

Influences of technological competencies and philanthropic practices of corporate social responsibility on consumer brand preference

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Abstract

The broad objective of this study was to establish the moderating effect of technological competencies on the relationship between Philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services in Kenya. Data was collected using a structured questionnaire and analyzed through descriptive and inferential statistics. Findings suggest that technological competencies significantly moderate the relationship between philanthropic practices of corporate social responsibility and customer brand preference. These findings call for continuous involvement of mobile phone service companies in corporate social responsibility practices as it positively influences consumer brand preference. Future research should aim at establishing contextual and geographical differences in consumer preferences by targeting other countries with different social economic conditions.

Keywords: Technological Competencies; Corporate Social Responsibility; Philanthropic Practices; Consumer Brand Preference; Mobile Phone Services

1. Introduction

The decision by organizations to undertake philanthropic practices of corporate social responsibility will depend on whether their objective is to gain a competitive advantage or create sustainability in a business (Porter, 2011). The effectiveness of philanthropic practices of corporate social responsibility in enhancing consumer brand preference is an important aspect that needs to be studied (Kang, Faria, Lee and Choi, 2023). The Kenyan mobile phone industry has been characterized by dominance by one player from 2011 to 2020 (Ongek and Onjoro, 2020; Muturi, 2014; Krell, Giroux, Guido, Hannah, Lopus, Caylor and Evans, 2021). The lower consumer brand preference for other companies operating in similar competitive conditions has not been explained. Considering the above discourse, mechanisms and the extent to which ethical practices of corporate social responsibility may lead to superior consumer brand preference in a highly competitive environment have not been explained in the context of mobile phone service companies in Kenya.

The reviewed studies showed various shortcomings which rendered them inadequate in establishing the moderating effect of technological competencies on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services. For instance, studies by Masa'deh, Al-Henzab, Tarhini and Obeidat (2018) and Ylilehto, Komulainen and Ulkuniemi (2021), linked technological competencies to firm innovativeness and found that it is important to evaluate the benefits against the cost of investing in technological aspects before making the decision. The findings indicated further that a firm that focuses on technological competencies aligns its efforts towards the efficient utilization of resources in a way that protects society's well-being. The authors further argue that companies have been driven to improve their technological competence to compete in their sectors because of technology innovation and the reduced life cycle of products and services.

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Additionally, Tsou Chen, and Liao (2014) regard Technological competence as essential for introducing new, better-designed products to the market. Hence, technology-oriented businesses are aggressive in obtaining new technologies and utilizing cutting-edge technology to create their goods and services. These sentiments are further supported by Gao, Ren, Yang, Zhang and Li (2022). Their studies findings indicated that for a firm's products to be more preferred in the market, it must use complicated technologies, which may not be easily duplicated by competitors during product development and should productively expand new technologies in creating novel, valuable and distinctive product ideas. The findings further indicated that the firm's research, skills, development resources and technological capability are critical in enhancing originality and superior products for the market, hence a better consumer brand preference.

More studies by Srivastava, Kishore and Dhingra (2021) and Ismail (2023) on the impact of technological competencies on consumer loyalty found out that technology-oriented firms apply technological capabilities to produce new products in the market that are ahead of the competitor. The studies further indicated that products produced by technologically oriented firms are flexible to the customers' changing needs, hence they can maintain customers. Their products are also unique or original and hence difficult to imitate. These studies also indicated that customers choose technologically superior products and services, and a customer sticks to a firm that has the capability to grow with their tastes, preferences and choices successfully. These studies noted a strong positive relationship between technological competencies and consumer brand preference.

All the above studies were conducted outside Kenya, under different social economic and regulatory conditions and are therefore locational variants. It is also important to note that of all the studies above, only two were conducted in the mobile phone service industry. None of the above studies cited evaluated the moderating effect of technological competencies on the relationship between ethical practices of corporate social responsibility and consumer brand preference in a better way than the current study variables on consumer brand preference. This study worked to bridge the identified gaps by utilizing descriptive and inferential statistics. It also undertook linear regression and correlation analysis of the data that was collected. The study considered the moderating effect of technological competencies on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference. This study addressed the following research question: what is the moderating effect of technological competencies on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services? The objective of this study, therefore, was to explore the moderating effect of technological competencies on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services.

1.1. Review of Related Literature

Integration of technology in an organization improves its efficiency, product quality, productivity, and consumer brand preference (Ismail, 2023). Srivastava, Kishore, and Dhingra (2021) and (Ismail, 2023) further note that technology is a key determinant of an organization's success. Ylilehto, Komulainen and Ulkuniemi (2021), operationalized technological competencies as innovation, progressive corporate technological specialization patterns over time, exploiting technological opportunities and adopting technology to secure customers' data, information and content. The author further notes the importance of technological competencies as a foundation for generating superior consumer brand preference. The same study noted that the relationship between corporate social responsibility and consumer brand preference is strengthened by the VRIN factor. This study conceptualized consumer brand preference for mobile phone services as a function of ethical practices of corporate social responsibility and technological competencies.

In this study, technological competencies were used in analyzing how the relationship between philanthropic practices of corporate social responsibility and consumer brand preference can be moderated by continuously generating new ideas, developing new products or services, corporate technological innovation, progressive corporate technological specialization patterns over time, exploiting technological opportunities and adopting technology to secure customers data, information and content.

In their studies, Srivastava, Kishore, and Dhingra (2021) as well as Ylilehto, Komulainen and Ulkuniemi (2021), established that technological competencies had a significant contribution to improving consumer brand preference. They concluded that technological competencies such as; continuously generating new ideas, continuously developing new products or services, corporate technological innovation, progressive corporate technological specialization patterns over time, exploiting technological opportunities and adopting technology to secure customers' data, information and content have an effect on consumer brand preference. Gao, Ren, Yang, Zhang and Li (2022), are also of the thought that organizations that commit their resources to technological competencies develop customer loyalty and attract new customers. This in turn translates to a favourable consumer brand preference.

2. Methodology

To explore the moderating effect of technological competencies on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services, the current study adopted the descriptive cross-sectional survey design. The adopted design helped in exploring and describing the relationships among the key study variables (Kothari, 2019). Kothari (2019) further notes that in a cross-sectional survey design, parameters of a phenomenon are picked once at a specific time to accurately capture the characteristics of the population relating to what, where, how, and when of a research topic.

The population of the study consisted of 2811 secondary school teachers in Tharaka Nithi County who are subscribers to either of the five mobile phone companies in Kenya (C.A.K, 2021). This study adopted a systematic random sampling technique which ensured that respondents from the four sub-counties, namely, Meru South, Maara, Thraka North, and Tharaka South were represented. Systematic random sampling technique was adopted for this study since it resulted in more reliable and detailed information for a population that was not fully homogenous (Kothari, 2019).

The sample size was determined using Israel's formula with the resulting sample size of 350 respondents.

Data was collected using a structured questionnaire. The questionnaires were personally administered to the respondents. To ensure that the respondents were fully engaged and motivated to give the required information, explanations were given to the respondents on issues that needed clarification (Fowler, 2009). The questions used for this study were modified and validated to suit the study objectives.

The study variables were operationalized and measured using direct measures and a five-point Likert scale ranging from 1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= Agree and 5= strongly Agree. Data were analyzed using both descriptive statistics (frequencies, percentages, mean and standard deviation) and inferential statistics (chi-square and correlation analysis).

2.1. Data Analysis Methods and Interpretation of Results

The analytical models adopted for this study were as follows:

Multiple Linear regression model; Multiple Linear regression model: environmental practices of consumer brand preference = f (Philanthropic practices of corporate social responsibility and Technological competencies): $Y = \beta_1 + \beta_{31}PP + \beta_{32}TC + \beta_{33}PP * TC$

Where:

- Y - Consumer Brand Preference
- PP – Philanthropic Practices of CSR
- TC – Technological Competencies
- β_i – Regression Coefficients

3. Presentation and Analysis of Empirical Results

Three hundred and fifty questionnaires were administered out of which 344 were filled, making a total response rate of 98.28% that was considered adequate. According to Creswell and Creswell (2018), a return rate of 50% and above is acceptable. The response rate of 98.28 compared favorably with a similar study conducted among mobile phone companies by Onyango (2019) which had a response rate of 90%.

3.1. Reliability and validity

The study ensured the reliability of the research instrument by computing Cronbach's Alpha coefficient for the elements in the study variables. The levels of reliability of the instrument were found to have a Cronbach's Alpha reliability coefficient of 0.89. This coefficient was above the acceptable minimum value of 0.5 as informed by Cronbach (1951) and above 0.7, which is the recommended value as informed by Nunnally and Bernstein (1994). This makes the internal consistency measures used in this study to be adequate in measuring the relevant study variables.

Validity was achieved by ensuring that the questionnaire used during data collection was created from strong and validated literature and that an expert panel was involved. This study also enhanced validity by piloting the

questionnaire. It was also ensured that the instrument had accuracy in reflecting constructs stated in the theoretical domain and that it measured what it claimed to measure. This made it necessary to involve some experts in the study area and some respondents to strengthen the questionnaire by reflecting on its coverage of the theoretical domain (Saunders, Lewis and Thornhill, 2007)

3.2. Participation in CSR Philanthropic Activities

The independent variable of this study was participation in corporate social responsibility philanthropic activities. Philanthropic CSR is commonly portrayed in activities related to giving back to society. This study describes secondary school teacher's perception of philanthropic CSR initiatives in shaping their preferences of mobile phone service brands. The descriptive results are given in Table 4.7.

The results of this study indicate that consumer preferences for mobile phone line brands are influenced by CSR philanthropic activities of mobile phone service providers (mean score = 3.591, standard deviation 1.072). The corporate social responsibility philanthropic practice considered to make the greatest contribution was involvement in citizen economic empowerment projects ($M = 4.282$; $SD = 0.99$), involvement in sports activities such as racing, athletics and ball games ($M = 3.718$; $SD = 0.96$) supporting children homes for orphans ($M = 3.334$; $SD = 1.07$); supporting health activities such as purchasing of medical equipment to support local hospitals, monetary support to persons unable to clear hospital bills and supporting wellness camps ($M = 3.154$; $SD = 1.01$); in educational activities such as scholarships, bursary, construction of facilities and instructional resource provision ($M = 3.305$; $SD = 1.15$) and involvement in disaster prevention and management ($M = 2.941$; $SD = 1.25$) which was the lowest.

Table 1 Participation in CSR Philanthropic Activities

	Respondents Perception	SD	D	N	A	SA	Total	Mean	St. Dev
1	Preference because my MPSP participates supporting children's homes for orphans	14	92	37	167	34	344	3.334	1.07
2	Preference because my MPSP participates in supporting health activities.	23	75	82	154	10	344	3.154	1.01
3	Preference because my MPSP participates in supporting educational activities.	0	66	130	145	3	344	3.305	1.15
4	Preference because my MPSP participates in supporting sports activities.	53	2	32	159	98	344	3.718	0.96
5	Preference because of my MPSP involvement in citizen economic empowerment projects.	0	2	51	139	152	344	4.282	0.99
6	Preference because of my MPSP involvement in support of disaster prevention and management	37	103	88	75	41	344	2.941	1.25
	Mean score on CSR philanthropic activities and consumer brand preference for mobile phone lines							3.591	1.072

MPSP- Mobile phone service provider; **Source:** Survey data (2026)

3.3. Technological Competencies

The fourth independent variable of the study was technological competencies, which was also the moderating variable of the study. Data is presented in frequencies, mean, and standard deviation. The results obtained are presented in Table 4.8. The summary of results in Table 4.8 presents an average mean score (mean score = 3.699, S. D = 0.831) implying that all the technological competencies contributed at an average level to consumer brand preference of mobile phone services. The technological competence considered to make the greatest contribution is continuously generating new technological ideas ($M = 4.041$; $SD = 0.85$), continuously developing new products or services ($M = 3.959$; $SD = 0.80$); persistent in technological innovation ($M = 3.471$; $SD = 0.94$); exploiting technological opportunities ($M = 3.895$; $SD = 0.96$) and adopting technology to secure customers data, information and content ($M = 3.907$; $SD = 0.89$). The technological competence reported to be of least importance was distinct technologically specializing ($M = 2.922$; $SD = 1.43$)

Table 2 Technological Competencies

	Respondents Perception	SD	D	N	A	SA	Total	Mean	St. Dev
1	I prefer mobile phone companies that continuously generate new ideas.	18	38	25	94	169	344	4.041	0.85
2	I prefer service providers who continuously develop new products or services	0	17	38	231	58	344	3.959	0.80
3	I prefer companies with strong persistence in corporate technological innovation progress	0	113	71	45	115	344	3.471	0.94
4	I prefer companies with distinct corporate technological specialization patterns over time	70	32	129	81	32	344	2.922	1.43
5	I prefer companies which exploit technological opportunities	42	2	38	130	132	344	3.895	0.96
6	I prefer companies which adopt technology to secure customers data, information and content	2	50	10	198	84	344	3.907	0.89
Mean score on technological competencies in CSR and consumer brand preference for mobile phone lines								3.699	0.831

Source: Survey data (2026)

3.4. Moderating effect of technological competencies on the relationship between philanthropic Practices of corporate social responsibility and consumer brand preference for mobile phone services.

Table 3 Moderating effect

Users Data	Model		
	Beta ^a	T	p
Predictors			
(Constant)	22.113	6.594	0.000
PP	0.755	10.252	0.000
TC	0.340	7.798	0.000
PP* TC	0.082	4.707	0.000
R Square	0.295		
R Square	0.047		
P-Value F	0.000		

Dependent variable: consumer brand preference

Source: Survey data (2026)

The third regression model shows the interaction effect of philanthropic practices of corporate social responsibility and technological competencies (PP*TC) as the third predictor. This interaction term had a regression coefficient of 0.082(p=0.000, P< 0.05) which indicates significant positive moderation effect. Based on the results of table 4.17, consumer brand preference can be estimated as follows;

$$Y = 22.113 + 0.755PP + 0.340TC + 0.082PP * TC$$

Where;

- Y - Consumer Brand Preference
- PP – Philanthropic Practices of CSR
- TC – Technological Competencies

Therefore, the statistical inference is that technological competencies moderate the relationship between philanthropic practices of corporate social responsibility and consumer brand preference. The alternative hypothesis that technological competencies statistically significantly moderate the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services is therefore accepted.

4. Discussion of The Results

This study hypothesized that philanthropic competencies have a statistically significant moderating effect on the relationship between ethical practices of corporate social responsibility and consumer brand preference for mobile phone services. To test the moderating effect of technological competencies on the relationship between philanthropic practices of CSR and consumer brand preference for mobile phone services, multiple regressions analysis indicated significant positive moderation effect. Therefore, the statistical inference is that technological competencies moderate the relationship between philanthropic practices of corporate social responsibility and consumer brand preference. These results indicate that continuous development of new ideas, products and services, persistence in corporate technological innovation progress, technological specialization patterns over time, exploitation of technological opportunities and securing customer data, information and content are statistically significant moderating factors on the relationship between philanthropic ethical practices of corporate social responsibility and consumer brand preference for mobile phone services.

These findings agree with other studies like Gao, Ren, Yang, Zhang and Li (2022), who conducted a related study on factors affecting customer preference. However, the study looked at the technological competencies as the independent variable and recommended the expansion of the model by interplaying technological competencies as the mediator. The result revealed that respondents are to some extent technological innovation progress sensitive. Other factors that were found to considerably influence consumer brand preference in the study by Gao, Ren, Yang, Zhang and Li (2022), include technological specialization patterns, securing customer data, information and content, exploiting technological opportunities, continuous development of new products and services, and continuous development of new ideas.

This study results interpretation seems to agree with the previous studies on the relationship between technological competencies and consumer brand preference carried out by Kimwele (2017), Hakala (2011) and Fernando et al. (2022). These authors indicated various aspects of technological investment influences consumer brand preference for mobile phone lines.

A study conducted by Hakala (2011) also found that people were more likely to respond to a brand that was involved in technological advancement. These results confirm the findings of Fernando et al. (2022) who found out that keeping abreast with contemporary technologies has an influence on customer's decision to retain a mobile phone service line. In support of this assertion, Gao, Ren, Yang, Zhang and Li (2022), in their studies found out that technological competencies influence consumers' choice of a mobile phone service.

5. Conclusion

Technological competencies have a statistically significant moderating effect on the relationship between philanthropic practices of corporate social responsibility and consumer brand preference for mobile phone services. Results obtained indicate that secondary school teachers in Tharaka Nithi County prefer using mobile phone lines from service providers who are continuously generating new technological ideas, products and services.

The results further showed that teachers prefer using mobile phone lines from service providers who demonstrate persistence in research and development, and innovation demonstrates distinct corporate technological specialization patterns over time, seizes and exploits technological opportunities and adopts technologies that enable the companies to secure customers' data, information and content. Results from regression analysis established that there is a statistically significant moderation effect of technological competencies on the relationship between philanthropic practices of CSR and consumer brand preferences for mobile phone lines.

6. Compliance with ethical standards

A consent to undertake the study was obtained from the Director Teachers Service commission of Tharaka Nithi County. The respondents were not being forced to fill out the questionnaire if they were not willing. All the potential respondents were contacted and informed to participate in the study voluntarily. The respondents were contacted through an SMS to ask for an appointment and participation. The questionnaire first introduced the aim of the study to the respondent.

The researcher also ensured that there was no information that was used or transmitted that could have harmed the respondents. Anonymity and Confidentiality issues were addressed by assuring the respondents that the information provided would be used for academic research purposes only. Anonymity was ensured by removing the identifiers immediately after collecting the data. Integrity was observed by seeing into it that the research was conducted in honesty, respect to all and fairness as informed Yin (2009). The researcher obtained consent from the respondents that were consulted to participate in this study.

The risk in terms of any harm to the respondents was minimized by protecting their identity through anonymity and confidentiality procedures. Ethical values were also observed by avoiding any deceptive practices. This was observed by giving the participants the right to withdraw anytime they felt like opting out from filling out the questionnaire. The participants were guided on time not to write names on the questionnaire. This ensures confidentiality. By doing so, the respondents were comfortable giving all the information needed accurately.

Before starting the process of data collection, the researcher also sought for approval from the Kenyan government research clearing bodies. A self-introduction section was also included in the first part of the questionnaire for the respondent to understand the research objective and an assurance that the information given would only be used for academic purposes. Appointments were also made with the participants, and the respondents filled out the questionnaire when they were available at their own convenient time. The researcher also acknowledged all the cited works of other authors in this study.

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