International Journal of Business Management and Economic Review

Vol. 6, No. 02; 2023

ISSN: 2581-4664

INFLUENCES OF TECHNOLOGICAL COMPETENCIES AND ENVIRONMENTAL PRACTICES OF CORPORATE SOCIAL RESPONSIBILITY ON CONSUMER BRAND PREFERENCE

Richard Mwenda Mate[1], France Aloyce Shayo[2] and Isaac Micheni Nkari[3]

[1]PhD Scholar, Faculty of Business Management, Open University of Tanzania

[2]Lecturer, Department of Marketing, Entrepreneurship and Management, Faculty of Business Management, Open University of Tanzania

[3]Professor, Department of Business Administration, Faculty of Business Studies, Chuka University, Kenya

http://doi.org/10.35409/IJBMER.2023.3478

ABSTRACT

The broad objective of this study was to establish the moderating effect of technological competencies on the relationship between environmental practices of corporate social responsibility and consumer brand preference for mobile phone services in Kenya. Data were collected using a structured questionnaire and analyzed through descriptive and inferential statistics. Findings suggest that technological competencies significantly moderate the relationship between environmental 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.

Keyword: Technological competencies, Corporate social responsibility, philanthropic practices, consumer brand preference, mobile phone services.

1. INTRODUCTION

It is widely acknowledged today that, under certain circumstances, achieving social goals helps maximize shareholder value. As a result, most large corporations pay close attention to Corporate Social Responsibility, especially when taking into account the interests of those who have an investment in the company. However, the constant search for profit maximization may end up with natural resources being irreparably depleted, and the environment is badly harmed. The Corporate Social Responsibility theories put forth several activities that organizations could engage with. Among the activities of CSR is environmental responsibility, which refers to the belief that organizations should behave in an environmentally friendly way as possible (Melé 2008). It's one of the most common forms of corporate social responsibility. Accordingly, D'Souza, (2022) contemplates that the need to maintain environmental responsibility has increased and with it the significance of the role that enterprises play and the factors that influence social and environmental responsibility.

The decision by organizations to undertake environmental 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 environmental practices of corporate social responsibility in enhancing consumer brand preference is an important aspect that

Vol. 6, No. 02; 2023
ISSN: 2581-4664

needs to be studied (Kang, Faria, Lee & Choi, 2023). The Kenyan mobile phone industry has been characterized by dominance by one player from 2011 to 2020 (Ongek & Onjoro, 2020; Muturi, 2014; Krell, Giroux, Guido, Hannah, Lopus, Caylor & 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 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 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 the environment and society's well-being. The authors further argue that companies have been driven to improve their technological competence to compete in their sectors as a result of technology innovation and the reduced life cycle of products and services.

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 study's 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 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 can grow with their tastes, preferences and choices successfully. These studies noted a strong positive relationship between technological competencies and product 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 studies cited above evaluated the moderating effect of technological competencies on the relationship between environmental practices of corporate social responsibility and consumer

Vol. 6, No. 02; 2023
ISSN: 2581-4664

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 environmental 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 environmental practices of corporate social responsibility and consumer brand preference for mobile phone services? The objective of this study, therefore, is to explore the moderating effect of technological competencies on the relationship between environmental practices of corporate social responsibility and consumer brand preference for mobile phone services.

2. 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 environmental practices of corporate social responsibility and technological competencies.

In this study, technological competencies were used in analyzing how the relationship between environmental 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 recent 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, 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 thought that organizations that commit their resources to technological competencies develop customer loyalty and also attract new customers. This in turn translates to a favourable consumer brand preference.

3.METHODOLOGY

To explore the moderating effect of technological competencies on the relationship between

Vol. 6, No. 02; 2023
ISSN: 2581-4664

environmental 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. The 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 a five-point Likert-type 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).

3. 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 (environmental practices of corporate social responsibility and Technological competencies): Y = $\beta_C + \beta_{11}ENP + \beta_{12}TC + \beta_{13}ENP * TC$

Where:

Y - Consumer Brand Preference
ENP – Environmental Practices of CSR
TC – Technological Competencies
β_i – Regression Coefficients

4.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

Vol. 6, No. 02; 2023
ISSN: 2581-4664

(2018), a return rate of 50% and above is acceptable. The response rate of 98.28 compared favourably with a similar study conducted among mobile phone companies by Onyango (2019) which had a response rate of 90%.

4.1 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 (Saunder, Lewis & Thornhill, 2007)

Table 1: Technological Competencies and Consumer Brand Preference for Mobile Phone Services

	Respondents Perception	Total	Mean	St. Dev
1	I prefer mobile phone services from my current service provider because of continuously generating new ideas	**344**	4.041	0.85
2	I prefer mobile phone services from my current service provider because of continuously developing new products or services	**344**	3.959	0.80
3	I prefer mobile phone services from my current service provider because of my strong persistence in corporate technological innovation progress	**344**	3.471	0.94
4	I prefer mobile phone services from my current service provider because of distinct corporate technological specialization patterns over time	**344**	2.922	1.43
5	I prefer mobile phone services from my current service provider because of exploiting technological opportunities	**344**	3.895	0.96
6	I prefer mobile phone services from my current service provider because of adopting technology to secure customers' data, information and content	**344**	3.907	0.89
The mean score on technological competencies in CSR and consumer brand		**3.699**		**0.831**

Vol. 6, No. 02; 2023
ISSN: 2581-4664

preference for mobile phone lines

Source: Survey data (2021)

The summary of results in Table 1 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 for mobile phone services. The technological competence considered to make the greatest contribution continuously generating new technological ideas (M = 4.041; SD = 0.85), continuously developing new products or services (M = 3.959; 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)

4.2 Summary of Environmental Practices of CSR and Consumer Brand Preference

Table 2 contains a Summary of Environmental Practices of CSR and Consumer Brand Preference

	Respondents Perception	Total	Mean	St. Dev
1	Engagement in environmental conservation activities by my mobile service provider influences my preference for its service line.	**344**	2.761	1.234
2	The provision of waste disposal bins in towns by my mobile service provider influences my preference for its service line.	**344**	3.119	0.979
3	Involvement in mass tree planting exercises by my mobile service provider influences my preference for its service line.	**344**	3.238	0.879
4	Minimization of waste and emissions from operations of a mobile phone service company influences my preference for its service line.	**344**	3.938	0.970
The mean score on environmental activities of CSR and Consumer Brand Preference for Mobile Phone Services			**3.264**	**1.0155**

Source: Survey data (2021)

The summary of results in Table 1 presents an average mean score (mean score =3.264, S. D=1.0155) implying that all the environmental practices of corporate social responsibility contributed at an average level to consumer brand preference for mobile phone services. The environmental practice considered to make the greatest contribution was the minimization of waste and emission from operations (M = 3.938; SD = 0.970), provision of waste disposal bins in towns (M =3.119; SD = 0.979); and mass tree planting exercises (M = 3.238; SD = 0.879). The environmental practice reported to be the least important was the engagement in environmental conservation activities in the community (M = 2.761; SD =1.234).

Vol. 6, No. 02; 2023
ISSN: 2581-4664

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

Users Data	**Model**		
	Beta[a]	t	p
Predictors			
(Constant)	29.270	13.131	0.000
ENP	0.899	13.547	0.000
TC	0.157	4.007	0.000
ENP* TC	0.068	5.671	0.000
R Square	0.392		
Δ R Square	0.057		
P-Value ΔF	0.000		

The third regression model shows the interaction effect of environmental practices of corporate social responsibility and technological competencies (ENP*TC) as the third predictor. This interaction term had a regression coefficient of 0.068 (p=0.000, P< 0.05) which indicates a significant positive moderation effect. Based on the results of table 4.20, consumer brand preference can be estimated as follows;

$$Y = 29.270 + 0.899ENP + 0.157TC + 0.068ENP * TC$$

Where:
Y - Consumer Brand Preference
ENP – Environmental Practices of CSR

TC – Technological Competencies

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

5. DISCUSSION OF RESULTS

Concerning consumer brand preference, it was hypothesized that technological competencies have no statistically significant moderating effect on the relationship between environmental practices of corporate social responsibility and consumer brand preference for mobile phone services. To test the moderating effects of technological competencies on the relationship between environmental practices of CSR and consumer brand preference for mobile phone services, multiple regressions analysis was done. This was important to determine whether the moderating effect was statistically significant.

Vol. 6, No. 02; 2023
ISSN: 2581-4664

This interaction term had a regression coefficient of 0.068 (p=0.000, P< 0.05) which indicates a significant positive moderation effect. Therefore, the statistical inference is that technological competencies moderate the relationship between environmental practices of corporate social responsibility and technological competencies. The 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 environmental practices of corporate social responsibility and consumer brand preference for mobile phone services. Technology exploration for example refers to practices which enable firms to acquire new knowledge and technologies from outside through customer involvement, external networking and external participation.

These findings are plausible to the results of a study conducted by Ylilehto, Komulainen and Ulkuniemi (2021), on factors affecting consumers' purchase decisions of mobile phone service lines. The study revealed that technology competencies are one of the main determinants of consumers purchasing intent. However, Ylilehto, Komulainen and Ulkuniemi (2021) study adopted technological competencies as the dependent variable, whereas the current study used technological competencies as the moderating variable. It is interpreted from the results that respondents are somewhat corporate technological innovation progress sensitive. Other factors found to considerably influence consumer brand preference include mobile phone service 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 interpretation seems plausible in light of the other studies on the relationship between technological competencies and consumer brand preference for mobile phone services carried out by Gao, Ren, Yang, Zhang and Li (2022) and Srivastava, Kishore and Dhingra (2021). These authors indicated various aspects of technological competencies influence consumer brand preference.

Masa'deh, Al-Henzab,Tarhini and Obeidat (2018) conducted a study and also found that people were more likely to respond to a brand that was involved in improving their technological competencies. These results confirm the findings of Ylilehto, Komulainen and Ulkuniemi (2021) who found that keeping abreast with contemporary technologies influences customers' decision to retain a mobile phone service line. In support of this assertion, Gao, Ren, Yang, Zhang and Li (2022) found that brand investment in technological competencies influences consumers' choice of mobile phone service.

6.CONCLUSION

Technological competencies have a statistically significant moderating effect on the relationship between environmental 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.

Vol. 6, No. 02; 2023
ISSN: 2581-4664

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 environmental practices of CSR and consumer brand preferences for mobile phone lines.

7.RECOMMENDATIONS FOR FUTURE RESEARCH

This study is restricted to Kenya, which is a developing country. Future research should aim at establishing contextual and geographical differences in consumer preferences by targeting other countries with different social economic and socio-cultural conditions.

REFERENCES

Communication Authority of Kenya (CAK), (2021). Quarterly sector Statistics Report, Quarter 3 report.

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, And Mixed Methods Approaches*. Fifth edition. Thousand Oaks, Califonia, Sage Publishers.

Cronbach, L. J. (1951). Coefficient Alpha and the International Structure of Tests. *Psychometrika, 16*, 297-334.

D'Souza, C., Ahmed, T., Khashru, M. A., Ahmed, R., Ratten, V., & Jayaratne, M. (2022). The complexity of stakeholder pressures and their influence on social and environmental responsibilities. *Journal of Cleaner Production*, *358*, 132038.

Fowler, F.J. (2009) Survey Research Methods, (4th ed.). Sage Publishers, Los Angeles.

Friedman, M. (1970). The social responsibility of a business is to increase its profits. *New York Times Magazine* 13th September: 123-127.

Gao, J., Ren, L., Yang, Y., Zhang, D. and Li, L. (2022), "The impact of artificial intelligence technology stimuli on smart customer experience and the moderating effect of technology readiness", *International Journal of Emerging Markets*, *17(4),* 1123-1142.

Ismail, I. J. (2023), "Speaking to the hearts of the customer! The mediating effect of customer loyalty on customer orientation, technology orientation and business performance", *Technological Sustainability*, *2 (1),* 44-66.

Kang, J., Faria, A.A., Lee, J. and Choi, W.J. (2023), "Will consumers give us another chance to bounce back? Effects of pre-crisis commitments to social and product responsibility on resilience", *Journal of Product & Brand Management*, (ahead-of-print).

Kothari, C. R. (2019). *Research Methodology: Methods & Techniques*, 4th edition. New Age International Publishers, New Delhi, India.

Krell, N. T., Giroux, S. A., Guido, Z., Hannah, C., Lopus, S. E, Caylor, K. K & Evans, T. P. (2021). Smallholder farmers use of mobile phone services in central Kenya, *Climate and Development, 13(3),* 215-227.

Kurniawati, K. & Danthy, M. (2017). The impact of philanthropy responsibility and ethical responsibility towards customer purchase behaviour and customer loyalty, *Journal of Marketing Review 10(1),* 118-130.

Lashitew, A. A., van Tulder, R., & Liasse, Y. (2019). Mobile phones for financial inclusion: What

Vol. 6, No. 02; 2023

ISSN: 2581-4664

explains the diffusion of mobile money innovations? *Research Policy, 48*(5), 1201-1215.

Masa'deh, R. E., Al-Henzab, J., Tarhini, A., & Obeidat, B. Y. (2018). The associations among market orientation, technology orientation, entrepreneurial orientation and organizational performance. *Benchmarking: An International Journal*, 25(8), 3117-3142.

Megha, R. & Anupam, B (2018). Corporate philanthropy: A study on customer perceptions. *Journal of business perspective, 17 (5),* 523-568.

Melé, D. (2008). *Corporate Social Responsibility Theories.* Oxford Handbooks Online. doi:10.1093/oxfordhb/9780199211593.003.0003

Muturi, F. M., Wadawi, J. K., & Owino, E. O. (2014). Antecedents of customer perceived value: Evidence of mobile phone customers in Kenya, *International Journal of Business and Social Science, 5(4),* 318 - 326.

Nkari, M. I. (2016) Branding practices for fresh fruits and vegetables, farmer characteristics, operating environment and performance of commercial farmers in Kiambu County, *Kenya; Unpublished PhD Thesis*, University of Nairobi, Kenya.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory*. New York: McGraw- Hill.

Ongek. M & Onjoro. V. (2020). Mobile Phone Usage among University Students in Kenya: A Recipe for Sustainable Development. *International Journal of Research and Innovation in Social Science*, *(4).* 2454-6186.

Onyango, M.O. (2019). Relationship between service brand communications on consumer brand preference in mobile phone companies in Kenya; unpublished PhD Thesis, Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya.

Porter, M. & Kramer, M. (2011). Creating shared value. *The Harvard Business Review 89(2),* 62-77.

Saunders, M., Lewis, P. & Thornhill, A. (2007*). Research methods for business students.* (4th ed.). Harlow: Prentice Hall Financial Times, Edindurg Gate.

Srivastava, V., Kishore, S., & Dhingra, D. (2021). Technology and the future of customer experience. In *Crafting customer experience strategy* (pp. 91-116). Emerald Publishing Limited.

Tsou, H.T., Chen, J.S. and Liao, W.H. (2014), "Market and technology orientations for service delivery innovation: the link of innovative competence", *Journal of Business & Industrial Marketing, 29(6).* 499-513.

Ylilehto, M., Komulainen, H. and Ulkuniemi, P. (2021), "The critical factors shaping customer shopping experiences with innovative technologies", *Baltic Journal of Management, 16(5),* 661-680.