting banking products that could be boring and irritating. On the contrary, while SD users attributed 0.886 importance to their system quality, BD users did so with a more aggressive value of 1.060. This could be credited to the technological power and network issues that normally abode well for BDs. No wonder that all things being equal, the bigger the device, the more expensive it cost. Therefore, banks must investigate the exact size of a device that will generate this rating from their clientele base and invest in it. This, together with good interaction and information, will constitute a perfect system that can be the 'silver bullet.'

As already indicated, the thicker lines in Figures 3.1 and 3.2 highlights the critical paths for users when deciding on important influencing factors. Again, the greater the value of a particular construct, the more performance users attach to that construct. Almost all the performance result of SD surpasses that of BD. For instance, the exogenous constructs of overall satisfaction (80.499), m-banking continuance intentions (81.302) and actual usage (38.306) of SD are more significant than (71.384, 81.259 and 26.909) respectively of BD. Hence, it can be concluded that users consider SD for m-banking as their preferred device than BD. The figures also prove that SD users actually use their devices to perform m-banking more than their BD counterparts (38.806 for SD and 26.909 for BD). This is consistent with what m-banking tries to achieve: the ability to do banking while 'on the move', anywhere, anytime, and this sounds better with the SD, which is more portable than BD.

However, the BD skewness that looks like a normal distribution (-0.5 and 0.5) mean that, most of these gadgets will be more predictable by the banks, using standard deviation to forecast future returns. Again, since it has a lower skewness than the SD, it will most likely be the safest gadgets to invest in by the banks because they would be more predictable in terms of demand by the clients. This controversy needs further investigation. Nevertheless, the lesson from this is that the ideal device size should be less than a standard laptop but bigger than the smallest SD. The SD with the more negative skewed values would have a higher investment risk with a higher likelihood of negative returns. In the same vein to the skewness, the BD's kurtosis is far from a normal distribution (value less than four or five).

A great source of worry for customers is, however, the problem in the trust dimensions. Thus, financial institutions should protect their m-banking customers from cyber-attacks by adding an appropriate security layer(s) before they log in to their m-applications. They should engage customers on social media and educate them on new strategies meant to make their m-banking adventure free from any hiccups. This should be done openly, transparently and frequently. Trust is very crucial in demanding loyalty. The more sceptical people become of anything including COVID-19 vaccine, the higher they put up resistance to buy into it roll out.

6. Limitations and Recommendations and conclusion

6.1 Limitations

Traditionally, every study is required to provide self-criticism for correction in the future. The first such introspection is the sample size for the pilot study. Given the limited number of participants, it became clear during data analysis that this number alone could not point out all the issues which needed to be corrected before the actual data collection. This subjected the analysis phase to a back-and-forth deletion and re-specification process, making the data suffer torture. A major setback, though, is the grouping of all handheld devices as SD

against the laptop. This can distort the actual result because these SDs range from Netbooks, Tablet PCs, UMPCs, M-Internet devices and Smartphones to PDAs with too many functionalities' differences. Thus, lambasting all as SD should be a source of worry.

7. Conclusion

Trust in the trust receiver (e-vendors) is an important ingredient which customers look for before giving their trust or utilising m-banking. Device analytics work behind the scenes to assess devices vulnerability and share this information with their social networks. Therefore, banks have to add more system protections to their website to protect the customers' access to their m-banking application to protect the financial institutions and their customers from cybercriminals. Banks should interact with service participants to determine why they do not wish to accept or continue with m-banking and provide individuals with the appropriate advice. Bank representatives assuring clients of policies to mitigate any misfortunes that may occur to them can help build current and potential clients' confidence. It might take a while before the message gets down in them, but continuous interaction and promotion of m-banking on social networks certainly pay off in the long run.

8. Recommendations model

A. Future studies should assess laptop against only one single SD among the listed above.
B. Bank representatives should join the social networks of their clients, or create pages on social media to interact and assure their clients of practices in place to make their m-banking experience problem-free.
C. **Scope for further research:** The acceptance and usage levels of m-banking the world over are below the anticipated forecast. Thus, research on this concept must be encouraged to determine all the reasons serving as a deterring factor to m-baking usage. This would add excellent knowledge to the body of the research fraternity than the current levels of studies.
D. **The relationship between SD or BD and early adoption:** Studies on this relationship are necessary and need to be encouraged. It can reveal the depth of seriousness the users attach to the various reasons why they prefer one m-device over the other how these affects early adoption. Without this understanding, many efforts to get people to accept m-banking could be in vain, with the possibility of misinterpreting users as having a bad attitude towards m-banking.
E. **Service providers' readiness to deliver service quality to users:** As the concept of service quality is expected to lead to loyalty and repeated patronage, a lot of research on banking and how ready they are to ensure m-banking continuance usage through

service quality is necessary. Any issue from network providers could also be known from an extended study.

F. **The correlation between acceptance and actual usage:** This kind of study may shed light on acceptance and actual usage, as the two are not the same. Actual usage will impact performance and usage issues, opening doors for more pragmatic policies to enhance m-banking. The same study could be expected to divulge the impact of usage and expected service delivery from all stakeholders' (clients, bankers and Governments).

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