

Beyond Generic Differentiation: Product Novelty, Quality Reliability and Perceived Performance in Kenya's Cement Industry

¹George Lango Oyieno, ²Prof. Maria Onyango, ²Dr. Michael Nyagol

¹Jaramogi Oginga Odinga University of Science and Technology, Kenya

²Department of Management and Economics

DOI: <https://doi.org/10.47772/IJRISS.2026.100800731>

Received: 30 August 2026; Accepted: 05 September 2026; Published: 16 August 2026

ABSTRACT

This study examines whether product novelty and quality reliability are separately associated with perceived organizational performance in a capital-intensive emerging-market industry. Drawing on competitive strategy, the resource-based view and dynamic capabilities theory, the article conceptualizes product differentiation as market-visible novelty and quality differentiation as production-grounded reliability. Cross-sectional survey data were obtained from 265 managers and professional staff across six Kenyan cement manufacturers, representing a 75% usable response rate. Product differentiation correlated positively with perceived performance ($r = .68, p < .001$), so was quality differentiation ($r = .67, p < .001$). The findings indicate that visible distinctiveness and production reliability represent related but analytically different strategic signals. Because the data are cross-sectional, perceptual, single-informant and nested within only six firms, the results establish associations, not causal effects, and conventional p-values may overstate precision if responses within firms are correlated.

Keywords: product differentiation; quality differentiation; organizational performance; cement manufacturing; emerging markets; capability configuration

INTRODUCTION

Differentiation remains one of the most durable explanations of superior performance, yet empirical studies frequently treat it as a single strategic posture. Such aggregation conceals an operationally important distinction. Product differentiation creates market-visible novelty through features, formulation, packaging, branding and customer-relevant uniqueness. Quality differentiation stabilizes that promise through conformity, durability, reliability and process control. Customers may notice novelty first, but continued value depends on dependable performance. The strategic question is therefore not merely whether a manufacturer differentiates, but whether visible distinctiveness and production discipline make separate contributions to perceived organizational performance.

Cement is frequently treated as a commodity, yet its production is capital intensive and product failure carries substantial construction, financial and reputational costs. Firms face intense price and distribution pressure, but differentiation remains possible through specialized formulations, packaging, application attributes, certification, consistency and technical support. Competitive strategies generate returns through the capabilities and complementary practices that implement them rather than through strategic labels alone (Banker et al., 2014; Islami et al., 2020; Maclean et al., 2023; Mgwatyu et al., 2024; Arslan & Can, 2025).

Emerging market conditions make the capability problem sharper. Infrastructure constraints, energy and imported input costs, fragmented channels and variable institutional enforcement can widen the gap between a novel product promise and reliable delivery. Cement sector evidence also demonstrates the operational importance of supply chain and sustainability constraints (Nteta & Mushonga, 2021). Evidence from African

firms links organizational learning, marketing alignment and strategic differentiation to performance, but also shows that competitive intensity and context can alter the strength of these effects (Agyapong et al., 2021; Komakech et al., 2024; Houessou et al., 2025). Kenya's cement industry therefore provides a theoretically useful setting in which to examine whether product and quality capabilities retain independent associations with performance.

The article makes three contributions. First, it disaggregates generic differentiation into market-visible product novelty and production-grounded quality reliability. Second, it links external positioning to the internal routines required to deliver the promise consistently. Third, it provides sector-specific evidence from an African process-manufacturing setting that remains underrepresented in strategy and operations research. Empirically, the article asks whether the two dimensions show distinct associations with managers' perceptions of organizational performance; it does not claim to identify firm-level causal effects.

LITERATURE REVIEW AND HYPOTHESES

Positioning, resources and dynamic renewal

Porter's competitive-strategy framework identifies valued uniqueness as a route away from direct price rivalry (Porter, 1980, 1985). The resource-based view explains why some firms sustain that position: distinctive products and reliable quality depend on combinations of technical knowledge, development routines, production systems, brand assets and managerial coordination that competitors may find difficult to reproduce (Barney, 1991). Dynamic capabilities theory adds that these resources must be sensed, recombined and renewed as technologies, customer requirements and competitive conditions change (Teece et al., 1997; Eisenhardt & Martin, 2000). Together, the perspectives explain positioning, its underlying resource base and the renewal processes needed to preserve relevance.

Contemporary evidence supports this integrated view. Resource-based research stresses the need to connect resource attributes to organizing processes and outcomes (Newbert, 2007). Knowledge-management capability and organizational agility strengthen new-product-development performance (Idrees et al., 2022), organizational learning supports competitive strategy and performance in a lower-middle-income economy (Maclean et al., 2023), and strategic capabilities remain central across evolving performance research (Melesse, 2025). Differentiation is therefore treated here as an implemented capability system rather than a merely stated strategic position.

Product differentiation as market-visible novelty

Product differentiation creates customer perceived distinctiveness through new features, formulations, packaging, variety, branding and application-specific benefits (Ulrich & Eppinger, 2016; Kotler et al., 2022; Aaker & Moorman, 2023). It can reduce substitutability, broaden use cases and support price premiums when attributes are meaningful to customers. In mature process industries, novelty is likely to be incremental and problem oriented rather than radical. Specialized cement types, packaging configurations, handling characteristics and technical-support bundles may differentiate within the boundaries of regulated standards.

Product differentiation requires more than ideation. It depends on market sensing, product-development knowledge and the capacity to translate customer problems into manufacturable offerings. Market-driven capability, market orientation and marketing capability connect those insights to performance (Day, 1994; Morgan et al., 2009; Duah et al., 2024). Recent studies associate knowledge capability, agility and an innovative managerial mindset with stronger innovation and competitive outcomes (Idrees et al., 2022; Jaaffar et al., 2024). Multi-country evidence identifies product uniqueness, product innovation and customer responsiveness as important elements of marketing innovation (Sipos et al., 2025). African evidence also links differentiation to performance while showing that competitive intensity can condition the relationship (Houessou et al., 2025).

H1. Product differentiation is positively associated with organizational performance.

Quality differentiation as production-grounded reliability

Quality differentiation creates value through conformity, certification, durability, dependable performance and credible process control. It can lower customers' perceived technical and economic risk, protect reputation and reduce failure costs. In the cement industry, reliability is particularly consequential because variability can affect construction performance and buyers frequently use supplier reputation as a proxy for production discipline that they cannot observe directly.

Quality becomes strategic when it exceeds basic compliance and is supported by routines that are consistent, difficult to imitate and responsive to changing requirements. Operations research has long treated quality and innovation as complementary, rather than necessarily competing priorities (Prajogo & Sohal, 2006). Recent evidence links production capabilities and routines to performance and shows that firms adapt innovation strategy to environmental change (Csiki et al., 2023; Gošnik et al., 2023). Studies of manufacturing firms in East Africa likewise associate competitive and differentiation strategies with organizational outcomes (Modi & Wambua, 2024; Musanya & Wainaina, 2024). Product novelty without reliable execution can magnify complexity and failure risk; reliability without renewal can leave an offering indistinguishable.

H2. Quality differentiation is positively associated with organizational performance.

Product-quality capability configuration

The two dimensions are analytically distinct but strategically connected. Product differentiation answers why a customer should notice or select an offering; quality differentiation answers why the customer should trust and repurchase it. Existing studies indicate that differentiation operates through complementary organizational, innovation, procurement and sustainability practices (Aidara et al., 2021; Aftab et al., 2025; Arslan & Can, 2025; Indriyani et al., 2025). The present analysis does not estimate a product-quality interaction. Complementarity is therefore a theoretical interpretation and a proposition for future testing, not an empirical moderation finding.

METHODOLOGY

Research setting, design and sample

The study used a cross-sectional survey of managers and professional staff in six Kenyan cement manufacturers: Bamburi Cement, Mombasa Cement, East African Portland Cement Company, National Cement (Simba Cement), Savannah Cement and Rai Cement. The sampling frame comprised approximately 3,000 employees in marketing, product development, strategy, finance/accounting and operations. Firms were purposively selected for sector relevance; proportionate stratification and simple random selection were then applied within role strata. Of 353 questionnaires distributed, 265 usable responses were returned, yielding a 75% response rate. Respondents represented all six firms, with firm shares ranging from 12.5% to 20.0%. The respondent was the unit of observation, although the constructs concerned organizational practices and performance. This cross-level feature limits firm-level inference and is addressed explicitly in the analytical interpretation.

Measures, construct specification and analytical strategy

Five-point Likert items were averaged to form composite scores. Product differentiation was measured through perceived product variety, uniqueness, innovation, customer-relevant attributes and superiority. Quality differentiation covered consistent quality, standards and certification, durability and reliability, quality-control effectiveness and customer satisfaction with quality. Items were developed from the thesis conceptual definitions and reviewed by subject experts for relevance and coverage. The pilot study reported a two-wave test-retest coefficient of $r = .751$ from 12 participants; this provides preliminary temporal-consistency evidence but is not a substitute for item-level internal-consistency, convergent-validity or

discriminant-validity assessment. Organizational performance was operationalized provisionally as a reflective perceptual composite of financial and non-financial performance: the indicators were treated as manifestations of respondents' overall assessment rather than mechanically summed contributions to a formative index. This specification requires confirmation with the original item-level data. The article therefore distinguishes perceived organizational performance from audited firm outcomes.

Pearson correlations were used to describe the unadjusted associations between each focal differentiation dimension and perceived performance. The originating thesis also reported a simultaneous regression containing product, quality, design, price and market differentiation ($R^2 = .65$, adjusted $R^2 = .63$, $F = 32.5$, $p < .001$). The product and quality coefficients from that model are reported here as covariate-adjusted supplementary evidence; they are not substitutes for a dedicated two-predictor model. Because the archived article file did not contain the raw item-level dataset or statistical output, the requested two-predictor model, firm-clustered or multilevel estimates, CFA and exact assumption diagnostics could not be reproduced for this revision. No unreported diagnostic statistic is therefore described as "acceptable." The available conventional p-values are presented for completeness but treated as exploratory: respondents are nested within only six firms, conventional regression assumes greater independence than the design guarantees, and six clusters are too few for routine cluster-robust inference without small-sample procedures such as wild-cluster bootstrap. Normality, linearity, residual homoscedasticity, influence and multicollinearity must be reported from the reproducible output before submission.

RESULTS

Both focal dimensions were rated highly and were positively associated with perceived performance. Table 1 separates the unadjusted correlations from the standardized coefficients obtained from the broader five-predictor thesis model.

Table 1. Focal differentiation dimensions and perceived organizational performance

Construct	Mean	SD	r with performance	Standardized β	p
Product differentiation	4.09	0.73	0.68	0.45	< .001
Quality differentiation	4.18	0.78	0.67	0.31	0.001

Note. $N = 265$ individual respondents nested within six firms. Correlations are unadjusted associations. Standardized coefficients come from the thesis-reported five-predictor model containing product, quality, design, price and market differentiation ($R^2 = .65$; adjusted $R^2 = .63$; $F = 32.5$, $p < .001$). They are supplementary covariate-adjusted estimates, not results from a dedicated product-and-quality-only model. Conventional p-values should be interpreted cautiously because firm clustering was not modelled.

Product differentiation averaged 4.09 ($SD = .73$), with perceived superiority to competitors receiving the highest product-item rating ($M = 4.15$). Product differentiation correlated with perceived performance at $r = .68$ ($p < .001$). In the broader five-predictor model, it had the largest standardized coefficient ($\beta = .45$, $p < .001$). The pattern is consistent with H1, but the hypothesis should be regarded as provisionally supported pending re-estimation of the focal two-predictor model with an appropriate small-sample adjustment for firm clustering.

Quality differentiation averaged 4.18 ($SD = .78$). Durability and reliability received the highest rating ($M = 4.22$), followed by consistent production of high-quality products ($M = 4.20$); quality-control processes were rated comparatively lower ($M = 4.10$). Quality differentiation correlated with perceived performance at $r = .67$ ($p < .001$) and had a positive standardized coefficient in the broader five-predictor model ($\beta = .31$, $p =$

.001). This pattern is consistent with H2, subject to the same measurement, clustering and model-specification qualifications.

Capability	Highest-rated practice	Mean	Comparatively weaker practice	Mean
Product	Perceived superiority to competitors	4.15	Overall product-differentiation composite	4.09
Quality	Durability and reliability	4.22	Quality-control processes	4.10

DISCUSSION

The findings support a disaggregated view of differentiation. Product differentiation showed the larger partial coefficient in the broader model, suggesting that customer-perceived distinctiveness may provide a salient reason for selecting one cement offering over another. The result is consistent with positioning theory and evidence that product uniqueness, innovation and responsiveness contribute to competitive and marketing outcomes (Porter, 1985; Jaaffar et al., 2024; Sipos et al., 2025). African evidence likewise associates differentiation with performance, although the magnitude can depend on competitive conditions (Houessou et al., 2025). Because both predictor and outcome measures came from the same respondents, the result concerns perceived association and may partly reflect shared-method variance.

Quality differentiation also retained a positive coefficient in the broader model. Reliability can make a product promise credible, reduce perceived risk and support repeat demand. This interpretation accords with the view that innovation and quality-management capabilities should be integrated rather than managed as opposing priorities (Prajogo & Sohal, 2006). It also supports a resource-based explanation in which consistent quality rests on less visible routines - process control, technical competence, certification and corrective action, that competitors cannot reproduce merely by copying a visible feature. The analysis does not demonstrate that these mechanisms caused objectively measured performance changes.

The product and quality coefficients indicate separate conditional associations in the broader model; they do not establish statistical complementarity. The conceptual architecture nevertheless remains useful: novelty creates salience, whereas reliability protects trust. The comparatively lower rating for quality-control processes, relative to experienced durability, warrants managerial attention but should not be interpreted as evidence of deteriorating process capability without objective defect, conformance or complaint data.

The study extends differentiation research by separating two mechanisms commonly folded into a generic construct, bringing operating routines into a positioning explanation and adding evidence from a capital-intensive African process industry. Its empirical contribution is deliberately bounded: it documents consistent respondent-level associations rather than firm-level causal effects. Future confirmation requires measurement validation and analysis that respects the six-firm clustering structure.

Managerial Implications

Managers should coordinate product and quality decisions through shared cross-functional review gates. Product-development proposals should include evidence of customer value, manufacturability, certification readiness, process-capability requirements and post-launch quality indicators. Operations and quality teams should participate before feature and formulation commitments are finalized, while marketing teams should translate technical differences into defensible customer benefits rather than generic superiority claims. A balanced scorecard could track new-product adoption, repeat purchases, complaints, non-conformance, defect and return costs, certification performance and margin contribution. These are evidence-informed

recommendations derived from the conceptual logic and observed perceptions; the present cross-sectional design does not establish their causal impact.

LIMITATIONS AND FUTURE RESEARCH

The study has four central limitations. First, its cross-sectional design cannot establish temporal order and is vulnerable to reverse causality: respondents in better-performing organizations may evaluate differentiation more favorably. Second, the same respondent supplied predictor and performance ratings, creating common-method and consistency-motif risks. Third, 265 respondents are nested within only six firms. Treating all observations as independent may underestimate uncertainty, while conventional cluster-robust inference is itself unreliable with so few clusters. Fourth, measurement evidence is limited to expert content review and a 12-participant test-retest exercise; item-level internal consistency, factor structure, convergent validity, discriminant validity and role invariance were not available for verification. Before journal submission, the original data should be used to (i) report the complete item wording and performance dimensions; (ii) estimate a focal model containing product and quality differentiation; (iii) present the five-predictor model as a robustness specification; (iv) report residual plots, influence statistics, VIF/tolerance and heteroscedasticity tests; (v) conduct CFA and, if sample structure permits, measurement-invariance checks across roles; and (vi) use multilevel modelling or a small-cluster procedure such as wild-cluster bootstrap. Longitudinal, multi-informant research should link differentiation measures to audited margins, sales growth, market share, certification outcomes, complaints and defect rates, and then test whether quality capability conditions the performance payoff from product novelty.

CONCLUSION

In a sector often viewed as commodity based, respondents associated differentiation with giving customers both a reason to notice and a reason to trust. Product differentiation showed the larger coefficient in the broader model, while quality differentiation remained positively associated with perceived performance. The evidence therefore favors further examination of a disaggregated capability explanation over a single generic posture. It does not establish causality, firm-level performance effects or statistical complementarity. Those claims require validated measurement, a focal two-predictor specification, clustering-aware inference and longitudinal objective outcomes.

REFERENCES

1. Aaker, D. A., & Moorman, C. (2023). *Strategic market management* (12th ed.). Wiley.
2. Aftab, J., Veneziani, M., Wei, F., Abid, N., & Aftab, F. (2025). Corporate social responsibility and business excellence: Examining the serial mediation of green entrepreneurial orientation and differentiation strategy. *Corporate Social Responsibility and Environmental Management*, 32(3), 3621–3638. <https://doi.org/10.1002/csr.3152>
3. Agyapong, A., Osei, H. V., & Akomea, S. Y. (2021). Organizational capabilities, business strategic orientation, and performance in family and non-family businesses in a sub-Saharan African economy. *Journal of African Business*, 23(2), 411–439. <https://doi.org/10.1080/15228916.2021.1907158>
4. Aidara, S., Mamun, A. A., Nasir, N. A. M., Mohiuddin, M., Nawi, N. C., & Zainol, N. R. (2021). Competitive advantages of the relationship between entrepreneurial competencies and economic sustainability performance. *Sustainability*, 13(2), 864. <https://doi.org/10.3390/su13020864>
5. Arslan, O., & Can, E. (2025). The effects of differentiation strategies on firm performance: The role of sustainable procurement policies in environmental uncertainty. *Journal of Strategy and Management*, 18(3), 657–676. <https://doi.org/10.1108/JSMA-01-2025-0001>
6. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
7. Banker, R. D., Mashruwala, R., & Tripathy, A. (2014). Does a differentiation strategy lead to more sustainable financial performance than a cost leadership strategy? *Management Decision*, 52(5), 872–896. <https://doi.org/10.1108/MD-05-2013-0282>

8. Csiki, O., Horváth, D., & Szász, L. (2023). How to improve firm performance? The role of production capabilities and routines. *International Journal of Operations & Production Management*, 43(13), 1–26.
9. Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52. <https://doi.org/10.1177/002224299405800404>
10. Duah, F. A., Gyamfi, S., & Ofori, D. (2024). Marketing capability and firm performance: The mediating role of resource orchestration capability. *Cogent Social Sciences*, 10(1), 2318880. <https://doi.org/10.1080/23311886.2024.2318880>
11. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11%3C1105::AID-SMJ133%3E3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11%3C1105::AID-SMJ133%3E3.0.CO;2-E)
12. Houessou, A. M., Aoudji, A. K. N., & Biaou, G. (2025). Nexus between competitive business strategy and firm performance: Moderating effect of competitive intensity. *Journal of African Business*, 26(3), 514–537. <https://doi.org/10.1080/15228916.2024.2395231>
13. Gošnik, D., Kavčič, K., Meško, M., & Milost, F. (2023). Relationship between changes in the business environment, innovation strategy selection and firms' performance: Empirical evidence from Slovenia. *Administrative Sciences*, 13(4), 99. <https://doi.org/10.3390/admsci13040099>
14. Idrees, H., Hynek, J., Xu, J., Akbar, A., & Jabeen, S. (2022). Impact of knowledge management capabilities on new product development performance through mediating role of organizational agility and moderating role of business model innovation. *Frontiers in Psychology*, 13, 950054. <https://doi.org/10.3389/fpsyg.2022.950054>
15. Indriyani, E. P., Suhariadi, F., Lestari, Y. D., Aldhi, I. F., Rahmawati, E., Hardaningtyas, D., & Abbas, A. (2025). Sustaining infrastructure firm performance through strategic orientation: Competitive advantage in dynamic environments. *Sustainability*, 17(3), 1194. <https://doi.org/10.3390/su17031194>
16. Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, 6, 3. <https://doi.org/10.1186/s43093-020-0009-1>
17. Jaaffar, A. H., Abd Majid, N., Kasavan, S., Isa, A., Alwi, M. N. R., & Zahari, A. R. (2024). The effect of innovative mindset and behavior on innovation performance and competitive advantage: A case of halal SME owner-managers from Malaysian energy-intensive industry. *Journal of Innovation and Entrepreneurship*, 13, 1. <https://doi.org/10.1186/s13731-023-00359-z>
18. Komakech, A. R., Namugenyi, W. M., Namara, R. B., & Ombati, T. O. (2024). Influence of competitive strategies on the performance of small manufacturing enterprises in Kampala Metropolitan, Uganda. *Ugandan Journal of Management and Public Policy Studies*, 25(1), 24–41.
19. Kotler, P., Keller, K. L., & Chernev, A. (2022). *Marketing management* (16th ed.). Pearson.
20. Maclean, M., Appiah, M. K., & Addo, J. F. (2023). How organizational learning dimensions influence firms' competitive strategy and performance in a lower-middle-income country: A mediation model. *Cogent Business & Management*, 10(3), 2256073. <https://doi.org/10.1080/23311975.2023.2256073>
21. Melesse, H. S. (2025). Strategic capabilities and competitive performance of firms: Development, current themes, and future research agenda. *Journal of the Knowledge Economy*. Advance online publication. <https://doi.org/10.1007/s13132-025-02708-7>
22. Mgwatyu, B., Chigori, D. T., & Olabanji, O. (2024). Strategic marketing alignment-competitive advantage nexus: Green entrepreneurship path in SMEs. *Southern African Business Review*, 28, 1–28.
23. Modi, B. O., & Wambua, P. P. (2024). Differentiation strategy effects on performance of milk processing firms in Kiambu County, Kenya. *Strategic Journal of Business & Change Management*, 11(1), 213–231. <https://doi.org/10.61426/sjbcm.v11i1.2850>
24. Morgan, N. A., Vorhies, D. W., & Mason, C. H. (2009). Market orientation, marketing capabilities, and firm performance. *Strategic Management Journal*, 30(8), 909–920. <https://doi.org/10.1002/smj.764>
25. Musanya, P., & Wainaina, G. (2024). Competitive strategies and organizational performance of metal and allied manufacturing industries in Mombasa County, Kenya. *Strategic Journal of Business & Change Management*, 11(1), 120–135.
26. Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal*, 28(2), 121–146. <https://doi.org/10.1002/smj.573>

27. Nteta, A., & Mushonga, J. (2021). Drivers and barriers to green supply chain management in the South African cement industry. *Journal of Transport and Supply Chain Management*, 15, a571. <https://doi.org/10.4102/jtscm.v15i0.571>
28. Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. Free Press.
29. Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. Free Press.
30. Prajogo, D. I., & Sohal, A. S. (2006). The integration of TQM and technology/R&D management in determining quality and innovation performance. *Omega*, 34(3), 296–312. <https://doi.org/10.1016/j.omega.2004.11.004>
31. Sipos, N., Rideg, A., Al Najjar, A. S., & Lukovszki, L. (2025). Resource-based view of marketing innovation in SMEs: A multi-country empirical analysis based on the global competitiveness project. *Journal of Innovation and Entrepreneurship*, 14, 94. <https://doi.org/10.1186/s13731-025-00573-x>
32. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z)
33. Ulrich, K. T., & Eppinger, S. D. (2016). *Product design and development* (6th ed.). McGraw-Hill Education.