

Assessment of the Factors Affecting the Intention to Adopt Mobile Marketing Among the Aging Population in Zanzibar

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Abstract

The popularity of mobile phones has led to the explosion of mobile service provision in different sectors such as; marketing, health, and sports. Studies evidenced that the use of the mobile service is generally associated with the younger generation while ignoring the aging population. The purpose of this paper was to investigate factors affecting the intention to adopt mobile marketing among the aging population in Zanzibar. This study was guided by an extension of the Technology Acceptance Model. The study utilized the quantitative method whereby 382 questionnaires were distributed to pensioners using a stratified sampling design. Structural equation modeling was employed to analyze the collected data. The analysis was aided by SEM-AMOS version 25. The study found out that perceived ease of use and technology anxiety strongly influenced the consumers' intention to adopt mobile marketing. Furthermore, it was also revealed that attitude had partial mediation on the relationship between consumers' perception and behavioral intention. This finding implied that mobile business vendors should design mobile marketing apps with user-friendly interfaces with a clear view of products and services for aging consumers. The finding of this study is vital to aging consumers because will improve the standard of living in the current mobile phone era.

Keywords: *Aging population, mobile marketing adoption, Zanzibar*

INTRODUCTION

The emergence of mobile phone communication from landlines made communication to be more ubiquitous throughout the globe. Many studies upheld the enforcement of the mobile marketing communication adoption resulting from the communication revolution of traditional landlines to mobile phones. The mobile channel become the ideal medium for business owing to the recognition of incremental value from adopting it (Bauer *et al.*, 2005). The term mobile marketing has been gaining attention in the literature of information communication technology. Studies in mobile marketing

evolved recently and have examined the perception of mobile marketing, attitude, acceptance, and continuous usage, and continues to be a vital issue.

A major reason for gaining momentum has been the increasing evidence that the mobile marketing channel involves personalized interaction between consumers and vendors contrary to traditional marketing as depicted by Hall, (2018). Thus, continued to grow tremendously in recent years as reported to reach 327 billion US \$ globally in 2022 and is expected to reach 400 billion US \$ by 2024 (Statista Research Group 2023). It is generally expected that the perception and attitude of consumers toward mobile marketing need to be well understood for the successful development of sites, promotion, and continuous adoption and usage of mobile marketing (Sham *et al.*, 2014, Carrol *et al.*, 2009).

Although many studies have been conducted to identify consumers' perceptions of mobile marketing and attitudes toward mobile marketing adoption, just a few have assessed aging consumers' perceptions of mobile marketing. However, aging consumers seem to be less in using mobile app services, as reported in Statista (2023a) that aging consumers (65+) were only 1% to 2% of different mobile app category users. Since this segment is increasingly growing tremendously than youth in many countries, the situation increasing the importance to academician and mobile marketing practitioners to understand their needs and perceptions. Aging consumers must perceive mobile marketing in generally positive terms to sustain the growth of mobile marketing. In this context, the relationship between aging consumers' perception and intention to adopt mobile marketing needs to be understood, yet the area is not well investigated.

The lack of such knowledge limits the current research on understanding the aging consumers' perception of mobile marketing. Most of the research in mobile marketing was conducted on youth (Maseke, 2020; Abraham, 2018), these studies investigated the antecedents of attitude toward acceptance and usage specifically to students and other groups of youth (Agbasimelo, 2023; Donga & Kadyamatimba, 2020; Bakare, 2017; Donga *et al.*, 2018) and less participation of aging consumers (Maisara *et al.*, 2022; Maduku, 2015, Chille *et al.*, 2021). According to Unal, *et al.*, (2011), the behavior in technology adoption varied significantly between the youth and adult generation. Because of the diversity of attitudes based on education, age, gender, anxiety, social, economic, and cultural uptake. This shows that since attitude differs among consumers therefore more studies are needed to verify factors influencing the adoption of mobile marketing.

In studying technology adoption TAM theory is declared to be the best technique used to elaborate on the rationality of users' acceptance and use of technology within different contexts (Chille *et al.*, 2021; Chen *et al.*, 2017; Charness and Boot, 2016). It helps users understand why innovative technology might be acceptable or unacceptable while taking suitable measures besides providing predictions (Lai, 2017). Since the theory assumed if the system is recognized to make the task easier to perform, this increases the probability of acceptance as being useful (Ajibade, 2018). However, this theory appeared to have some limitations in explaining adoption in other consumers such as aging population. As the theory lacks some important theoretical constructs such as psychological constructs like anxiety or physical influences. Venkatesh and Bala, (2008) and Putra, (2018) recommended the extension of the model to increase its predictive power in technology adoption which alone could not be able to provide a wide-range antecedent to mobile technology use.

This study opts an extended TAM model by including technology anxiety. Anxiety was scarcely studied in aging consumers' intention to adopt technology such as mobile marketing in Tanzania. This new construct has been included because it has been used to determine adoption in other forms of technologies such as cardiac warming system (Tsai, Lin, Chang & Lee, 2020), technophobia for digital living (Giacomo *et al.*, 2019), healthcare system (Riboni *et al.*, 2020), and little is known concerning factors affecting mobile marketing among aging population. Surprisingly, Lee (2010) came up with the finding that youth are more anxious than aging population when it comes to technology adoption. Therefore, inconclusive findings have motivated researcher to undertake this study.

This study is important because mobile technology adoption is still immature in most of African countries (Nyatsambo, 2021, Uwamariya, 2021, Chille *at al.*, 2021; Engotoit *et al.*, 2016). Additionally, most of the aging population are pensioners and they are believed to have disposable income to purchase anything (Fitzgerald, 2023). On top of that aging population is an emerging market that is growing too fast. It is estimated that by 2030, 1 in 6 people in the world will be from 60 years and above, the number will increase to 2.1 billion in 2050 (WHO, 2022). Therefore, the assessment of the aging population in mobile technology becomes indispensable. Additionally, it is also reported that by 2050, two-thirds of the world's population over 60 years will live in low and middle-income countries (WHO, 2022). Thus, this poses the urgency for this study.

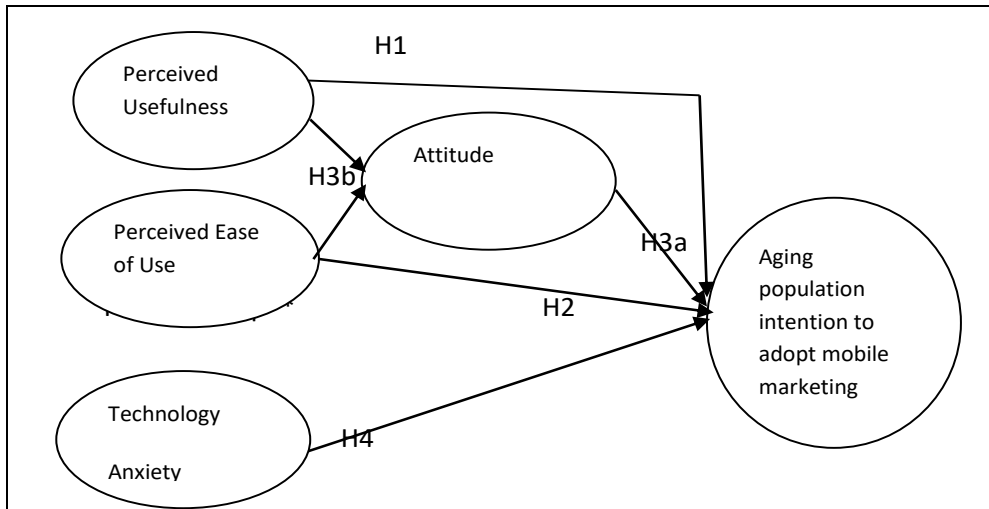


Figure 1: Conceptual Framework
Source:

METHODOLOGY

The questionnaire for this study was borrowed from previous studies of Chan *et al.*, (2022), Plasse (2017), Haq and Ghouri (2018), and Tsai *et al.*, (2020). However, the survey was adopted and tailored to the respondent's language so as to be well understood. A pilot study was conducted among 15 retirees who visited the Pension Fund office in Zanzibar. The exercise intended to check the appropriateness of wordings, structures, and suggestions for improving the questionnaire as recommended by Gyankovandar (2022). The actual data collection was done during the period of pensioners' verification season of July 2023 at three Pension Fund offices in Zanzibar. Respondents were conveniently approached at Zanzibar social security fund offices and asked to take part in the study. In this study, the aging population covered all retirees from the age of 60 years and above, and they benefit from ZSSF pension in Zanzibar.

From the pilot study, substantive changes were made to the pre-determined set of questions. All items were measured using 5 Likert-scale (1 strongly disagree to 5 strongly agree). The sample size was estimated based on the Yamane (1967) method in which the estimate was based on the size of the consumers of the study and level of accuracy which was set to be 0.05 for a confidence level of 95%. Hence based on 2022 statistics (Ministry of Finance, 2022), there were 1,203,683 aging population in Zanzibar. Therefore, the sample size for the study was 399. This sample size was appropriate for SEM as it was verified by (Hair *et al.*, 2006).

FINDINGS AND DISCUSSION

Respondents Demographic Characteristics

Response rate was 96% of the distributed questionnaires, 48% were male and 52% were female. The age of 60 years to 70 years were 58.2%, the age of 71 to 81 years were 25.9%. 13.1% were aged of 82 to 92 years, and only 2.9% were above the age of 93 years. Among these retired pensioners 17% were investors, 29% were employed on a contract basis and 54% were non-employed nor investors. Studies showed a correlation between experience levels and the mobile marketing technology for the experience of using similar technology, the study categorized the levels of experience of the respondents based on years, to facilitate answering the studied objectives. Among respondents, 31% had experience of 1 year of using a mobile phone. 28% used mobile phones within one to four years, while 41% had experience of more than four years.

Table 1: Respondents Demographic Characteristics

Variable	Frequency Percentage
Age	
60-70	222 (58)
71-81	99 (26)
82-92	50 (13)
above of 93	11 (3)
Gender	
Male	161 (42)
Female	221 (58)
Occupation	
Investors	65 (17)
Employed	111 (29)
Non-employed nor investor	206 (54)
Experience on mobile phone usage	
Within 1 year	119 (31)
1-4 years	106 (28)
Above 4 years	157 (41)
Location	
Urban	308 (80)
South	42 (11)
North A	36 (9)

Source: Field Data (2023)

Exploratory Factor Analysis (EFA)

The study used exploratory factor analysis to explore and assess the usefulness of the items used in the pilot study since they were adapted from different authors and tailored a bit based on targeted sample. Therefore, EFA was carried out to identify data patterns and its relationships. The extraction method was Maximum likelihood which best suited for small number of variables in normal distribution of the data (Onyekachi and Olanrewaju, 2020) and rotation method used was Oblimin with Kaiser normalization. The items load from 0.55 to 0.97 and there were no cross-loadings, thus achieved the acceptable value of 0.5 (Gaur & Gaur, 2006) as revealed in Table 2.

Table 2: Rotation Component Matrix

The Rotated Components Matrix of Aging Consumers intention to adopt mobile marketing technology					
Items	PU	PEOU	Anx	BI	ATT
Marketing messages received on my mobile phone help to reduce the time it takes me to search for products and services	0.924				
Marketing messages received on my mobile phone help to improve my shopping efficiency, especially when I am in a hurry or in a new city	0.907				
Marketing messages received on my mobile phone save me money.	0.897				
Shopping through mobile marketing contributes to a betterment of life	0.887				
With regard to mental effort, I believe receiving marketing ads through mobile phone is very effortless.		0.918			
The task of searching marketing messages via mobile phone is very simple		0.877			
The task of interacting with marketing messages via mobile phone is very simple		0.851			
It would be easy for me to become skillful in using mobile marketing		0.818			
I feel nervous about using mobile marketing			0.931		
I hesitate to use technology for fear of making mistakes I cannot correct			0.911		
I am worried about the rapid advances in information technology			0.756		
I avoid to use mobile marketing because it is unfamiliar to me			0.733		
Given the chance I intend to use mobile marketing				0.816	
I intend to buy products and services via my mobile phone				0.815	
I expect to continue with mobile marketing in the future				0.811	
I would respond to a coupon offer for a product or service on my mobile phone.				0.743	
Mobile marketing is so interesting, that you just want to learn more about it					0.846
If someone taught me how to use mobile marketing, I would continue to use it					0.826
I am looking forward to using mobile marketing more often					0.810
Other people should use mobile marketing					0.791

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: Field Data (2023)

Then the sample adequacy tested through KMO and Bartlett’s test of Sphericity respectively. Kaiser Mayer Olkin (KMO) test was 0.9 which denoted good according to Bagby, Parker and Taylor (1994). Bartlett’s test conducted to check for the existence of adequate correlation among variables and values should be less than 0.05 of the significant level. From this data the correlation coefficient value of all constructs ranges from 0.209 to 0.566 which is much smaller than the cutoff threshold of 0.85 (Kline, 2005) and was highly significant ($p < .001$) as shown in Table 3. Therefore, there was evidence that there was sufficient correlation of the variables in a proposed model.

Table 3: Factor Correlation Matrix

Factor	AMM	PU	PEOU	TANX	ATT
AMM	1.000				
PU	.341	1.000			
PEOU	.228	.394	1.000		
TANX	.569	.407	.232	1.000	
ATT	.301	.388	.420	.303	1.000

Extraction Method: Maximum Likelihood
 Rotation Method: Promax with Kaiser Normalization.

Source: Field Data (2023)

Finally, the reliability analysis was conducted to explore if the research tools measured the intended outcome (Saunders *et al.*, 2012). The reliability estimates showed Crobach’s Alpha values of all constructs exceeded the cut-off point of acceptable range of 0.7 (Nunnaly, 1978), thus there were equally reliable and there is internal consistency of the measured items.

Table 3: Pilot Study Cronbach Alpha Reliability Test Results

Construct	Items tested	Crobranch Alpha	Remarks
AMM	AMM1, AMM2, AMM3, AMM4	0.861	Adequate reliability
PU	PU1, PU2, PU3, PU4	0.928	Adequate reliability
PEOU	PEOU1, PEOU2, PEOU3, PEOU4	0.865	Adequate reliability
TANX	TANX1, TANX2, TANX3, TANX4	0.942	Adequate reliability
ATT	ATT1, ATT2, ATT3, ATT4	0.847	Adequate reliability

NOTE: AMM: Intention to adopt Mobile Marketing, PU: Perceived Usefulness, PEOU: Perceived Ease of Use, TANX: Technology Anxiety, ATT: Attitude toward adoption

Source:

Measurement Model

Confirmatory Factor Analysis (CFA)

CFA was employed to validate constructs for this study. Maximum Likelihood Estimator (MLE) algorithms was employed because it is accurate

and efficient based on Baistaman *et al.*, (2020). The measurement model should have met the construct validity, convergent validity and discriminant validity before continuing with structural model were then assessed as recommended by Hair *et al.*, (2006). The construct validity was assessed through goodness of fit indices (GIF). The results from CFA revealed that the data fits well in the model as most of GIF were above the acceptable cut-off point as suggested by Hu and Bentlers (1999). The results were χ^2 / df of 2.000, SRMR of 0.037 RMSEA of 0.051, TLI of 0.953, CFI of 0.958 and RMR of 0.026. Summary of the results are indicated in Table 4. The standardized regression weights are presented in Figure 2.

Table 4: CFA Model fit Indices

Fit indices	Recommended = Good Fit	Obtained indices
Relative χ^2 (χ^2/df)	< 3	2
RMSEA	0.03- 0.08	0.051
CFI	>0.90	0.958
TLI	>0.90	0.953
SRMR	≤0.08	0.037

Source: Field Data (2023)

Convergent and Composite Validity

The convergent validity and composite reliability assessed and average variance extracted (AVE). All five constructs of this study had achieved the convergent validity to the satisfactory level, where they reach the AVE value of > 0.5, as shown in Table 5, thus provided evidence that the variance explained by the construct was higher than the variance due to measurement error. The composite reliability (CR) value of 0.851 to 0.93 the values meet the acceptable ranges while the CR value of above 0.95 was not desirable based on Diamantopoulos *et al.*, (2012) and Parmaksiz, (2020). The CR value of each latent variable was also higher than AVE value of the same latent variable as shown diagonal of Table 5, rendering the assumptions of convergent validity of the measurement model.

Discriminant Validity

Discriminant validity was assessed via correlation coefficient values and hence found that the correlation coefficient between all five constructs ranges from 0.209 to 0.566 which did not exceed the cutoff threshold of 0.85 (Kline, 2005). Table 5, shows all correlation coefficients were less than 0.6 as seen in the double-pointed lines which connect the latent variables. This proves the discriminant validity since each measurement item correlated weakly with all other constructs except for the one with which theoretically associated (Ronkko and Cho, 2020).

Table 5: Reliability and Validity of the constructs

FACTOR	Crobanc alph	CR	AVE	AMM	PU	PEOU	TANX	ATT
AMM	0.816	0.851	0.588	0.766				
PU	0.944	0.935	0.708	0.209	0.841			
PEOU	0.907	0.908	0.624	0.323	0.386	0.789		
TANX	0.932	0.932	0.735	0.566	0.209	0.393	0.857	
ATT	0.843	0.858	0.548	0.281	0.398	0.373	0.279	0.740

Source: Field data (2023)

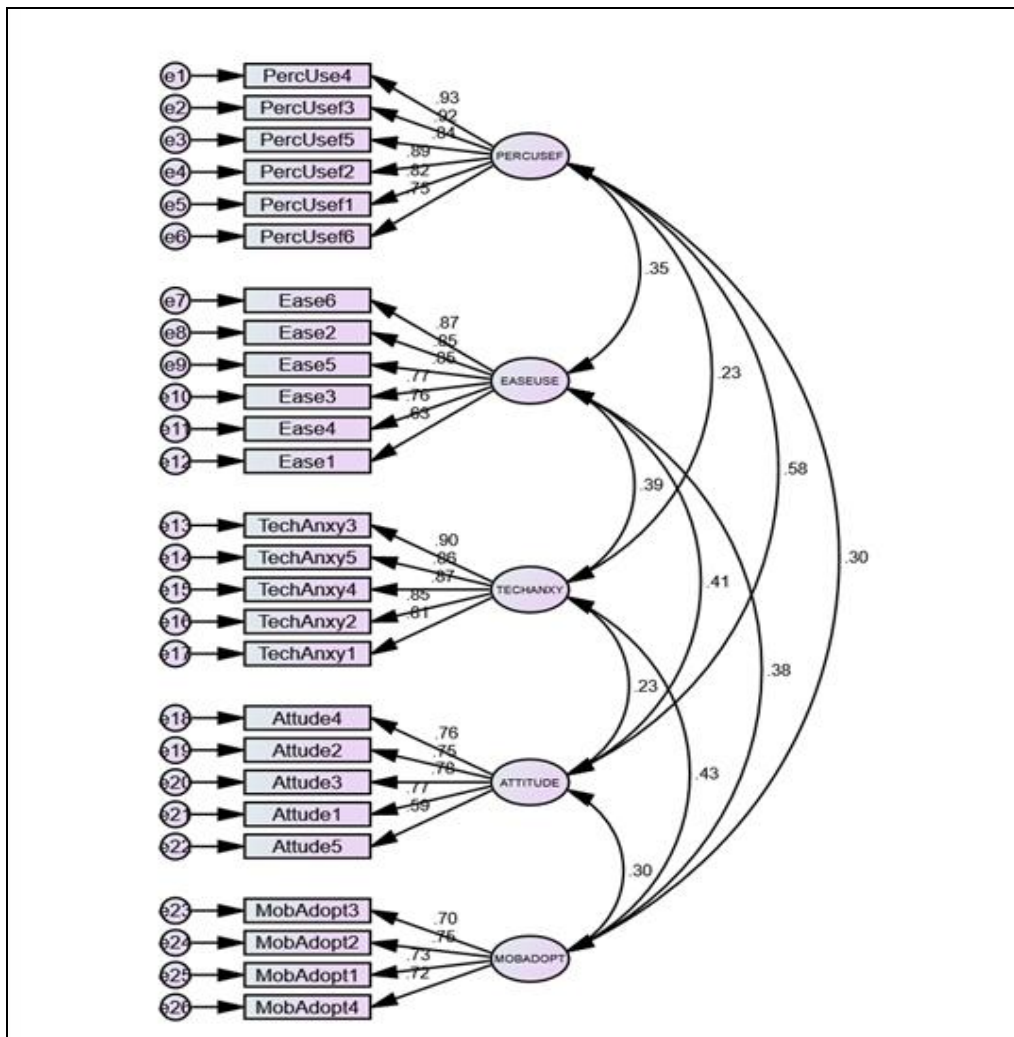


Figure 2: CFA Model.

Source: Field data (2023)

Assessment of the Normality

The normality assessed the skewness and kurtosis of the items distribution based on Baistaman et al., (2020; Civelec, 2018) approaches. The results revealed that the data followed normal distribution since the skewness and kurtosis were within the acceptable range of -1.5 to +1.5 (Baistaman *et al.*, 2020; Awang, 2015) therefore all items could be used for further analysis of the model as presented in Table 6.

Table 6: Data Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
AMM4	1.000	5.000	.303	2.414	-.880	-3.513
AMM3	1.000	5.000	.437	3.484	-.440	-1.756
AMM2	1.000	5.000	-.420	-3.350	-.707	-2.820
AMM1	1.000	5.000	.276	2.199	-.803	-3.205
TANX5	1.000	5.000	.791	6.310	.428	1.706
TANX4	1.000	5.000	.704	5.621	.004	.017
TANX3	1.000	5.000	.808	6.449	.573	2.285
TANX2	1.000	5.000	.704	5.615	-.105	-.419
TANX1	1.000	5.000	.831	6.634	.175	.698
ATT5	1.000	5.000	-.584	-4.656	.491	1.957
ATT4	1.000	5.000	-.866	-6.906	1.839	7.338
ATT3	2.000	5.000	-.707	-5.642	2.484	9.909
ATT2	2.000	5.000	-.679	-5.416	.918	3.663
ATT1	2.000	5.000	-.822	-6.559	1.962	7.827
PU6	1.000	5.000	-.878	-7.004	2.132	8.504
PU5	1.000	5.000	-.561	-4.478	.837	3.341
PU4	1.000	5.000	-.594	-4.743	1.105	4.407
PU3	1.000	5.000	-.595	-4.749	.927	3.700
PU2	1.000	5.000	-.700	-5.585	1.285	5.128
PU1	2.000	5.000	-.700	-5.584	.961	3.832
Ease6	1.000	5.000	-.107	-.853	-.928	-3.704
Ease5	1.000	5.000	-.083	-.663	-.887	-3.539
Ease4	1.000	5.000	-.285	-2.275	-.688	-2.745
Ease3	1.000	5.000	.298	2.380	-.484	-1.932
Ease2	1.000	5.000	.104	.827	-.809	-3.229
Ease1	1.000	5.000	.290	2.316	-.406	-1.619
Multivariate					143.677	36.797

Source: Field data (2023)

Structural Model

The relationship of the hypothesized model was measured through SEM-AMOS version 25. The structural model found out that most of GIF indices

were within the acceptable range as stipulated by Byrne (1998). The evaluation of GIF reports that the χ^2 was 577.942 degree of freedom was 289 thus χ^2 /df 2.3, SRMR = 0.032, RMSEA =0.059, NFI = 0.92 and CFI =0.958 Path hypothesis shows three of the hypothesized paths variables were significant and only one hypothesized path was not supported the remaining two were not significant. Table 7 summarizes the path coefficients of the hypothesized paths in the model.

Table 7: Structural Model Results

Hypothesis				Path coefficient	T statistic (C.R.)	P value	Label
H1	AMM	<---	PU	0.181	2.065	0.039	Supported
H2	AMM	<---	PEOU	0.163	3.361	***	Supported
H3	AMM	<---	ATT	0.110	1.144	0.253	Not supported
H4	AMM	<---	TANX	0.290	5.592	***	Supported

Source: Data Collection (2023)

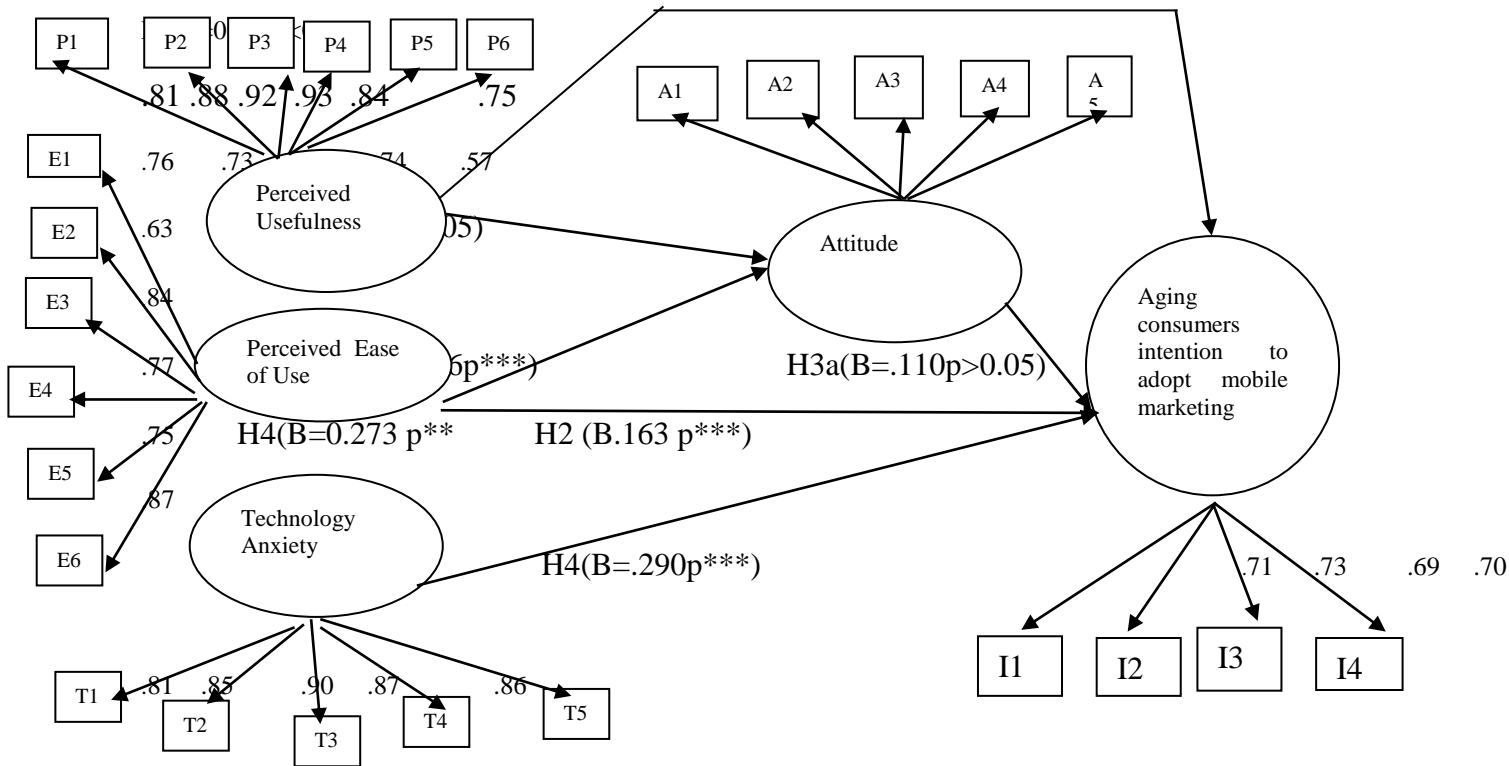


Figure 3: Structural Path Results
Source: Field Data (2023)

Mediation Testing

On analyzing the path hypothesis H3b i.e. assessing the mediation role of attitude on the relationship between PU, PEOU behavioral intention, the Hayes Process Macro with application of SPSS statistics was used. The significance effect of mediating role of attitude on the relationship between latent and observed variables was partially achieved as the total effect was significant at $p < 0.01$, $B = 0.3469$, $R^2 = 9\%$, $t (5.4873)$. The direct effects of Perceived Usefulness, on the presence of the Attitude mediator were also significant at $p < 0.01$, $B = 0.254$, $R^2 = 28\%$, $t (3.315)$. The indirect effect of PU to explain the mediator was significant the Bootstrapping intervals does not include zero ($B = 0.1018$, $BootLLCI = 0.0264$, $BootULCI = 0.1841$). besides the mediating effect of Attitude on the relationship between PEOU and behavioral intention revealed the total effect was significant at $p < 0.01$, $B = 0.3469$, $R^2 = 9\%$, $t (5.4873)$. The direct effects of PEOU, on the presence of the Attitude mediator were significant at $p < 0.01$, $B = 0.3663$, $R^2 = 14\%$, $t (7.1604)$. The indirect effect of PEOU to explain the mediator was also significant the intervals do not include zero ($B = 0.0565$, $BootLLCI = 0.0155$, $BootULCI = 0.0981$). However, the analysis results revealed the significant partial mediating effect of Attitude on both relationships, and thus providing evidence to support the path hypothesis H3b as depicted in Table 8.

Table 8: Mediation Testing Results

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Interval		T statistics	Conclusion	Label
				Lower bound	Higher bound			
PU->ATT->AMM	0.3469 (0.000)	0.2451 (0.05)	0.1017	0.0264	0.1841	5.487	Partial Mediation	Supported
PEOU->ATT->AMM	0.3663 (0.000)	0.3098 (0.000)	0.0565	0.0155	0.0981	5.673	Partial Mediation	Supported

Source: Field Data (2023)

DISCUSSION

This study investigated the factors affecting the intention to adopt mobile marketing technology on aging consumers in Zanzibar, and secondly to investigate the role of attitude on mediating the relationship between the aging consumers' perception and their behavioral intention.

Through the model that was used, Path hypothesis 1 (i.e. Perceived Usefulness had a positive and significant influence on aging consumers' intention to adopt mobile marketing technology) and was supported with a t value of 2.065 ($p < 0.05$) $\beta = .181$, hence hypothesis H1 was accepted. The main concern in the adoption of mobile marketing was the perception of

usefulness which might be perceived when one explores new features such as ubiquitous, interactive, and compatibility of the medium which were found to be more beneficial to them (Hui, Haji and Zhang, 2018). In this manner, the results support other studies Chille *et al.*, (2021), Chan *et al.*, (2022), Haq and Ghouri (2018), and Nabot *et al.*, (2020). However, the result contends with Chimbarazo *et al.*, (2021) and Oscaret *et al.*, (2017) who vowed that the main driver of mobile technologies to consumers who have a lower level of experience and low confidence in mobile phone use was not utility or convenience at the adoption, but mostly the entertainment and fun experience on using mobile device.

Next Perceived Ease of Use was found to have a positive and significant influence on aging consumers' intention to adopt mobile marketing technology. Supported with a t value of 3.361 ($p < 0.000$) $\beta = .163$, hence the hypothesis H2 was accepted. This is the second more influential variable, thus implying that aging consumers consider more on the complexity of the technology in emerging of new innovations. The result from the model supports other studies of Yap *et al.*, (2022) Zhou *et al.*, (2019); Ali *et al.* (2019); Jayaratne *et al.*, (2017); and Pan and Jordan (2010), concomitantly, suggested the products of mobile technology should not require a lot of mental effort to learn and to use, besides by offering support to consumers could reduce the perception of difficulties and complexities. Besides Liesa-Orus *et al.*, (2023) also a strong influence of PEOU on aging consumers' intention to adopt other technology on the perception that the innovated technology is easy to use when they are competent to overcome barriers on the adoption of such technology. However, this result contends with Li *et al.*, (2019) Chen and Chan (2014) Gurner and Acaturk (2018), and Li *et al.*, (2019). Brawn (2013) said aging consumers perceived the technologies to be relatively difficult to use and understand, therefore the adoption of some technologies was not being positively encouraged.

Additionally, the effect of Attitude on aging consumers' intention to adopt mobile marketing technology was found insignificant at $t = 1.144$ $P > 0.05$ and $\beta = .011$. Therefore, path hypothesis H3_a was rejected. Attitude by itself was confirmed to be insignificant in influencing behavioral intention as depicted by Ventakesh *et al.*, (2003); Putra, (2018), and Riantinia *et al.*, (2021). Thus, aging consumers might have no intention to use mobile marketing despite of having a favorable attitude towards mobile phone technology use. A further role of attitude on mediating the relationship between perception and behavioral intention was assessed and found to be partially mediation. The study results are steady with Kumar *et al.*, (2020), Haq and Ghour (2018) and

Verma *et al.*, (2017) who confirmed the mediating role of attitude towards behavioral intention to adopt technology, and emphasized the improvement of the positive attitude on the consumers' perception which could be attributed by making the mobile application simpler and benefited to consumers. The study findings were consistent with prior studies by George *et al.*, (2022) and Teo (2009) concomitantly who vowed that the effect of attitude was not directly associated with the intention to use the technology. Also, Davis's (1989) notion in the development of TAM theory as attitude play a vital role in influencing technology adoption in individual basis. However, other studies contend with this study result. Ventakesh and Davis (2000); Chauhan (2015) and Tobbin (2014) vowed attitude has no role in mediating the consumers' perception with behavioral intention.

Finally, the effect of Technology Anxiety to influence the aging consumers' intention to adopt mobile marketing technology was also accepted with a t value of 5.592 ($p=0.000$) and $\beta= .290$. Therefore, the hypothesis H4 is accepted. Technology anxiety is the strongest predictor among the tested variables in the model. Anxiety was not an obstacle to adopting mobile marketing technology because of the mobile lifestyle currently experienced around the globe. This result was consistent with the studies of Adikoeweswanto *et al.*, (2022), and Kimiloglu *et al.*, (2017) who asserted that sometimes anxiety did not cause a negative influence that affected the intention to use the technology. Despite of the anxiety on services provided through mobile phones, there was an increase in the adoption of these services such as mobile money, mobile banking, mobile health, and mobile marketing.

CONCLUSION

Conclusively, the current study aimed to investigate the factors affecting the intention to adopt mobile marketing technology on aging consumers in Zanzibar. The proposed model explored TAM variables in extension with technology anxiety on the aging consumers' intention to adopt mobile marketing. In our model technology anxiety, perceived ease of use, and perceived usefulness were the main factors driving intention. The result emphasized the vitality of making mobile marketing apps simple to meet the requirements of aging consumers. Attitude did not directly influence intention, however partially mediated the behavioral intention through perceived usefulness and perceived ease of use.

On theoretical basis, the study contributes to the extension of the TAM model. Since TAM alone could not be efficient in explaining the aging

consumers' intention to adopt technology as the model lacks specific attention related to aging consumers. Most of the existing works focused on actual mobile technology usage (Nunan and Domenico, 2020; Jingqi et al., 2016; Gunasighe and Nanayakkara, 2021; Sahin and Sahin, 2022; Kummer *et al.*, 2017). This study adopted an extended TAM Model by adding technology anxiety. To the best of our knowledge, the effect of technology anxiety among the aging population has been never reported in the context of mobile marketing. Therefore, this finding could be the roadmap for other researchers in the related field.

In the practical basis, mobile marketing vendors should engage more directly with anxiety-driven perceptions such as; trustworthiness, safety, ubiquity, and customer satisfaction to bear pleasing and motivating sensations during the early stages of mobile marketing technology introduction. Timely information related to the mobile service will help to increase intention to adopt mobile service despite the existence of anxiety about the use of mobile technology.

RECOMMENDATION

The current study used a cross sectional survey approach to investigate the factors affecting intention of aging population in adoption of mobile marketing specifically in Zanzibar. This limits the generalization of the study findings to other areas. Therefore, further studies recommended to extend the scope to other districts in Tanzania to increase the demographic representation of the consumers. Lastly, this study sample was more biased toward pensioners only, since respondents had diversity in demographic traits which could affect the validity of the sample taken. Therefore, further studies are recommended to test the conceptual model in another group of the aging population so as to identify factors affecting intention to adopt mobile marketing among other aging populations in other countries.

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