INTERNATIONAL JOURNAL OF eBUSINESS and eGOVERNMENT STUDIES
Vol: 12 **No:** 2 **Year:** 2020 **ISSN**: 2146-0744 (Online) (**pp.** 91-106) **Doi:** 10.34111/ijebeg.202012201
Recieved: 23.09.2019 | **Accepted:** 30.12.2019 | **Published Online:** 01.07.2020

-RESEARCH ARTICLE-

BRANDED MOBILE APP USAGE INTENTIONS AMONG GENERATION Y STUDENTS: A COMPARISON OF GENDER AND EDUCATION LEVEL

BN Ncube

University of the Free State

E-mail: henriettabuhleni@gmail.com

Orcid ID: https://orcid.org/0000-0003-4299-8473

HA Koloba

University of the Free State

E-mail: Kolobaha@ufs.ac.za

Orcid ID: https://orcid.org/0000-0002-0025-6300

─Abstract─

The adoption of smartphones and the development of mobile applications have presented brands with an opportunity to communicate with their consumers. The Generation Y cohort has been identified as the most ardent user of smartphones and apps. Like the rest of the world, South Africa is experiencing growth in this area. The aim of this study was to investigate the association between gender and education level and branded mobile app usage intentions among Generation Y students. The data was collected using a self-administered questionnaire and a total of 260 were valid for analysis. T-tests were applied to investigate differences between males and females as well as between undergraduates and postgraduate Generation Y students. The findings revealed no statistically significant differences between males and females regarding usage intention of branded mobile apps. However, regarding education level, undergraduate and postgraduate students differed significantly regarding usage intention of branded mobile apps.

Citation (APA): Ncube, B. N. & Koloba, H. A., (2020), Branded Mobile App Usage Intentions Among Generation Y Students: A Comparison Of Gender And Education Level, International Journal of eBusiness and eGovernment Studies, 12 (2): 91-106. Doi: 10.34111/ijebeg.202012201

Therefore, it is recommended that the Generation Y cohort should be kept in mind when developing mobile apps, as this generation represents a significant number of those who use branded mobile apps.

Key Words: Branded mobile apps, mobile apps, technology adoption, mobile marketing, Generation Y.

JEL Classification: M39

1. INTRODUCTION

The increasing acceptance of smartphones and subsequent development of mobile applications (apps) continue to change the ways in which consumers communicate with a brand (Kim, Wang & Malthouse, 2015). In other words, due to the accessibility of mobile apps, consumers who adopt them can interact with brands that fit into their lifestyles (Wang, Kim & Malthouse, 2016). In the case of South Africa, some of the factors that contribute to the evolution of mobile apps, amongst many, are the development of network infrastructure, extensive use of smartphones and app usability (SME South Africa, 2015). Mobile apps are, therefore, used as mobile marketing media to deliver strategic marketing activities to consumers (Rohm, Gao, Sultan & Pagani, 2012). Because of this, businesses have realised that they can market their products and services and, in addition, add new value for consumers through mobile apps (Peng, Chen & Wen, 2014). Furthermore, mobile technology enables marketers to offer consumers a chance to interact with their brand through the development of branded mobile apps (Al-Nabhani & Wilson, 2015).

According to Bellman, Potter, Treleaven-Hassard, Robinson and Varan (2011), branded mobile apps are the "software downloadable to a mobile device which prominently displays a brand identity, often via the name of the app and the appearance of a brand logo or icon, throughout the user experience". In other words, branded mobile apps are customised mobile apps for promoting company brands as well as adding value to mobile devices (Yang, 2013). Therefore, it is of vital importance that marketers offer branded mobile apps that add value for consumers and also provide an exceptional brand experience without any technical difficulties (Kim et al., 2015). Zhao and Balague (2015) are of the view that a challenge confronting mobile app marketers relates to how to capture the attention of users. For this reason, the discovery process of branded mobile app stores deserves the attention of academics and professionals (Kim et al., 2015). In line with this view, Khan and Hyunwoo (2009) affirmed the importance of a knowledge of the success factors of mobile app innovations.

2. LITERATURE REVIEW

2.1. Generation Y cohort

Hill (2004) describes the Generation Y cohort as comprising individuals born between 1981 and 2004, whereas Zimmerer and Scarborough (2008) describe them as those born between 1982 and 1995. Thus, this cohort represents young people. Many studies have shown that young people are the main users of mobile technology (Kim, Lin & Sung, 2013). For example, Yang (2013) found that young American adults, Generation Y according to Bolton, Parasuraman, Hoefnagels, Migchels, Kabadayi, Gruber, Loureiro and Solnet (2013), were substantial users of smartphones and more likely to download apps to their phones than any other group. Generation Y members are highly active in the marketplace (Noble, Haytko & Philips, 2009). This generation is characterised by being tech-savvy (Bhave, Jain & Roy, 2013) and represents an essential segment of the consumer market (Beneke, Cumming, Stevens, & Versfeld, 2010). Even so, the majority of consumers is yet to embrace smartphones (Rohm et al., 2012).

The Generation Y cohort is purported to have time, money and independence (Mosupyoe, 2014). Some authors such as Bhave et al. (2013) also support the view that Generation Y has a high disposable income and spending propensity. Also, this generation is perceived to be knowledgeable regarding investments, are brand conscious, brand loyal, value seekers and concerned about image because they were raised at a time where everything was branded, which made them comfortable with brands (Mosupyoe, 2014). Furthermore, members of Generation Y are known to be flexible in adopting new brands, as they are adventurous and believe in immediate gratification (Bhave et al., 2013). It is evident that Generation Y represents a significant segment of the consumer market, since their considerable spending power extends across most industries (Beneke et al., 2010).

2.2. Mobile phone usage among the Generation Y cohort

Many people use mobile devices such as smartphones to support their personal and professional lives (Chinomona, 2013). These developments led to the rapid adoption of mobile phone technology among young consumers (Rohm et al., 2012). In South Africa, Generation Y forms a substantial part of the population; therefore, the market is big enough for companies to make use of mobile strategies to reach this segment. Generation Y consumers are known to be open-minded, optimistic, confident, independent, ambitious, competitive, energetic, hardworking, tech-savvy and impatient (Bhave et al., 2013). Being highly tech-savvy, they use many features on their mobile smartphones and prefer creative,

personalised and engaging messages. For example, they like to decide the content and frequency of the promotional messages (Beneke et al., 2010). Generation Y anticipates enjoyable and fast-paced information from technology and, for them, mobile phones are more than a form of communication - they are a way for self-expression and individuality (Bhave et al., 2013). Hence, they integrate technology with their day-to-day activities, since they had early and frequent exposure to technology (Bolton et al., 2013).

Compared to other generations, members of Generation Y are substantial users of value-added mobile data services (Beneke et al., 2010). According to Bhave et al. (2013), this generation has displayed an intense shift from traditional to new media over a period of time and are, therefore, flexible since this cohort accepts new technology and dramatically uses value-added mobile services, such as Quick Response Codes (QR Codes). In line with this, it is essential that marketers become aware that Generation Y individuals are resistant to traditional marketing efforts and are challenging to capture and retain as loyal consumers (Mosupyoe, 2014). For this reason, market analysts and researchers are noticing that Generation Y plays a substantial role in their marketing and advertising in the 21st century (Cui, Trent, Sullivan & Matiru, 2003). Furthermore, understanding the approach of Generation Y to brands is key to any branding strategy targeting this segment (Mosupyoe, 2014).

2.3. Branded mobile apps

Bellman et al. (2011) view branded apps as one of the most influential marketing tools developed so far. Therefore, it is vital for marketers to offer branded mobile apps that add value for consumers together with an exceptional brand experience without any technical difficulties (Kim et al., 2015). Marketers have learnt that getting people to download their branded mobile apps is a challenge and that for them to use the apps is another challenge on its own (Bellman et al., 2011). In other words, making branded mobile apps useful is a challenge; hence it is of vital importance that their impact should be maximised. Branded mobile apps are valuable to marketing as they can engage consumers efficiently (Kim et al., 2013).

Bellman et al. (2011) investigated the effectiveness of branded mobile apps among members of the public in the south-western United States and western Australia. The findings of their study confirmed that the use of branded mobile apps has a substantial positive effect which increases the brand's interest. Meeder (2011) investigated the acceptance of branded smartphone apps among students, marketers and engineers and found that performance expectancy, perceived enjoyment and social influence were significant determinants of usage intention.

Similarly, Kim et al. (2013) found that brands integrate engagement attributes and entertainment features to engage consumers. Wu (2015) studied the factors that influence consumers to continue using branded mobile apps among undergraduate students from a south-eastern university in the USA. It was revealed that effort expectancy, social influence and brand identification influenced app engagement. Research focusing on factors influencing the usage of branded mobile apps in South Africa is limited (Chalomba, 2016).

South African brands face a challenge because consumers compare them to some of the best in the world (Anonymous, 2017). Kriel (2017) states that most branded mobile apps in South Africa lack the quality of the apps that users have become used to which originate from other countries. For instance, users of apps such as Facebook, WhatsApp, Snap Chat and Instagram are now accustomed to apps offering a certain level of usefulness, quality and usability, and it is this level of quality that users have come to expect of apps. A digital firm, 4i, investigated how South Africans rate the branded apps they use. The goal was to show how South African branded apps compare to other apps in the USA (Anonymous, 2017). The findings revealed that as much as brands in South Africa had taken the route to have an app, very few have impressed consumers compared to American apps.

2.4. Gender, education level and technology

Generally, men and women differ with regard to how they handle and process information (Karjaluoto, Lehto, Leppäniemi & Jayawardhena, 2008). For example, Nel and Raleting (2010) found that gender was an essential variable in crafting marketing strategies. Similarly, Zhou, Jin and Fang (2014) also found that gender had a moderating effect because men and women have different decision-making processes. Goswami and Dutta (2016) found that gender played a vital role in determining the purpose of accepting new technology.

Sohn, Schulte and Seegebarth (2014) concluded that gender-specific preferences were essential for marketers to come up with effective outcomes, as it was one of the most important patterns of individuals' self-concept. Chong (2013) found that males displayed more favourable attitudes towards computers than females, because females more often than not were more hesitant in using computers than males while Okazaki and Mendez (2013) opine that a smartphone falls within a male realm. This is not surprising, since men tended to show more interest in using different types of technology because they were more confident towards technology than women (Alafeef, Singh & Ahmad, 2012).

Numerous studies have examined the link between gender and mobile service usage (Karjaluoto et al., 2008). Chong (2013) investigated the relationship among various demographic variables regarding m-commerce usage in China and found no significant correlation regarding gender in this respect. Conversely, Wang and Wang (2010) examined user acceptance of the mobile internet and found significant gender differences regarding behavioural intention among males and females. According to Cho (2015), men are hugely motivated to use technologies and interested in exploring to gain technological skills with regard to computers and apps. Meeder (2011) found that the relationship between effort expectancy and behavioural intention would be moderated by gender. In another study, Acheampong, Zhiwen, Hiran, Serwaa, Boateng and Bediako (2018) examined the moderating effects of gender on e-payment. The results revealed that effort expectancy for male respondents was higher than for the female respondents.

Like gender, in the past education level has also been found to play a role in the acceptance of technology. This is underscored by Hsiao (2013) who stated that demographic variables such as age, gender and education level may influence consumers' adoption and usage of various technologies. Persaud and Azhar (2012) investigated the willingness of consumers to accept marketing through their smartphones and found that those with diplomas and undergraduate degrees were more inclined to receive promotions on their smartphones than their postgraduate counterparts. Dineshwar and Steven (2013) found a relationship between mobile banking adoption and education level.

3. METHODOLOGY

To support the empirical research, a literature review on mobile apps in general and branded mobile apps, in particular, was conducted. Also, the literature on the Generation Y cohort and its interaction with technology was also performed. The study followed a quantitative approach in which a self-administered questionnaire was distributed among Generation Y students.

3.1. Sample and sampling techniques

The sample comprised Generation Y students from two higher education institutions in two provinces of South Africa. A sample size of 300 Generation Y students were invited to participate in the study. The students were chosen because they were deemed to be the main users of smartphones and, therefore, likely to download branded mobile apps. A non-probability convenience sampling method was selected for this study.

3.2. Instrument and procedure

The questionnaire comprised three sections. Section A comprised questions regarding the demographic profiles of participants. Section B provided a short description of branded mobile apps. Section C included questions related to the usage of branded mobile apps. The scaling items used to measure the construct were sourced from Alnawas and Aburub (2016). In Section C a five-point Likert type scale was used to score the items ranging from 1 (strongly disagree) to 5 (strongly agree).

3.3. Reliability and validity

To establish the reliability of the scale, a Cronbach's Alpha reliability test was computed on the usage intention construct. Maholtra (2010) recommended a reliability coefficient value above 0.60 for the scale to be deemed reliable. The Cronbach alpha coefficient for the intention usage construct was 0.905, which was above the prescribed threshold value. Three experienced researchers confirmed the content and face validity of the measuring instrument. Factor analysis was used to verify convergent validity on the data collected from Generation Y students. All items loaded on the construct ranged from 0.790 to 0.875 and were, therefore, above the recommended cut-off point of 0.30 (Pallant, 2013). Table 1 provides the Cronbach alpha values and item loadings for the construct of intention usage.

Table 1: Scale reliability

Research constructs		**Descriptive statistics**		**Cronbach's test**		**Factor Loading**
		Mean	SD	Item-total	α value	
Intention usage	IU1	4.2	0.642	0.886	0.905	0.875
	IU2			0.878		0.874
	IU3			0.879		0.870
	IU4			0.877		0.848
	IU5			0.901		0.790

IU1 to IU5 = Intention usage items.

3.4. Data analysis

With the help of the Statistical Package for Social Sciences (IBM Version 24) different statistical techniques were used to analyse data. Demographic

information was examined through descriptive statistics. T-tests were used to compare males and females regarding intention usage of branded mobile apps. Also, T-tests were used to compare undergraduate and postgraduate Generation Y students regarding intention usage of the branded mobile app. Since the dependent variable (intention usage of branded mobile) was scored on a five-point Likert scale, T-tests were deemed appropriate.

3.5. Ethical considerations

Ethical clearance was obtained from the ethics committee of the faculty of Economic and Management Sciences of the University of the Free State. Before data collection, participants were informed that participation was voluntary and that they may withdraw at any time without repercussions. They were assured that their names would remain confidential. Furthermore, they were informed that the findings would be reported in an aggregate format.

4. FINDINGS

Of the 300 participants, only 260 questionnaires were deemed usable, thus giving a response rate of 87%. Furthermore, 59.6% of participants were females and 49.4% males. The majority of the respondents were 18 to 20 years of age, constituting 50.4% of the respondents. Regarding ethnicity, the majority of the respondents were Black/African representing 67.3%. The undergraduate students constituted 76.2% of the respondents. Table 2, below, presents the results of the descriptive statistics.

Table 2: Descriptive statistics of respondents

Gender	Frequency	Per cent (%)
Female	155	59.6
Male	105	40.4
Age	Frequency	Per cent (%)
18-20	131	50.4
21-25	98	37.7
26-30	21	8.1
31-35	10	3.8
Ethnicity	Frequency	Per cent (%)
Black/African	175	67.3
White	52	20.0
Indian	8	3.1
Coloured	22	8.5
Other	3	1.2
Level of study	Frequency	Per cent (%)
Undergraduate	198	76.2
Postgraduate	62	23.8

4.1. Exploratory factor analysis

Before the factor analysis application, a KMO measure of sampling adequacy test and Bartlett's test of Sphericity were applied to ascertain the factorability of the data. A KMO value of 0.865 and Bartlett's test of Sphericity value of 0.000 confirmed that the data was factorable. A principal component analysis with Direct Oblimin was conducted on the intention usage construct. The cumulative variance explained was 72.591 per cent.

T-tests – gender comparisons

T-tests were applied to establish whether there were any statistically significant differences between male and female Generation Y students regarding intention usage of branded mobile apps. The results (Table 3) indicated no statistically significant differences between male and female Generation Y students regarding intention usage of branded mobile apps at a $p<0.05$ significance level. The mean scores (x = 4.2581; females) and (x = 4.1162; males) indicated that females and males showed a similar intention to use branded mobile apps. These results contradict the finding of Sohn et al. (2014) that there were gender-specific behaviours in the assessment of utilitarian and hedonic branded apps.

Table 3: Gender comparison regarding intention usage of branded mobile apps

	Levene's Test for Equality of Variances		**T-test for Equality of Means**						
	F	Sig.	t	df	Sig. (2-	Mean Difference	Std Error difference	95% Confidence Interval of the Difference	
								Lower	Upper
Intention usage for branded mobile apps.									
Equal variances assumed	0.833	0.362	1.755	258	0.080	0.14187	0.08082	-0.01729	0.30103
equal variances not assumed			1.714	204.441	0.088	0.14187	0.08277	-0.02132	0.30507

T-tests – the level of study comparisons

T-tests were applied to investigate whether there were any statistically significant differences between undergraduate and postgraduate students regarding the intention to use branded mobile apps. The results (Table 4) showed that the group mean scores differed significantly at the $p<0.05$ significance level between undergraduates (x = 4.1485) and postgraduates (x = 4.3677). In other words, the postgraduate students showed more intention to use branded mobile apps than undergraduate students. This is inconsistent with Persaud's (2012) finding that undergraduates were more inclined to mobile marketing more than postgraduates.

Table 4: Comparison between undergraduates and postgraduates on intention to use branded mobile apps

	Levene's Test for Equality of Variances		T-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error difference	95% Confidence Interval of the Difference	
								Lower	Upper
Intention usage for branded mobile apps.									
Equal variances assumed	0.019	0.891	-2.367	258	0.019	-0.21926	0.09262	-0.40164	-0.03688
Equal variances not assumed			-2.438	107.141	0.016	-0.21926	0.08994	-0.39754	-0.04097

5. DISCUSSION

The aim of this study was to investigate the influence of gender and education level on branded mobile app usage intentions among Generation Y students. Reflecting on the mean scores of males and females, it is clear that regarding usage intention of branded mobile apps the two groups do not differ. In other words, when it comes to gender, the South African Generation Y student cohort have a similar usage intention of branded mobile apps. This confirms the view that Generation Y, in general, is a tech-savvy generation and, therefore, inclined to use different features on their smartphones (Bhave et al., 2013). For this

generation, smartphones are not only a gadget for communication but a valuable tool also for other purposes such as entertainment, transacting and searching for information. This finding is essential for marketers and developers of branded mobile apps. Many organisations and marketers can, therefore, enhance their apps as they appeal to a broader market segment of these young people. As previously stated, this generation constitutes a considerable portion of the population. It should be seen as a market segment that can be very lucrative for businesses. Branded mobile apps have changed how businesses operate. It might also be that the gender gap in respect of owning gadgets, education and career development is closing. That may also explain the similar usage. Perhaps, the only thing that marketers can do is to investigate the effectiveness of their branded mobile apps on the purchasing decisions of the Generation Y cohort.

This study also investigated the influence of education level on the usage intention of branded mobile apps among Generation Y students. Regarding education level, contrary to gender, the results revealed statistically significant differences between undergraduate and postgraduate students regarding usage intention. Based on the mean scores, postgraduate students showed more intention to use branded mobile apps than their undergraduate counterparts. This could be interpreted as suggesting that the higher the education level, the more such a person is likely to use branded apps. However, a microscopic view of the results revealed that even though postgraduate students showed more intention than undergraduates, undergraduate students still manifested a significant usage intention of branded mobile apps. Marketers and developers of branded mobile phones should, therefore, target the Generation Y cohort as they represent a significant market segment. The world of business is influenced to a great extent by technological developments. It is not surprising, therefore, that Generation Y displays a substantial shift from the traditional way of doing things. Perhaps marketers can investigate the factors that influence the differences and come up with appropriate strategies to address those.

6. LIMITATIONS AND FUTURE RESEARCH

Like other studies, the present study has limitations. Therefore, a generalisation of the findings should be approached with caution. First, only two institutions of higher learning students participated in this study. To assume that these findings apply to Generation Y students all over South Africa or the world would be a misrepresentation. Perhaps the context influenced the outcome. Furthermore, one limitation of this study is that convenience sampling techniques were followed. Future studies could adopt other sampling techniques that are more objective

which may lead to different findings. For this reason, the findings should be acknowledged and interpreted with caution. Future research can address these limitations by including a larger population from other institutions. Future studies should also investigate the type of branded mobile apps that students prefer. Furthermore, the influence of other factors should also be considered.

7. MANAGERIAL IMPLICATIONS AND CONCLUSION

In creating a branded mobile app, mobile app developers and digital marketers should consider keeping Generation Ys in mind. Even though there are significant differences regarding education level, there is a significantly high usage intention among Generation Y students in general. In future, mobile apps and branded mobile apps will dictate how businesses market or sell their products and services. The fourth industrial revolution is upon us and there is no place to hide. To put it differently: if businesses do not adapt, they will perish. The findings of this study indicate that there are no differences between females and males regarding the usage intention of branded mobile apps. One can, therefore, conclude that when it comes to branded mobile apps, the Generation Y market is homogeneous.

The fact that postgraduate students manifest more usage intention means that marketers can also focus on the less educated to increase their reach. Doing this is imperative, since this generation possesses a substantial buying power for goods and services. In summary, this study has shown that digital marketers and branded mobile app developers can reach Generation Y students using branded mobile apps.

REFERENCES

Acheampong, P., Zhiwen, L., Hiran, K.K., Serwaa, O.E., Boateng, F. & Bediako, I.A. (2018). Examining the intervening role of age and gender on mobile payment acceptance in Ghana: UTAUT Model. *Canadian Journal of Applied Science and Technology*, 6(1), 141-151.

Alafeef, M., Singh, D. & Ahmad, K. (2012). The influence of demographic factors and user interface on mobile banking adoption: *a review. Journal of Applied Sciences*, 12(20), 2082-2095.

Alnawas, I. and Aburub, F. (2016). The effect of benefits generated from interacting with branded mobile apps on consumer satisfaction and purchase intentions. *Journal of Retailing and Consumer Services*, 31, 313–322.

Al-Nabhani, K. & Wilson, A. (2015). Factors influencing consumer retention of mobile apps: a conceptual perspective on the high-street retails. *Reser Conference*, Eigtveds Pakhus, 10 –12 September 2015.

Anonymous, (2017). The state of branded apps in SA. https://www.4i.co.za/blog/2017/10/05/state-branded-apps-sa. Accessed on 2018/02/12.

Bellman, S., Potter, R. F., Treleaven-Hassard, S., Robinson, J. A. & Varan, D. (2011). The effectiveness of branded mobile phone apps. *Journal of Interactive Marketing*, 191-200.

Beneke, J., Cumming, G., Stevens, A. & Versfeld, M. (2010). Influences on attitude toward mobile text message advertisements: an investigation of South African youth. *International Journal of Mobile Marketing*, 5(1), 77-97.

Bhave, K., Jain, V. & Roy, S. (2013). Understanding the orientation of Gen Y toward mobile applications and in-app advertising in India. *International Journal of Mobile Marketing*, 8(1), 62-72.

Bolton, R.N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., Loureiro, Y.K. & Solnet, D. (2013). Understanding Generation Y and their use of social media: a review and research agenda. *Journal of Service Management*, 24(3), 245-267.

Chalomba, N. (2016). *Effectiveness of branded mobile apps on brand loyalty among generation Y consumers.* Masters Dissertation, Johannesburg: University of the Witwatersrand.

Chinomona, R. (2013). The influence of perceived ease of use and perceived usefulness on trust and intention to use mobile social software. *African Journal for Physical Health Education, Recreation and Dance*, 19(2), 258-273.

Cho, D. (2015). *What influences people to purchase in-game mobile items? Analysis of motivational drivers to use in-game mobile game items in the U.S.* Masters Dissertation, East Lansing: Michigan State University.

Chong, A. Y. L. (2013). Mobile commerce usage activities: the roles of demographic and motivation variables. *Technological Forecasting & Social Change*, 80, 1350-1359.

Cui, Y., Trent, E.S., Sullivan, P.M. & Matiru, G.N. (2003). Cause-related marketing: how generation Y responds. *International Journal of Retail & Distribution Management*, 31(6), 310-320.

Dineshwar, R. & Steven, M. (2013). An investigation on mobile banking adoption and usage: a case of Mauritius. *Proceedings of 3rd Asia-Pacific Business Research Conference, 25 -25 February 2013, Kuala Lumpur, Malaysia.*

Hill, K. S. (2004). Defy the decades with multigenerational teams. *Nursing Management*, 35(1), 32-35.

Hsiao, K. L. (2013). Android smartphone adoption and intention to pay for mobile internet: perspectives from software, hardware, design and value. *Library Hi Tech*, 31(2), 216-235.

Karjaluoto, H., Lehto, H., Leppäniemi, M. & Jayawardhena, C. (2008). Exploring gender influence on customer's intention to engage permission-based mobile marketing. *Electronic markets*, 18(3), 242-259.

Khan, K. & Hyunwoo, K. (2009). *Factors affecting consumer resistance to innovation - a study of smartphones*. Masters Dissertation, Jönköping International Business School.

Kim, E., Lin, J.-S. & Sung, Y. (2013). To app or not: engaging consumers via branded mobile apps. *Journal of Interactive Marketing*, 13(1), 53-65.

Kim, J. S., Wang, J. H. & Malthouse, E. C. (2015). The effects of adopting and using a brand's mobile application on customers' subsequent purchase behaviour. *Journal of Interactive Marketing*, 31, 28-41.

Kriel R. (2017). The state of South African branded apps. https://www.linkedin.com/pulse/state-south-african-branded-apps-renier-kriel/. Accessed on 2018/04/11.

Malhotra, N.K. 2010. *Marketing research: an applied orientation*. Upper Saddle River, NJ: Pearson/Prentice Hall.

Meeder, G.D. (2011). *The acceptance of branded smartphone applications*. Masters Dissertation. Amsterdam: University of Amsterdam.

Mosupyoe, S.S.L.N. (2014). Generational differences in South African consumers' brand equity perceptions. Masters Dissertation. Pretoria: University of Pretoria.

Nel, J. & Raleting, T. (2010). Gender differences in non-users' attitude towards WIG-cell phone banking. *Australian and New Zealand Marketing Academy Annual Conference* (*ANZMAC)*, University of Canterbury, Christchurch, New Zealand, 29 November 2010.

Noble, S.M., Haytko, D.L. & Phillips, J. (2009). What drives college-age Generation Y consumers? *Journal of Business Research*, 62, 617–628.

Okazaki, S. & Mendez, F. (2013). Exploring convenience in mobile commerce: moderating effects of gender. *Computers in Human Behavior*, 29(3), 1234-1242.

Pallant, J. (2013). *SPSS survival manual. A step by step guide to data analysis using IBM SPSS*. 5th Ed. New York City, McGraw-Hill.

Peng, K., Chen, Y., & Wen, K. (2014). Brand relationship, consumption values and branded app adoption. *Industrial Management & Data Systems*, 114(8), 1131-1143.

Persaud, A. & Azhar, I. (2012). Innovative mobile marketing via smartphones. Are consumers ready? *Marketing Intelligence and Planning*, 3(4), 418-443.

Rohm, A.J., Gao, T.T., Sultan F., & Pangani, M. (2012). Brand in the hand: a cross-market investigation of consumer acceptance of mobile marketing. *Business Horizons*, 55, 485-493.

Ruiz-Del-Olmo, F.-J., & Belmonte-Jiménez, A.-M. (2014). Young people as users of branded applications on mobile devices. *Media Education Research Journal*, 43,73-81.

SME South Africa. (2015). Why you should take advantage of SA's mobile app usage growth. http://www.smesouthafrica.co.za/16149/Why-you-should-take-advantage-of-SAs-mobile-app-usage-growth/. Accessed on 2017/03/20.

Sohn, S., Schulte, M., & Seegebarth, B. (2014). How do men and women assess branded mobile apps? A comparison between hedonic and utilitarian apps. *American Marketing Association Conference*.

Wang, H.Y. & Wang, S.H. (2010). User acceptance of mobile internet based on the unified theory of acceptance and use of technology: investigating the determinants and gender differences. *Social Behavior and Personality: an International Journal*, 38(3), 415-426.

Wang, R. J., Kim, S. J. & Malthouse, E. C. (2016). Branded apps and mobile platforms as new tools for advertising. In V. K. Ruth E. Brown (Eds), *The New Advertising: Branding Content, and Consumer Relationships in the Data-driven Social Media Era*. Santa Barbara: California, Library of Congress Cataloguing-in-Publication.

Wu, L. (2015). Factors of continually using branded mobile apps: the central role of app engagement. *International Journal of Internet Marketing and Advertising*, 9(4), 303-320.

Yang, H. (2013). Bon appétit for apps: young American consumers' acceptance of mobile applications. *Journal of Computer Information Systems*, 53(3), 85-96.

Zhao, Z. & Balague, C. (2015). Designing branded mobile apps: fundamentals and recommendations. *Business Horizons*, 58, 305-315.

Zhou, Z., Jin, X.L. & Fang, Y. (2014). Moderating role of gender in the relationships between perceived benefits and satisfaction in social virtual world continuance. *Decision Support Systems*, 65, 69-79.

Zimmerer, T. W. & Scarborough, N. M. (2008). *Essentials of entrepreneurship and small business management*. 5th edition. New Jersey: Pearson Prentice Hall.