

Causal factors of competitive advantage Affecting the organizational performance for construction materials business

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Abstract

This article aimed 1) to study the causal factors affecting competitive advantage and the organizational performance for construction materials business, 2) to study the influence of causal factors of competitive advantage affecting the organizational performance for construction materials business, and 3) to develop a model the causal factors of competitive advantage affecting the organizational performance for construction materials business. A researcher collected data from interviews and online questionnaires with construction materials business, from May 2024 to July 2024 by collecting a sample of 400 people. The results of the analysis concluded that marketing mix 4Ps affected competitive advantage, marketing mix 4Ps affected organizational performance through competitive advantage, service quality affect competitive advantage, service quality affected organizational performance through competitive advantage, partnership network affected on competitive advantage, partnership network affected organizational performance through competitive advantage, and competitive advantage affected organizational performance. The business of manufacturing and distributing construction materials can utilize research findings to establish competitive advantages. Furthermore, it can adapt and modify organizational operations based on these research results.

Keywords: Marketing Mix 4Ps, Service Quality, Partnership Network, Competitive Advantage, Organizational Performance

1. Introduction

The construction material production and distribution business is a crucial upstream industry for the construction and real estate sectors. Sales of construction materials fluctuate in line with investment conditions in construction, as the cost of materials accounts for approximately 60% of total construction value (National Economic and Social Development Board, 2015). Most traditional construction material retailers manage their operations in an outdated manner, with some lacking comprehensive management strategies compared to modern stores that offer a diverse range of products. This includes improvements in storefronts, distribution systems, especially online sales channels, modern inventory tracking, and systematic product delivery services. This has led the researcher to study how competitive advantage can enhance organizational performance in the construction material production and distribution sector.

The researcher collected data from businesses in this sector, categorizing them into the following types: 1) roofing and installation equipment, 2) cement and construction materials, nails and wire, 3) doors, windows, and wood products, 4) sanitary ware, bathrooms, and kitchens, 5) tools and electrical equipment, 6) ceramic tiles, flooring and wall materials, and paints and chemicals, 7) furniture and household items, and 8) water tanks, pipes, and water management and landscaping systems. Data were gathered through interviews and online surveys from May 2024 to July 2024, targeting a qualitative population of construction material businesses, with eight samples taken across the categorized types. For the quantitative aspect, 400 samples were collected based on statistical structural equation modeling analysis.

The anticipated benefits include enabling construction material businesses to plan their marketing mix (4Ps), improve service quality, and develop partnership networks to enhance operational efficiency and achieve better organizational performance.

This research article presents a study grounded in systems theory to develop and investigate empirical variables influencing competitive advantage and organizational performance. The researcher believes that the findings will be significant for businesses in the construction material sector and will provide academic benefits for scholars, researchers, and students who can use the empirical results to further integrate and develop academic studies.

2. Research Objectives

- 1) To study the causal factors affecting competitive advantage and the organizational performance for construction materials business.
- 2) To study the influence of causal factors of competitive advantage affecting the organizational performance for construction materials business.
- 3) To develop a model the causal factors of competitive advantage affecting the organizational performance for construction materials business.

3. Literature Review

The concepts and theories used in the research encompass the marketing mix 4Ps, service quality, partnership network, competitive advantage, and organizational performance. As mentioned in the background and significance of the problem, these are the variables that define the conceptual framework. The examination of the relationships between these variables is as follows:

Hypothesis 1: The relationship between marketing mix 4Ps and competitive advantage

Darmawan and Grenier (2021) state that the marketing mix is one of the most important components of marketing activities and plays a crucial role in creating value and satisfaction to meet customer expectations.

Dedy and Soelaiman (2023) note that the development of various processed nutmeg products shows good potential but must be maximized to balance nutmeg production in Ternate City to produce products that meet market demand.

Juju and Supriadi (2024) define the impact of marketing mix strategies and relationship marketing strategies on competitive advantage and their effects on certain aspects of marketing performance simultaneously.

Hypothesis 2: The relationship between marketing mix 4Ps and organizational performance through competitive advantage

Ndegwa et al. (2020) examined the impact of competitive environmental factors on the relationship between marketing mix strategies and the performance of tour companies in Kenya.

Al-Karim et al. (2023) investigated the effects of marketing mix strategies on the performance of garment manufacturing organizations in Bangladesh, assessing the role of service quality as a mediator between marketing mix strategies and business performance.

Alqudah (2023) explored the relationship between electronic marketing mix strategies (EMMS) and organizational performance (OP) in SMEs in Jordan. This study employed a quantitative research approach to investigate the impact of EMMS factors on OP indicators such as product development, pricing strategies, promotional activities, and online distribution channels.

Hypothesis 3: The relationship between service quality and competitive advantage

Medina et al. (2023) describe, compare, and analyze the competitive advantages derived from service quality in current logistics companies. The primary aim of this comparative study is to identify the factors that enable service quality to create a competitive advantage among these companies.

Ahmad and Jais (2024) state that logistics resources play a crucial role in determining service quality and maintaining the competitive capabilities of organizations. This study examines how service quality (SQ) and logistics resources (LR) affect the sustainable competitive advantage (SCA) of hotels in Kurdistan, Iraq.

Budiarti (2024) analyzes and validates the influence of service quality and entrepreneurial orientation on competitive advantage and marketing performance, as well as examining and validating the impact of competitive advantage on the marketing performance of public markets in East Java province.

Hypothesis 4: The relationship between service quality and organizational performance through competitive advantage

Sharma and Al-Sinawi (2021) state that the influence of service quality on organizational performance has gained increasing attention in the business and academic worlds. Public universities in Malaysia are no different from the business world regarding service quality and outcomes.

Fialkowska-Filipek et al. (2023) reveal a statistically significant relationship between electronic leadership, product and service quality, and organizational performance. Notably, a strong link has been identified between product service quality (PSQ) and organizational performance.

Sahibzada et al. (2023) examine the relationship between knowledge-oriented leadership (KOL) and organizational performance (OP) in higher education institutions (HEIs), both directly and indirectly through service innovation and the quality of knowledge sharing.

Hypothesis 5: The relationship between partnership network and competitive advantage

Oyombe et al. (2023) assess the influence of strategic collaboration on the relationship between league strategies and competitive advantage in the supply chain of construction companies in urban Nairobi, Kenya.

Alaofi and Almhalawi (2024) develop a framework that describes the relationship between dynamic economic leadership development and achieving competitive advantage in a highly competitive business environment in the contemporary world.

Jansen (2024) states that innovation is a crucial foundation for competitive advantage in today's dynamic business environment, and companies often collaborate with external partners to enhance their innovation capabilities.

Hypothesis 6: The relationship between partnership network and organizational performance through competitive advantage

Muis and Isyanto (2021) describe the implementation of market orientation, transformational leadership, and partnership strategies in relation to competitive advantage and organizational performance. The research also analyzes the impact of independent variables (market orientation, transformational leadership, and partnership strategies) and a mediating variable (competitive advantage) on the dependent variable (organizational performance).

Mukhongo et al. (2023) state that the performance of broadcasting entities must contend with the economic impacts of digital disruption, mobile technology, and the rise of social media, prompting managers to rethink and adjust their strategies, especially as radio and television stations have shut down operations recently in Kenya.

Olutimehin et al. (2024) propose a new theoretical model aimed at clarifying the impact of strategic collaboration on organizational performance, particularly tailored to the ever-changing landscape of emerging markets.

Hypothesis 7: The relationship between competitive advantage and organizational performance

Mehregan et al. (2023) propose a theoretical framework that explains the impact of supply chain management (SCM) practices on competitive advantage and company performance, while considering the mediating effects of supply chain innovation and total quality management (TQM).

Srikanlayaniwart et al. (2023) investigate the causes and outcomes of innovation capability to enhance competitive advantage and performance in small hotels in Thailand.

Tewu et al. (2023) explore the extent to which the implementation of enterprise risk management (ERM) and supply chain management (SCM) can create competitive advantage, influence decision-making, and impact the performance of companies.

4. Research Framework

This research employs both qualitative and quantitative methods. The researcher has established the research framework based on systems theory, summarizing the components of the system as follows: (1) Inputs, (2) Processes, (3) Outputs, and (4) Feedback.

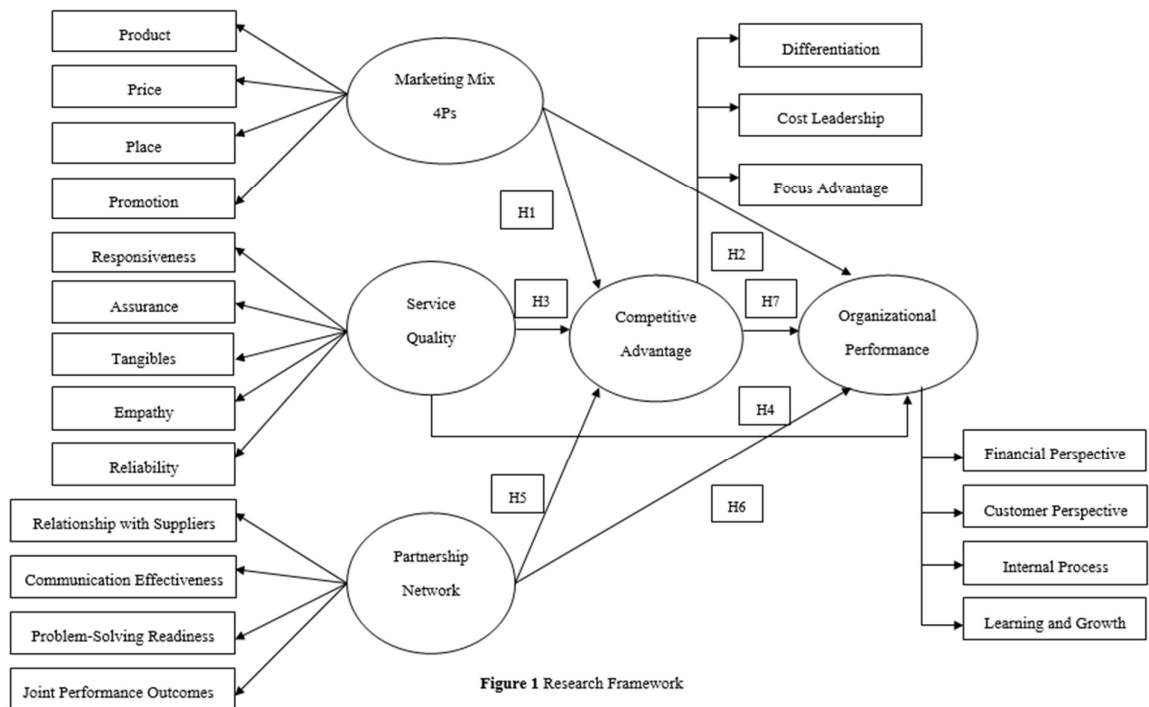
(1) Inputs refer to the marketing mix 4Ps, which consists of four components: 1) Product, 2) Price, 3) Place, and 4) Promotion; service quality, which includes five components: 1) Responsiveness, 2) Assurance, 3) Tangibles, 4) Empathy, and 5) Reliability; and partnership network, comprising four components: 1) Relationship with Suppliers, 2) Communication Effectiveness, 3) Problem-Solving Readiness, and 4) Joint Performance Outcomes.

(2) Process refers to competitive advantage, which consists of three components: 1) Differentiation, 2) Cost Leadership, and 3) Focus Advantage.

(3) Outputs refer to organizational performance, which includes four components: 1) Financial Perspective, 2) Customer Perspective, 3) Internal Process Perspective, and 4) Learning and Growth Perspective.

(4) Feedback refers to organizational performance, which is an output that feeds back into the marketing mix 4Ps, service quality, and partnership network.

The four components are interrelated, and none can exist in isolation. A change in one component will inevitably affect the others; any deficiencies or errors in one component will lead to shortcomings in the others. The details are as follows:



5. Research Methodology

This research is a mixed-method study focusing on data collection from businesses involved in the production and distribution of construction materials. The types of construction material businesses are categorized as follows: 1) roofing and installation equipment, 2) cement and construction, including steel, nails, and wire, 3) doors, windows, and wood and equipment, 4) sanitary ware, bathrooms, and kitchens, 5) tools and electrical equipment, 6) ceramic tiles, flooring and wall materials, and paints and chemicals, 7) furniture and household appliances, and 8) water tanks, pipes, and irrigation and landscaping systems.

The population consists of 36,210 businesses engaged in the production and distribution of construction materials (data from the Department of Business Development, 2023). The sample group includes 400 businesses, selected using the statistical technique of Structural Equation Modeling (SEM). Based on the research framework, there are five latent variables and twenty observed variables. Statisticians recommend that the sample size should be 15 to 20 times the number of observed variables (Hair et al., 2006) for appropriate multivariate analysis. Therefore, the suitable and sufficient sample size should range from $15 \times 20 = 300$ to $20 \times 20 = 400$.

The research tools consist of two types.

1) The questionnaire consists of the following sections: Section 1 relates to the general characteristics of the organizations of the respondents; Section 2 pertains to the marketing mix 4Ps; Section 3 focuses on service quality; Section 4 addresses partnership network; Section 5 discusses competitive advantage; and Section 6 relates to organizational performance.

The researchers delivered a draft of the questionnaire to five experts for evaluation. The Index of Item-Objective Congruence (IOC) was calculated to be 0.8602, and the reliability of the research instrument was tested, yielding a

reliability coefficient of 0.9433. This instrument is used to study the causal factors of competitive advantage and their impact on the organizational performance of construction material businesses.

2) Interview Questions:

- How do you perceive the overall marketing mix 4Ps for businesses producing and distributing construction materials? What factors do you think it impacts?
- Do you believe that businesses in the production and distribution of construction materials should consider applying service quality to create a competitive advantage? What factors would this affect?
- How do you view partnership network for businesses producing and distributing construction materials? What factors do you think it impacts?
- Overall, how do the marketing mix 4Ps, service quality, partnership network, and competitive advantage relate to one another?
- Does your organization consider competitive advantage, and in what ways?
- To improve organizational performance, which variables do you think have direct and indirect impacts? How?
- Do you believe that competitive advantage has a direct effect on organizational performance? If so, how?

The researcher collected data through in-depth interviews conducted between May 2024 and July 2024. The data was then analyzed and synthesized, followed by descriptive narration and content analysis to develop the model derived from the quantitative aspect.

6. Research Results

Objective 1	Research Findings
Marketing Mix 4Ps	The respondents' opinions on the overall marketing mix (4Ps) were at the highest level. When analyzing each aspect separately, one aspect was rated at the highest level, while three aspects were rated at a high level. Specifically, the respondents rated the product aspect the highest, followed by price, place, and promotion.
Service Quality	The respondents' opinions on the overall service quality were at a high level. When analyzing each aspect separately, one aspect was rated at the highest level, while four aspects were rated at a high level. Specifically, the respondents rated the empathy aspect the highest, followed by tangibles, reliability, assurance, and responsiveness.

Partnership Network	The respondents' opinions on the overall partnership network were at a high level. When examining each aspect separately, all four aspects were rated highly. Specifically, the respondents rated communication effectiveness the highest, followed by joint performance, relationships with suppliers, and problem-solving readiness.
Competitive Advantage	The respondents' opinions on the overall competitive advantage were at a high level. When examining each aspect separately, one aspect was rated the highest, and two aspects were rated highly. Specifically, the respondents rated differentiation as the highest, followed by cost leadership and focus advantage.
Organizational Performance	The respondents' opinions on the overall organizational performance were at the highest level. When examining each aspect separately, all four aspects were rated at the highest level. Specifically, the respondents rated the learning and growth perspective as the highest, followed by the internal process perspective, customer perspective, and financial perspective.

Objective 2	Research Findings
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Marketing Mix 4Ps (MM4P)	Has a direct positive influence on competitive advantage (CPAV) with a direct influence size of 0.20, which is a statistically significant influence at the level of 0.01.
Marketing Mix 4Ps (MM4P)	Has a direct positive influence on organizational performance (OZPF) with a direct influence size of 0.12, which is a statistically significant influence at the level of 0.05.
Service Quality (SVQL)	Has a direct positive influence on competitive advantage (CPAV) with a direct influence size of 0.22, which is a statistically significant influence at the level of 0.01.
Service Quality (SVQL)	Has a direct positive influence on organizational performance (OZPF) with a direct influence size of 0.22, which is a statistically significant influence at the level of 0.01.

Partnership Network (PNNW)	Has a direct positive influence on competitive advantage (CPAV) with a direct influence size of 0.49, which is a statistically significant influence at the level of 0.01.
Partnership Network (PNNW)	Has a direct positive influence on organizational performance (OZPF) with a direct influence size of 0.53, which is a statistically significant influence at the level of 0.01.
Competitive Advantage (CPAV)	Has a direct positive influence on organizational performance (OZPF) with a direct influence size of 0.11, which is a statistically significant influence at the level of 0.05.
Marketing Mix 4Ps (MM4P), Service Quality (SVQL), and Partnership Network (PNNW)	Has an indirect positive influence on organizational performance (OZPF) through competitive advantage (CPAV), with indirect influence sizes of 0.12, 0.12, and 0.05, respectively, which are statistically significant at the level of 0.05.

Objective 3: The research findings revealed that the development of the model based on exploratory analysis and synthesis led the researcher to name the model of competitive advantage affecting organizational performance as the Competitive Advantage for Organizational Performance Model (CAOP Model).



Figure 2 Competitive Advantage for Organizational Performance Model

7. Conclusion

Manufacturers of construction materials are increasingly likely to adjust their production processes by investing in technology to improve product quality. At the same time, retailers are rapidly adapting to meet the changing demands of consumers in the digital age. Although the construction business is gradually recovering, it still faces high competition from both modern construction material retailers and manufacturers who are selling directly to consumers. Retail revenues are expected to remain stable.

The researcher collected data through online questionnaires and in-depth interviews with businesses involved in the production and distribution of construction materials. The analysis concluded that the marketing mix 4Ps influences competitive advantage, the marketing mix 4Ps impacts organizational performance through competitive advantage, service quality affects competitive advantage, service quality influences organizational performance through competitive

advantage, partnership network contribute to competitive advantage, partnership network affect organizational performance through competitive advantage, and competitive advantage impacts organizational performance.

Businesses in the production and distribution of construction materials can utilize the findings from this research to define their competitive advantage and adjust their organizational performance accordingly.

8. Discussion

The results from Objectives 1 and 2 indicate that:

- The marketing mix 4Ps significantly affects competitive advantage at a statistical level of 0.01. This can be explained by the fact that developing quality products that meet market demands, setting competitive prices, managing distribution channels effectively and conveniently, and implementing effective promotions are key factors that strengthen competitiveness. This aligns with the study by Darmawan and Grenier (2021).
- The marketing mix 4Ps impacts organizational performance through competitive advantage, also with a statistical significance at the 0.01 level. It can be explained that high-quality products adequately meet market demands and enhance customer loyalty. Appropriate pricing fosters market competitiveness and boosts customer confidence in choosing the organization's products, which aligns with the study by Ndegwa et al. (2020).
- Service quality significantly influences competitive advantage at a statistical level of 0.01. It can be explained that providing high-quality and standardized services increases customer satisfaction and trust. Customers often seek positive experiences in communication, problem-solving, and understanding, such as offering advice and responding quickly and effectively to their needs. Good service can create sustainable satisfaction and encourage customers to return for more products and services, consistent with the study by Media et al. (2023).
- Service quality also affects organizational performance through competitive advantage, with a statistical significance at the 0.01 level. It can be explained that providing excellent service creates a positive image and trust among customers, enhancing the organization's reputation in the market and allowing it to differentiate itself from competitors. Customers often seek the best service experience, which impacts their satisfaction. Timely responses to customer needs are crucial for increasing satisfaction and fostering goodwill, aligning with the study by Sharma and Al-Sinawi (2021).

The findings from the research objective 3 indicate that the in-depth interviews can lead to a causal relationship model of competitive advantage affecting organizational performance.

9. Research Contribution

The research findings provide academic insights into the causal factors of competitive advantage that affect organizational performance for construction material businesses. The results enhance the understanding of the relationships impacting various variables related to competitive advantage and organizational performance. This knowledge can be further developed and expanded academically for future studies and applications in other academic fields.

10. Recommendation

In future research, the causal relationship model of competitive advantage affecting organizational performance should be used to verify the model's consistency with empirical data. Additionally, future studies should explore other significant factors that serve as causal determinants of competitive advantage impacting organizational performance, as there are many variables that have not yet been examined.

- For instance, cost Efficiency is effective management of resources without compromising quality allows companies to set competitive prices through efficient supply chain management and cost-saving production techniques.
- Distribution network is a robust distribution network ensures quick availability of products, reducing delivery time and costs.
- Brand reputation and trust is building a good reputation through reliability and excellent customer service fosters trust among customers and partners.
- Customer relationships are developing strong relationships with stakeholders in the industry helps in understanding needs and creating repeat business.
- Technological integration is implementing technology in various processes enhances efficiency and competitive capability.

- Finally, regulatory compliance and sustainability is adhering to regulations and promoting sustainable business practices increases appeal to environmentally conscious customers.

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