

## Perceived Barriers effects on Adoption of Digitized Marketing Operations Tactics by Chain Supermarkets in Kenya

Joseph Tatua<sup>1st</sup>, Dr. Lilian Mwenda<sup>2nd</sup> and Dr. Anita Wachira<sup>3rd</sup>

<sup>1st</sup> School of Business, Dedan Kimathi University of Technology, Private Bag, Nyeri, 7381, Kenya, E-mail: joemerg2012@gmail.com.

<sup>2nd</sup> . School of Business, Dedan Kimathi University of Technology, Private Bag, Nyeri, 7381, Kenya, E-mail: lilianokunee@gmail.com

<sup>3rd</sup> School of Business, Dedan Kimathi University of Technology, Private Bag, Nyeri, 7381, Kenya, E-mail: wachiraanita@gmail.com

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This paper reports findings of a study conducted to establish the effects of perceived barriers towards adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. Perceived barriers in this case was evaluated a key driver towards adoption of digitalized marketing operations tactics by chain supermarkets. Low adoption of digitization of marketing and sales operations in Kenya retail sector have been experienced and hence presenting some gaps which this sought to specifically address. The study hypothesized that, the relationship between perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya is not statistically significant. The objective of this study was to evaluate the effects of perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. The study was anchored on the technology acceptance model TAM. To prove the hypothesis empirically the research study considered the positivism research philosophy and adopted a descriptive research design. The target population of the study was 180 retail chain supermarkets stores in Kenya and all the 180 retail chain supermarkets were included in the sample. The research instruments of the study were semi-structured questionnaire administered to all the 180 Operations Managers by use of google surveys and/or drop and pick method. The quantitative information was analyzed by the help of SPSS program (v.25.0) and Excel. The findings were presented in form of averages, standard deviations, counts and percentages by use of tables. The findings revealed that, perceived barriers that is technology affordability, performance risk to customers an staff, security risks to customers and business, and complexity to the business ( $\beta = -0.012$ ,  $p = 0.005$ ) has a negative and significant relationship with the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. This implies that reduction in the aspects related to perceived barriers improves the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. From the findings, the study recommends that since the study found that perceived barriers had a negative effect on the adoption of digitalized marketing operations tactics, the chain supermarkets in Kenya to innovate technologies that are free of the possible barriers that can impact on customer convenience. For instance, systems that are free of downtimes, less to hacking and which pose less security concerns of the customers' data. Likewise, the technologies need to be cost-effective to match the qualities of the technological innovation.

## INTRODUCTION

Digitalization has profoundly impacted on the society and business in particular (Darrell, Good, Hyman & Grant, (2017). Similar to other societal transformative developments, digitalization has prompted new ways of life, changed and replaced the previous ones. Consumption, consumer behavior and associated business as the single most crucial aspects of contemporary societies have been rapidly altered by the widespread digitalization transformation (Rachinger, Rauter, Müller, Vorraber & Schirgi, 2019). Digitalized marketing operations include the following: e-commerce-enabled Website, Search Engine Optimization, Customer Service E-mail /E-mail marketing (Fariborzi & Zahedifard, 2018), Blogs and social media (Facebook, Twitter & Instagram), Mobile Applications (Baktha, 2017), Webinars and Online Payment Integration (e.g., M-Pesa, PayPal, PesaPal, iPay etc.) among others (Cheng et al., 2017). E-commerce has become a rapidly growing market today. With the proliferation of tablets and smartphones, the use of electronic payment methods has grown up to 21% in 2012. Digitalization as an integration of digital technologies into businesses processes, products and operations has attracted significant scholarly interest particularly in the retailing business (Rachinger, Rauter, Müller, Vorraber & Schirgi, 2019). According to Pauwels, Leeflang, Teerling and Huizingh (2022), although e-commerce is part of digitalization, applications of digital technologies by business go beyond e-commerce. The global leaders in chain supermarket adoption of digitalized marketing operations by region, constitute a mix of both developed and developing countries, but developed countries lead the top half of the list, starting with the United States. Both the Global e-commerce index (2016) and Deloitte (2016) place the USA at the top. The ranking was based on the market size of e-commerce in the ranked countries. The USA is ranked the world's largest e-commerce market at \$238 billion (Global e-commerce index, 2016). African countries such as Ghana, South Africa, and Kenya among others have appreciated the uptake of mobile banking to a great extent. This service has been featured in Zimbabwe in the form of Eco Cash at an increasing rate changing the way businesses are operated (Masocha & Dzomonda, 2018). In Kenya, the vast consumer base in rural areas still shops at informal outlets, which account for approximately 70% of retail shopping. However, compared to other African markets, Kenya formal retail penetration rate ranges around ranges from 25% to 30%, (African Consumer and Retail Sector Report, (ACRSR, 2016). According to Lubis (2018), the reasons contributing to online shopping popularity are the changing lifestyle especially by professionals who little time to go shopping in traditional stores. Further, about 13.5 million Kenyans have access to internet over mobile phones making them potential users of online shopping platforms.

In Kenya common pre-requisite for digitalizing shopping experience are largely in place, chief among them is consumer who are technology savvy and have access to fast internet over their phones. The government policies and legislation such as the new ICT Act which has provisions for e-commerce. However, few retail outlets have embraced the digital phenomenon. While a number of large chain stores, including former Nakumatt and Niavas have ventured online, the sales and marketing operations are only partially digitized (RETRAK, 2018). Zafar and Mustafa (2017) sought to find out the contribution of SMEs in economic and socio-economic development of Pakistan while Jörling, Böhm and Paluch (2019) sought to investigate the drivers of perceived responsibility for service outcomes in the adoption of Service robots. Eze, Chinedu-Eze, Okike and Bello (2020) examined critical success factors shaping the adoption of digital marketing devices (DMD) by micro-businesses. However, the study was focused on the adoption of DMD by micro-businesses in Nigeria. These studies presented contextual gaps that failed to address the problem of low adoption in the retail sector in Kenya. Therefore, premised on the backdrops of the gaps

presented, the current sought to specifically analyze the effect of perceived barriers as a driver of adoption of digitization of marketing and sales operations in Kenya retail sector.

## METHODOLOGY

The study applied the positivism philosophy where the current study pursued the quantitative approach because the unit under observation is quantitative in nature. The study was cross sectional in nature adopting a descriptive survey design. A combination of both qualitative and quantitative methods was employed in data collection and analysis. By blending the two methods the study aimed to harness the inherent advantages associated with each of two methods. The method enabled quantification of digitalization of market practices by retail chain supermarkets store, and subsequently analyze the relation of perceived barriers and the established of digitalization. The target population of the study was 180 retail chain supermarkets stores in Kenya. All the 180 retail chain supermarkets were included in the sample. However, since the population is small but adequate for study, a census survey was used. The research instruments of the study constituted a semi-structured questionnaire. The questionnaire had both open-ended questions and closed questions. Before collecting data, the researcher sought the approval of the university and then sought permission from the relevant authorities, including a research permit from the National Council of Science, Technology and Innovation (NACOSTI). The study used qualitative as well as quantitative which prior to analysis, was sorted, coded and cleaned to ensure adequacy. Descriptive and inferential statistics was used to analyze the data based on the use of the descriptive and positivism approach. The quantitative information was analyzed by the help of SPSS program (v.25.0) and Excel.

## RESULTS AND DISCUSSIONS

Total of 180 questionnaires were issued from which 152 were filled and returned which represents a response rate of 84%. Majority of the respondents at 64% were males, while 36% of the respondents were females. Majority of the respondents about 52.63% were aged between 30 to 40 years, 26.32% were aged between 20 to 30 years, 13.82% were aged over 50 years and 7.24% were aged between 40 to 50 years. Majority of the respondents about 59.21% had their tenure of service in the same institution between 6 to 10 years, 21.05% had their tenure of service for over ten years, and 19.74% had their tenure of service between 0 to 6 years.

The descriptive results showed that 68% of the respondents disagreed that the cost of digitalized marketing operations is higher and unmanageable (mean=1.57 $\approx$ 2, SD=0.61). The results also revealed that 69% of the respondents disagreed that the digitalized marketing operations have been cited by their customers to be redundant and unprofessional (mean=2.08 $\approx$ 2, SD=1.24). The results also indicated that majority of the respondents (75%) agreed that the use of the new technological platforms requires huge investments in terms of capital and time (mean=4.22 $\approx$ 4, SD=0.71).

The results showed that 82% of the respondents disagreed that digitized marketing operations poses security threats to their supermarket chain by exposing their financial system to online hackers (mean=2.32  $\approx$ 2, SD=0.88). The results indicated that 77% of the respondents disagreed that digitized marketing operations poses security threats to customers' personal information (mean=2.01 $\approx$ 2, SD=1.07). The results also exposed that 77% of the respondents disagreed that the new digitized online system is ambiguous to the employees and often complexity is an issue (mean=2.74 $\approx$ 3, SD=1.41).

The results revealed 79% of the respondents disagreed that digitized systems of marketing are complex to use by customers and employee in our supermarket chain (mean=2.72≈4, SD=1.43). The results showed that 77% of the respondents disagreed that the new digitized systems often experience downtimes with transactional and operational errors (mean=2.67≈4, SD=1.34).

In conclusion, the average mean of the responses was 4.02 when viewed on a scale of five points presenting a standard deviation of 1.12. This means that the majority of the respondents indicated that the aspects of perceived barriers in the supermarket chains have affected their ability to adopt digitalized marketing operations tactics by chain supermarkets in Kenya. The findings agree with De Bellis and Johar (2020) who identified four types of psychological barriers affecting consumer adoption of technologies. Seyal, Rahman and Abid (2019) likewise, indicated that the perceived barriers of e-businesses are significant factors that influence the adoption of digitalized marketing operations. According to Ryu (2018), the perceived risk was found to significantly impact Fintech adoption intention. In addition, legal risk has the biggest negative effect, whereas convenience has the strongest positive effect on Fintech adoption intention.

**Table 1: Descriptive Results for Perceived Barriers**

| Indicators   | 1   | 2   | 3   | 4   | 5   | Mean | S D  |
|--|-----|-----|-----|-----|-----|------|------|
| The cost of digitalized marketing operations is higher and unmanageable  | 49% | 45% | 6%  | 0%  | 0%  | 1.57 | 0.61 |
| The digitalized marketing operations have been cited by our customers to be redundant and unprofessional                           | 44% | 27% | 12% | 11% | 6%  | 2.08 | 1.24 |
| The use of the new technological platforms requires huge investments in terms of capital and time                                  | 0%  | 0%  | 16% | 45% | 38% | 4.22 | 0.71 |
| Digitized marketing operations poses security threats to our supermarket chain by exposing our financial system to online hackers. | 22% | 28% | 44% | 5%  | 0%  | 2.32 | 0.88 |
| Digitized marketing operations poses security threats to customer personal information   | 44% | 22% | 22% | 12% | 0%  | 2.01 | 1.07 |
| The new digitized online system is ambiguous to the employees and often complexity is an issue                                     | 22% | 34% | 11% | 16% | 17% | 2.74 | 1.41 |
| Digitized systems of marketing are complex to use by customers and employee in our supermarket chain                               | 28% | 22% | 18% | 17% | 16% | 2.72 | 1.43 |
| The new digitized systems often experience downtimes with transactional and operational errors.                                    | 28% | 17% | 27% | 17% | 11% | 2.67 | 1.34 |

|                |             |             |
|----------------|-------------|-------------|
| <b>Average</b> | <b>2.54</b> | <b>1.09</b> |
|----------------|-------------|-------------|

The correlation analysis results showed that perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya have a negative and significant relationship ( $r=-0.353$  \*\*,  $p=0.000$ ). The  $r$  value of  $-0.353$  indicates a value of greater than 0 which implies that perceived barriers as a linear variable has a negative association with the adopt digitalized marketing operations tactics by chain supermarkets in Kenya. The findings are consistent with De Bellis and Johar (2020) who identified four types of psychological barriers affecting consumer adoption of technologies. Therefore, autonomous technologies thus, bring a wide range of societal changes with them (Puntoni et al., 2019) which can pose unintended negative consequences, such as technology addiction, diminished sense of competence and free will, reduced actual and perceived consumer autonomy, and degradation of automated skills (Wertenbroch et al., 2019). According to Ryu (2018), the perceived risk was found to significantly impact Fintech adoption intention. In addition, legal risk has the biggest negative effect, whereas convenience has the strongest positive effect on Fintech adoption intention.

**Table 2 Correlation test of Perceived Barriers**

|  |                     | Perceived Barriers | Adoption of Digitalized marketing operations |
|--|---------------------|--------------------|--|
| Perceived Barriers                           | Pearson Correlation | 1                  | -.353**                                      |
|  | Sig. (2-tailed)     |                    | 0.000  |
| Adoption of Digitalized Marketing operations | Pearson Correlation | -.353**            | 1  |
|  | Sig. (2-tailed)     | 0.000              |  |

Regression analysis was also done in the study to identify the relationship between perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya.

**Table 3: Regression between perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya**

| <b>Model of fitness</b> |                 |                          |                                   |
|-------------------------|-----------------|--------------------------|-----------------------------------|
| <b>R</b>                | <b>R Square</b> | <b>Adjusted R Square</b> | <b>Std. Error of the Estimate</b> |
| .353a                   | 0.125           | 0.119                    | 0.206                             |

| <b>ANOVA</b> |                       |           |                    |          |             |
|--------------|-----------------------|-----------|--------------------|----------|-------------|
|              | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
| Regression   | 0.909                 | 1         | 0.909              | 21.411   | .000b       |
| Residual     | 6.365                 | 150       | 0.042              |          |             |
| Total        | 7.273                 | 151       |                    |          |             |

| <b>Regression of Coefficients</b> |                                    |                   |                                  |          |             |
|-----------------------------------|------------------------------------|-------------------|----------------------------------|----------|-------------|
|                                   | <b>Unstandardized Coefficients</b> | <b>Std. Error</b> | <b>Standardized Coefficients</b> | <b>t</b> | <b>Sig.</b> |
|                                   | <b><math>\beta</math></b>          |                   | <b>Beta</b>                      |          |             |
| (Constant)                        | 4.433                              | 0.086             |                                  | 51.654   | 0.000       |
| Perceived Barriers                | -0.173                             | 0.037             | -0.353                           | -4.627   | 0.000       |

**Y= 4.433 – 0.173 Perceived Barriers** where

**Y=** the adoption of digitalized marketing operations tactics by chain supermarkets

Table 3 presents the fitness of regression used in explaining the study phenomena. Perceived barriers are essential in the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. This is evident, as shown by the R square value which is 0.125. This implies that perceived barriers explain 12.5% of the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya.

The model was also statistically significant implying that perceived barriers affect the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. This is further supported by the F statistic 21.411 where the value was greater than the critical value at 0.05 significance level,  $F_{\text{statistic}} = 21.411 > F_{\text{critical}} = 3.909 (1, 150)$ .

Regression of the coefficients results, revealed that perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya have a negative and significant relationship ( $\beta = -0.173$ ,  $p = 0.000$ ). This implies that improvement in 1 unit of the aspects related to perceived barriers reduces the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya by 0.173 units.

The findings agree with De Bellis and Johar (2020) who identified four types of psychological barriers affecting consumer adoption of technologies. Therefore, autonomous technologies thus, bring a wide range of societal changes with them (Puntoni et al., 2019) which can pose unintended negative consequences, such as technology addiction, diminished sense of competence and free will, reduced actual and perceived consumer autonomy, and

degradation of automated skills (Wertenbroch et al., 2019). Seyal, Rahman and Abid (2019) likewise, indicated that the perceived barriers of e-businesses are significant factors that influence the adoption of digitalized marketing operations. According to Ryu (2018), the perceived risk was found to significantly impact Fintech adoption intention. In addition, legal risk has the biggest negative effect, whereas convenience has the strongest positive effect on Fintech adoption intention.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

The findings revealed that perceived barriers and the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya have a negative and significant relationship ( $\beta=-0.012$ ,  $p=0.005$ ). This implies that reduction in 1 unit of the aspects related to perceived barriers improves the adoption of digitalized marketing operations tactics by chain supermarkets in Kenya by 0.012 units. The findings were supported by the majority of the respondents' statements which were in agreement that the aspects of perceived barriers in the supermarket chains have affected their ability to adopt digitalized marketing operations tactics by chain supermarkets in Kenya.

From the findings, the study concludes that perceived barriers have a significant effect on adoption of digitalized marketing operations tactics by chain supermarkets in Kenya. The cost of digitalized marketing operations being higher and unmanageable, the digitalized marketing operations having been cited by customers to be redundant and unprofessional, the use of the new technological platforms requires huge investments in terms of capital and time, digitized marketing operations posing security threats to our supermarket chain by exposing our financial system to online hackers were factors found to negatively influence the adoption of digitalized marketing operations tactics by chain supermarkets. Digitized marketing operations posing security threats to customer personal information, the new digitized online system being ambiguous to the employees and often complexity being an issue, digitized systems of marketing being complex to use by customers and employee in the supermarket chain, and the new digitized systems often experiencing downtimes with transactional and operational errors also were found to negatively influence the adoption of digitalized marketing operations tactics by chain supermarkets.

Since the study found that perceived barriers had a negative effect on the adoption of digitalized marketing operations tactics, the study recommends the chain supermarkets in Kenya to innovate technologies that are free of the possible barriers that can impact on customer convenience. For instance, systems that are free of downtimes, less to hacking and which pose less security concerns of the customer's data. Likewise, the technologies need to be cost-effective to match the qualities of the technological innovation.

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