An Investigation into M-Commerce Perceived Value: Assessing the Digital Transformation of Shopping Among Millennials and Generation Z in the Eastern Cape

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Abstract

The millennials (generation Y) and generation Z are perceived to be the most attractive and significant segments of the global population for online shopping. However, these segments would show much higher variation in their online shopping in South Africa. With the need to increase productive uses, among other things, in e-commerce and e-banking, this study's purpose was to examine the m-commerce perceived value among the millennials and generation Z in tertiary education in Butterworth, South Africa, and provide recommendation based on their actual technological value perception. The quantitative research approach and the cross-sectional study design was used. Surveymonkey.com was used as the survey tool to collect data. The study employed the cluster sampling technique to approach the participants. Findings show that perceived usefulness continues displaying a prominent position as a driver of the use of recent technologies. Amongst the value perceptions of the m-commerce use by the millennials and generation Z, perceived usefulness was the dominant, followed by ubiquity, monetary value, information value, convenience, and social value. Recommendations made on the basis of the empirical study and suggestions for future research are proposed.

Keywords: *Digital Transformation, Generation Z, M-Commerce, Millennials, Perceived Value*

Introduction

The customer's perception of value has been reported as an important factor to understand customers experience with retail online shop (Chopdar & Balakrishnan, 2020) and build customer loyalty (Karjaluoto, Shaikh, Saarijärvi & Saraniemi, 2019). The evaluation and understanding of customer's perceived value of m-commerce could be critical for customer service improvement, management of customers' needs and wants, incorporation of the changing consumer behaviour (Utami, Astuti, Ramadhan, Trialih & Aprilian, 2019) and effective integration and use of m-commerce amongst other things. In other words, customers' perception of value of m-commerce can enable retailers to improve their technological innovation capabilities to better support their online customers (Pura, 2005).

It has been observed that customers plan to use technologies with several realistic and unrealistic expectations (Pura, 2005; Hsu & Lin, 2015; Gan & Wang, 2017; Yu & Lee, 2019; Chopdar & Balakrishnan, 2020; Anwar, Thongpapanl & Ashraf, 2021). They could have expectations related to an improvement on service quality, price, their shopping experience or time management. However, any gap between their expected value and the value that is offered, can prevent customers from using their device for m-commerce (Hsu & Lin, 2015; Gan & Wang, 2017). The match of the expected value and the value that is offered should result in the use of m-commerce. Thus, it is important to stress that it would be useful for retailers to understand and deliver on customers' perception of value to increase the likelihood of the business meeting the value in question (Pevec & Pisnik, 2018). In other words, the more potential customers perceive the m-commerce systems value that are current enough or maintained at an appropriate level of detail and meet their expectations, the more they are likely to use the m-commerce. Thus, assessing current customer's perceived value of m-commerce is essential, in that "customer segments may have different motives to use services and thus perceive different value in them" (Pura, 2005:510).

The present study seeks to examine the m-commerce perceived value among millennials (i.e. generation Y) and generation Z, specifically the tertiary education students in Butterworth, South Africa. Since the millennials and generation Z tend to spend more time on the internet, they are perceived to be the most attractive and significant segments of the global population for online shopping (Makhitha & Dlodlo, 2014). However, a study conducted by Makhitha (2014) have found that although the generation Y would spend

more time online, majority of them did not shop online. Research carried out by Research ICT Africa indicate that majority (98%) of its respondents in South Africa would use the internet for social networking, while less than 30 percent would use the internet for shopping (Partridge, Makumbirofa, Moyo, Omar & Ahmed, 2024). In addition, a study on the pace of online shopping growth and adoption in South Africa, has identified that a significant relationship exists between the psychological risk, social risk and financial risk, and online consumers' purchase intention (Pentz, Du Preez & Swiegers, 2020). In the light of the above, the Department of Communications and Digital Technologies (2024) has recognised the need to increase productive uses, among other things, in e-commerce and e-banking. Consequently, the present study seeks to assess the m-commerce perceived value among millennials and generation Z in tertiary education in Butterworth, and provide recommendation based on their actual value perception. The study is based on the presumption that the millennials and generation Z's perception of value of m-commerce may help them as well as non-users weigh the possibility of shopping via m-commerce channel against other channels. Retailers may develop new understanding of millennials and generation Z's shopping behaviour and evaluate what channels they are more likely to use on their next shopping activities (Asshidin, Abidin & Borhan, 2016:641). Thus, by examining the perceived value of m-commerce, the pivotal role of this innovative technology could be realised (El-Haddadeh, Weerakkody, Osmani, Thakker & Kapoor, 2019:315) and retailers in South Africa could formulate marketing strategies, design new capabilities to meet potential consumers' wants and grow the m-commerce channel.

Literature Review

Perceived Value

An individual's perceived value can be described as one or a variety of different attributes of an object which has been evaluated by the individual in question. According to Jiang, Jun and Yang (2016:301) perceived value is concerned with the "results from an overall evaluation of the rewards and sacrifices associated with the service". It has been noted that the mobile value should be understood as "the value arising from the mobility of the new medium, i.e. making use of electronic services while 'on the move/road'" (Anckar & D'Incau, 2002:48). Thus, consumers' perception of value of m-commerce via their mobile technology may help them weigh the possibility of shopping via m-commerce channel against other channels. When customers perceive the value of use m-commerce applications they realise "what they get vis-à-vis what they have to give to acquire products and services" (Chopdar & Balakrishnan, 2020:3). They hold certain beliefs about the attributes of or pieces of information about the technology at their disposal, which ultimately influence their behaviour (Yu & Lee, 2019). Prior studies in South Africa have noted that, these generations tend to place more value on the convenience of online shopping (Makhitha & Dlodlo, 2014) and the order fulfilment (delivery of products) than the tangible aspects of products (Heyns & Kilbourn, 2022).

Dimensions of Perceived Value

Reviews of the literature indicate that perceived value has been analysed as one-dimensional (Ponte, Carvajal-Trujillo & Escobar-Rodríguez, 2015; Shaw & Sergueeva, 2019; Chopdar & Balakrishnan, 2020; Anwar et al., 2021), two-dimensional (Hong, Lin & Hsieh, 2017; Karjaluoto et al., 2019), or multi-dimensional construct (Pura, 2005; Hsu & Lin, 2015; Gan & Wang, 2017; Yu and Lee, 2019). According to Jiang et al. (2016) despite the reported importance of price in the evaluation of a product, a customer may also perceive new added value attached to a core product, e.g. quality service, as superior to competitors' offerings. Therefore, perceived value should not only be thought of as one-dimensional construct. The two-dimensional construct analysed in the field of Information System (IS), is usually conceptualised as hedonic and utilitarian value, which relate to having fun benefits and effective and efficient technology usage, respectively (Hong et al., 2017; Karjaluoto et al., 2019). According to Jiang et al. (2016) a customer can perceive different value of an offering. From a multidimensional perspective, perceived value denotes a sum of distinct dimensions of value which consumer form of different objects in different situation (Yu & Lee, 2019).

The richness of mobile technology attributes prompts many users to use the mobile device to capitalise on its advantage. Pura (2005) suggests three dominant perceived value dimensions associated with mobile location-based services, which were grouped into two value perceptions, convenience, monetary (content-related value perceptions) and conditional (context-related value perceptions). Pura (2005) argues that customers would experience the content-related perceived value by using the retailer's mobile content services, and the context-related perceived value when they are under certain physical and temporal conditions. The context-related value supports that customers are no longer shopping only locally, but also globally. M-commerce may be used to respond to any geographic barriers and receive timely services. User's interest in a product which is not offered in the local market, may trigger their intention to use. However, one can identify similarities between ubiquity and context-related value dimensions. Ubiquity has been observed as one of the most valuable dimensions of mobile services value (Clarke, 2001; Okazaki & Mendez, 2013), which differentiates it from in-store and other e-commerce. With smartphones, customers may have access to mobile services at any time and any place.

Furthermore, reviews of the literature indicate that perceived usefulness (PU), one of constructs of Technology acceptance Model (TAM) model, has been observed as a dominant driver of behavioural intention (Davis, 1989; Yen, Wu, Cheng & Huang, 2010; Awa, Ukoha & Emecheta, 2012; Chi, 2018). An individual's perception of technology benefits may motivate his or her behavioural intention to use the technology (Davis, 1989:333; Venkatesh & Davis, 2000:186; El-Haddadeh et al., 2019). Other variables discussed in the literature include the service quality and social influence. According to Jiang et al. (2016) optimized service quality is an important feature of e-service. Perceived service quality may enhance customers' value perceptions of mobile technology (Jiang et al., 2016). Social influence as defined in Unified Theory of Acceptance and Use of Technology (UTAUT) theory, is "the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh, Morris, Davis & Davis, 2003:451). Social influence is concerned with the customer's feelings of social acceptance, self-esteem and self-image enhancement (Pura, 2005). It is associated with an individual's perceptions of value derived from vendor's brand and reputation (Karjaluoto et al., 2019; Dastane, Goi & Rabbanee, 2023). Thus, the individual own feelings about others' thought on his or her action towards the use of the technological innovation, plays an important role in this evaluation. Similarly, Dastane et al (2023) suggest various dimensions of value perception, of which information value and social value were marked as dominants. A consumer may perceive the information value of a system when he or she is kept well informed about the product or service, while mapping and navigating through the vendor's app or website (Larivière et al., 2013; Justino, Tengeh & Twum-Darko, 2022). Table 1 presents different dimensions of perceived value which would be critical for this study.

Table 1 Dimensions of Perceived Value

Dimension	Definition	Author(s)
Monetary value	"The financial gains perceived by online customers from purchasing online after assuring an increase in perceived benefits, such as discounts and appropriately priced items, and a minimum perceived cost or payment risk".	(Dastane et al., 2023:17)
Convenience	The effective shopping tasks' performance and accessibility of products and services with ease and speed.	(Pura, 2005)
Information	reflects "the consumer's ability to receive specific and precise product/service information anytime, anywhere, helping them stay well-informed all the time, through" mobile technology.	(Ashraf, Tek, Anwar, Lapa & Venkatesh, 2021:3).
social influence	the "degree to which an individual perceives that important others believe he or she should use the new system."	(Venkatesh et al., 2003:451)

Ubiquity	The value perceptions derived from the portability, accessibility, immediacy, and continuity of mobile technology.	(Junglas & Watson, 2003; Okazaki & Mendez, 2013)
Perceived usefulness	"The degree an individual believes that using a particular system would enhance his/her job performance"	(Davis, 1989:333).

Research Methodology

In this study, the quantitative research approach and the cross-sectional study design were employed. Surveymonkey.com was used as the survey tool to collect data on m-commerce perceived value among tertiary education students in Butterworth, South Africa. The study adapted most of measures from pre-tested survey instruments which were used in prior studies to design the survey instrument. This action as well as the expert's assistance helped to minimize invalidity of measures as well as to eliminate ambiguities in the instrument. Measures were rated on a 7-point Likert scale (i.e. 1 = strongly disagree and 7 = strongly agree). The survey was sent to students at Walter Sisulu University in Butterworth, Eastern Cape province. The cluster sampling technique was used (Sharma, 2017) to select students from different levels. From the expected sample size of 379 respondents, 225 millennials and generation Z participated in the survey, 59 individual cases were discarded due to incompleteness, and 166 individual cases were used for analysis. The study used the descriptive analysis to summarise and report the data. The measure of median, mode and frequency were appropriately used.

Results

The present study's results reveal a widening chasm between female and male respondents. This growing disparity demonstrates that there are more females (68.1%) receiving tertiary education in relation to males (31.9%). Results reveals that respondents in below 25 (92.6%) age range were the majority in comparison with the 25 to 35 (6.8%) and 36 to 45 (0.6%) age ranges.

Results related to respondents' perception of monetary value of m-commerce use (Table 2) disclosed that the majority of the millennials and generation Z surveyed concurred that they could buy affordable products or services that are offered through m-commerce (A = 53%; SA = 18.1%; SWA = 13.9%). While a low proportion of them neither agreed nor disagreed with (NAD = 8.4%) or had a difference of opinion (SD = 3%; D = 3%; SWD = 0.6) about the above statement. Results further shows that the large majority of millennials and generation Z would also shop through m-commerce if the offers are cheaper than alternative point of sales (A = 49.4%; SA = 27.1%; SWA = 10.8%), or if the online shop offers value for money (A = 51.2%; SA = 23.5%; SWA = 12%), or if the overall mobile shopping experience is reasonably priced (A = 50%; SA = 27.2%; SWA = 9.9%).

In relation to the millennials and generation Z's perception of the convenience value of m-commerce use, the majority of them ascertained that they would use m-commerce systems that are ease to use (A = 51.8%; SA = 25.9%; SWA = 10.2%) and facilitate their shopping activity at any time (A = 53.6%; SA = 22.3%; SWA = 7.2%). In contrast to the low proportion of them who were neutral (NAD = 7.2%) and had a difference of opinion (D = 3%; SD = 1.2%; SWD = 0.6%) about the formal, and the low proportion of them who were neutral (NAD = 9.6%) and had a difference of opinion (D = 3%; SWD = 3%; SD = 1.2%) about the later. Furthermore, the instantaneous and the accessibility of m-commerce usage were also regarded as valuable attributes. Majority of respondents value the possibility of using m-commerce instantly (A = 47%; SA = 19.9%; SWA = 13.3%) and the convenience of using it at any given place (A = 52.1%; SA = 19.6%; SWA = 8%), as opposed to those who were neutral and had difference of opinion about these statements.

Results related to the millennials and generation Z's perception of the information value of m-commerce, disclose that the higher proportion of them value the m-commerce practicality in information search (A = 51.2%; SA = 29.9%; SWA = 7.9%) and the fast access to information on products/services regardless of their location (A = 49.1%; SA = 26.1%; SWA = 9.1%), as compared with the proportion that were neutral or had a difference of opinion about these statements (See Figure 2). Furthermore, a higher proportion of

these respondents also show interest in using m-commerce to obtain information and be informed about the offers (A = 51.2%; SA = 21%; SWA = 12.3%) at any time.

Furthermore, the results related to the millennials and generation Z's perception of social value of m-commerce, affirm that most them agreed that they value m-commerce because it is widely used in their circle of friends (A = 42.7%; SA = 20.1%; SWA = 13.4%) and gives them social approval (A = 41.2%; SWA = 17.2%; SA = 16%). Similarly, there was also a large proportion of them who concurred that they use m-commerce because it gives a good impression on other people (A = 43.8%; SA = 18.5%; SWA = 14.2%) and helps them feel acceptable (A = 46.7%; SA = 17%; SWA = 12.7%). However, results show that there was a low but considerable proportion of millennials and generation Z surveyed who neither agree nor disagree with and had a difference of opinion as to the use of m-commerce because of being widely used in their circle of friends (NAD = 12.2%; D = 5.5%; SWD = 4.3%; SD = 1.8%), or giving them social approval (NAD = 14.7%; D = 8%; SWD = 3.1%) and good impression on other people (NAD = 13%; D = 4.9%; SWD = 4.3%; SD = 1.2%), or helping them feel acceptable (NAD = 10.3%; D = 7.9%; SWD = 3%; SD = 3%).

Results related to the perception of ubiquity value of m-commerce show that most millennials and generation Z surveyed (A = 55.6%; SA = 26.3%; SWA = 8.1%) affirmed that they value the possibility of using m-commerce to keep up with their shopping activities at any time and any place, as opposed to those who were neutral in (NAD = 5.6%) and had a difference of opinion over this statement (D = 1.3%; SWD = 2.5%; SD = 0.6%). Furthermore, a higher proportion of them disclosed that: they value m-commerce for being always available and reachable (A = 51.6%; SA = 25.2%; SWA = 10.7%) in contrast to those who were neutral in (NAD = 4.4%) and had a difference of opinion over this statement (D = 3.1%; SWD = 2.5%; SD = 2.5%); value the accessibility of practical services anywhere and anytime (A = 55.7%; SA = 20.9%; SWA = 7%) in contrast to those who were neutral in (NAD = 9.5%) and had a difference of opinion over this statement (D = 3.8%; SWD = 3.2%); and value m-commerce to shop immediately at their best moment (A = 52.5%; SA = 22.2%; SWA = 11.4%) in contrast to those who were neutral in (NAD = 7.6%) and had a difference of opinion over this statement (D = 2.5%; SWD = 2.5%; SD = 1.3%).

With regard to the perceived usefulness of the use of m-commerce, majority of the millennials and generation Z surveyed reported that they value the use of m-commerce because it can improve their shopping tasks' performance (A = 54.1%; SA = 23.3%; SWA = 13.2%) and productivity (A = 50.6%; SA = 20.9%; SWA = 13.9%) and be advantageous (A = 50.3%; SA = 22.6%; SWA = 15.7%). While a low proportion of them neither agreed nor disagreed with or had a difference of opinion about the improvement of their shopping tasks' performance (NAD = 4.4%; D = 2.5%, SD = 1.9%, SWD = 0.6) and productivity (NAD = 7.6%; and D = 3.8%, SWD = 3.2%) and being advantageous (NAD = 6.3%; and D = 1.9%, SWD = 1.9, SD = 1.3%).

Table 2 The Participants' Perception of Value of Commerce Use

Dimension / Items	Percentage						
	SD	D	SWD	NAD	SWA	A	SA
Monetary value							
I could buy affordable product or service that is offered through m-commerce.	3	3	0.6	8.4	13.9	53	18.1
I would shop through m-commerce if the offers are cheaper than alternative point of sales.	1.2	3	0.6	7.8	10.8	49.4	27.1
I would shop through m-commerce if it offers value for money.	1.2	3.6	1.8	6.6	12	51.2	23.5
If the mobile shopping is reasonably priced, I can shop through m-commerce.	2.5	4.3	0.6	5.6	9.9	50	27.2
Convenience							

I would use m-commerce systems that are ease to use.	1.2	3	0.6	7.2	10.2	51.8	25.9
I would shop through m-commerce if it facilitates my shopping activity at any time.	1.2	3	3	9.6	7.2	53.6	22.3
I value the possibility of using m-commerce instantly.	2.4	2.4	3	12	13.3	47	19.9
I value the convenience of using m-commerce at any given place.	1.2	3.7	4.3	11	8	52.1	19.6
Information							
I value the fast access to product/service information regardless of my location.	0.6	0.6	1.8	7.9	7.9	51.2	29.9
I would use m-commerce to obtain the information I want to keep me well informed about the offers at any time.	0.6	3	2.4	9.7	9.1	49.1	26.1
I value the m-commerce practicality in information search.	1.2	3.1	3.1	8	12.3	51.2	21
Social value							
I value m-commerce because it is widely used in my circle of friends.	1.8	5.5	4.3	12.2	13.4	42.7	20.1
I would use m-commerce because it helps me feel acceptable.	0	8	3.1	14.7	17.2	41.1	16
I would use m-commerce because it gives a good impression on other people.	1.2	4.9	4.3	13	14.2	43.8	18.5
I value m-commerce because it gives me social approval.	3	7.9	3	10.3	12.7	46.7	17
Ubiquity							
I value the possibility of using m-commerce to keep up with shopping activities at any time and any place.	0.6	1.3	2.5	5.6	8.1	55.6	26.3
I would use m-commerce to shop immediately at the best moment for me.	2.5	3.1	2.5	4.4	10.7	51.6	25.2
I value the possibility of getting practical services through m-commerce anywhere and anytime.	0	3.8	3.2	9.5	7	55.7	20.9
I value the possibility of using m-commerce because it is always available and reachable.	1.3	2.5	2.5	7.6	11.4	52.5	22.2
Perceived usefulness							
I believe the use of my mobile device for m-commerce would improve my shopping tasks performance.	1.9	2.5	0.6	4.4	13.2	54.1	23.3

I believe the use of my mobile device for m-commerce would improve my productivity.	0	3.8	3.2	7.6	13.9	50.6	20.9
Overall, the use my mobile device for m-commerce would be advantageous.	1.3	1.9	1.9	6.3	15.7	50.3	22.6

SD = Strongly disagree; D = Disagree; SWD = Somewhat disagree; NAD = Neither agree nor disagree; SWA = Somewhat disagree; A = Agree; SA = Strongly agree

Discussion

The study's results show that perceived usefulness is the most valued reward of m-commerce use above others. It was found that the vast majority of the millennials and generation Z surveyed value the use of m-commerce because it can improve their shopping tasks' performance (Agree 90.6%) and productivity (Agree 85.4%) and be advantageous (Agree 88.6%). These results show higher support for perceived usefulness than other dimensions of perceived value of the use of m-commerce assessed in this study. Perceived usefulness has widely been recognised as one of the most important and popular drivers of the use of innovative ideas and technologies (Davis, 1989; Venkatesh & Bala, 2008; Yen et al., 2010; Chi, 2018).

Results reveal that the vast majority of the millennials and generation Z surveyed value the use of m-commerce because it helps them keep up with their shopping activities at any time and any place (90%), is always available and reachable (Agree 87.5%), and enables them to shop immediately at their best moment (Agree 86.1%) and access practical services anywhere and anytime (Agree 83.6%). These results greatly support ubiquity as a dimension of the perceived value of the use of m-commerce. The study conducted by Okazaki and Mendez (2013) also supports these results. Okazaki and Mendez's (2013:108) study supports that ubiquity of m-commerce is important to explain "how users perceive potential benefits" … of overcoming time and space constraint-based conventional services.

This study found great support for the items related to monetary value perception. The vast majority of the millennials and generation Z surveyed affirmed that they would shop through m-commerce if the offers are cheaper than alternative point of sales (Agree 87.3%), if the mobile shopping is reasonably priced (Agree 87.1%), if the online shop offers value for money (Agree 86.7%), and if it offers affordable products or services (agree 85%). Thus, monetary value is greatly supported as a dimension of perceived value of m-commerce use by the millennials and generation Z who participated in this study. These results are also supported by previous the study (Pura, 2005; Hsu & Lin, 2015). Results indicate that the acquisition of an online product can be assured if lower price or minimum payment risk are perceived as benefits (Dastane et al., 2023:17). Therefore, monetary value of m-commerce can be viewed as the monetary benefit, such as the price of m-commerce services accessibility and cost of making transactions, which the user recognises as being the best value for money in comparison to the alternative channels. This entails that online shops should supply items that are comparatively at a lower price than alternative channels as well as at a low payment risk.

Results show that majority of millennials and generation Z surveyed are in agreement that they would use m-commerce systems that are ease to use (Agree 87.9%) to facilitate their shopping activity at any time (Agree 83.1%), and that they value the possibility of using m-commerce instantly (Agree 80.2%) and the convenience of using it at any given place (Agree = 79.7%). Therefore, convenience is greatly supported in this study as a dimension of the perceived value of m-commerce use. These results are supported by Pura (2005:516) who observed convenience and its measures such as the ease of use, the instant use, and the efficient use, as critical to the use of mobile services. Other studies support that m-commerce can make a customer's buying process more convenient (Clarke, 2001; Pura, 2005; Justino, Tengeh & Twum-Danko, 2021; Dastane et al., 2023). Therefore, these results show that most millennials and generation Z surveyed take comfort from the effortless and timeless shopping, which provide users with a broad avenue to manage their time at any given place (Picoto, Bélanger & Palma-dos-Reis, 2014; Dastane et al., 2023), and the

experience of an affordable personalised and mobile technology-enabled service delivery. In turn, these benefits may improve users' quality of life, especially through timesaving and streamlined activities (Clarke, 2001).

Similarly, it was found that the higher proportion of millennials and generation Z surveyed value the m-commerce practicality in information search (Agree 89%) and the fast access to information on products/services regardless of their location (Agree 84.3%). They also show interest in using m-commerce to obtain information and be informed about the offers (Agree 84.5%) at any time. As a result, information value is greatly supported as a strong dimension of perceived value. These results are in agreement with previous studies which observed that this value would be derived from the m-commerce practicality in information search (Ashraf et al., 2021), displaying of the latest information (Dastane et al., 2023), enabling of users to make relevant consumption decisions (Larivière et al., 2013), and accessibility of the targeted information regardless of where it comes from (Okazaki & Mendez, 2013). Thus, the millennials and generation Z surveyed place high value on m-commerce application with quick and personalized search capability and good quality content.

Furthermore, the results disclosed that the majority of the millennials and generation Z surveyed value and use m-commerce because it gives a good impression on other people (Agree 76.5%), helps them feel acceptable (Agree 76.4%), is widely used in their circle of friends (Agree 76.2%) and gives them social approval (Agree 74.4%). These findings also entail that social value is greatly supported as a dimension of perceived value of m-commerce use by the millennials and generation Z. Previous study similarly found that customers who identify themselves with people who get service or use product from certain companies, are also likely to receive such service or use the product (Karjaluoto et al., 2019). As a result, social value is perceived when a user feels the use may help build their social reputation, self-image or help be accepted and highly esteemed by others (Pura, 2005). In contrast to the above, results also show that there was a higher number of millennials and generation Z surveyed who had neither agreed nor disagreed with the above items proposed for perceived social value in comparison with other variables. These respondents neither agreed nor disagreed that they value m-commerce as a result of giving them social approval (NAD = 14.7%), or good impression on other people (NAD = 13%), or being widely used in their circle of friends (NAD = 12.2%). This indicates that these respondents might have another perception of the actual value of m-commerce.

Contributions

In relation to the study's contributions, the results may increase the retailers' awareness of the millennials and generation Z's perception of value of the use of m-commerce, which could help formulate marketing strategies and design new capabilities to meet their expectations for the growth of m-commerce channel. Since, the increase in the productive use of e-commerce and e-banking is a concern for technological cooperative institutions and policymaking (Department of Communications and Digital Technologies, 2024), results of this study may also inform them about the actual youth's views of m-commerce activities for digital transformation policy and the promotion of m-commerce usage.

Recommendations

Since an overwhelming majority of millennials and generation Z in the tertiary education in Butterworth put a high value on the usefulness of the m-commerce use, its ubiquitous characteristics, the monetary value and information value. Perceived usefulness and ubiquity are values that relate to the users' own benefit, improvement and fulfilment of objectives, and the m-commerce systems quality. Therefore, online retailers should use approaches that enable online consumers to improve their shopping tasks' performance and productivity, and access practical services at any time and in any given place. In addition, the m-commerce systems should be reachable at all times anywhere. Similarly, the monetary value and information value should be taken into consideration. Thus, online retailers should take into consideration the provision of affordable or cheaper products and services than alternative channels, and overall m-commerce experience. The m-commerce systems should be ease to use, peed up data process regardless of users' location, and

provide current and detailed information on offers to inform the customer. These actions may increase the likelihood of the business meeting the above value perceptions (Pevec & Pisnik, 2018).

Technological cooperative institutions and policymaking should capitalise on the millennials and generation Z's perception of value found in this study to promote m-commerce and increase in the concerned productive use of e-commerce and e-banking.

Limitation and Suggestion for Future Research

The study was delimited by investigating the m-commerce perceived value among millennials and generation Z in the tertiary education in Butterworth, South Africa. The study used the descriptive statistics for the summary, analysis and report of the data, as distinguished from inferential statistics. It has been recognised that consumers' purchase or technological use behaviour "may change from time to time due to factors such as social lifestyles, country's industrialization and influence of globalization that might have affected their judgment towards the products" or technology (Asshidin et al., 2016:641). Therefore, future studies may adapt the perceived value's dimensions assessed in this study to examine the linkage between perceived value and intention to use mobile commerce by millennials and generation Z in the same or another context, exploring other forms of relationship between variables through inferential statistics measures. Such studies may serve for a new product, service concept and prototype tests or segmentation study (Asshidin et al., 2016:641). This action may be significantly useful for digital marketing specialists to understand and explain the critical factors influencing customers intention to use m-commerce.

Conclusion

This study was set to investigate the m-commerce perceived value among millennials and generation Z in the tertiary education in Butterworth, South Africa. The study identified and examined six different dimensions of perceived value and found great support for each one of them. Amongst the value perceptions of the use of m-commerce by the millennials and generation Z surveyed, perceived usefulness was the dominant, followed by ubiquity, monetary value, information value, convenience, and last but not least, social value. The study found that perceived usefulness continues displaying a prominent position as a driver of the use of new technologies, in that the millennials and generation Z surveyed were more likely to put a high value on the notion that the use of m-commerce would improve their shopping tasks' performance and productivity, and be advantageous to them. Similarly, ubiquity characteristics of m-commerce, such as being always available and reachable, and shopping immediately at the best moment, keeping up with shopping activities and accessing practical services at any time and in any given place were highly considered. The millennials and generation Z also placed high value on monetary value, as they were oriented to offers that are affordable or cheaper than alternative point of sales, and m-commerce systems that offers value for money and overall mobile shopping experience is reasonably priced. The convenience of using m-commerce systems and its associated characteristics such as ease to use and being instantaneously available at any time as well as the m-commerce practicality in information search and its associated characteristics the fast access to information regardless of users' location and the need for being informed about the offers with current and detailed information, were also marked as critical value. Therefore, for an increase in market share and the growth of m-commerce channel in the area, the online retailer should take into consideration the customers' perception of value tested in this study and formulate marketing strategies and design new capabilities to meet their expectations.

Appendix A: Dimensions of Perceived Value and Their Measures

Please tick the rating scale that expresses the extent to which you agree with the statements below related to the value of m-commerce.

Dimension	Items	Source

Monetary value	I could buy affordable product or service that is offered through m-commerce.	Pura (2005); Hsu and Lin (2015); Dastane et al. (2023)
	I would shop through m-commerce if the offers are cheaper than alternative point of sales.	
	I would shop through m-commerce if it offers value for money.	
	If the mobile shopping is reasonably priced, I can shop through m-commerce.	
Convenience	I would use m-commerce systems that are ease to use.	Pura (2005); Dastane et al. (2023)
	I would shop through m-commerce if it facilitates my shopping activity at any time.	
	I value the possibility of using m-commerce instantly.	
	I value the convenience of using m-commerce at any given place.	
Information	I value the fast access to product/service information regardless of my location.	Ashraf et al. (2021:3)
	I would use m-commerce to obtain the information I want to keep me well informed about the offers at any time.	
	I value the m-commerce practicality in information search.	
Social value	I value m-commerce because it is widely used in my circle of friends.	Ashraf et al. (2021:3); Dastane et al. (2023)
	I would use m-commerce because it helps me feel acceptable.	
	I would use m-commerce because it gives a good impression on other people.	
	I value m-commerce because it gives me social approval.	
Ubiquity	I value the possibility of using m-commerce to keep up with shopping activities at any time and any place.	Okazaki and Mendez (2013)
	I would use m-commerce to shop immediately at the best moment for me.	
	I value the possibility of getting practical services through m-commerce anywhere and anytime.	
	I value the possibility of using m-commerce because it is always available and reachable.	
Perceived usefulness	I believe the use of my mobile device for m-commerce would improve my shopping tasks performance.	Yen et al. (2010); Chi (2018)
	I believe the use of my mobile device for m-commerce would improve my productivity.	
	Overall, the use my mobile device for m-commerce would be advantageous.	

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