A model for building business customer dependency based on product attributes and distribution relationships

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Abstract

This study aims to examine the extent to which product attributes and distributor relationships influence the formation of business customer dependency on bagged cement distributors. The unit of observation in this research is building material stores that regularly sell bagged cement products. The data were collected using a cross-sectional, one-shot approach in 2024. The population consists of 46,118 building material stores that consistently sell bagged cement products. The sample size was determined using the Slovin formula, resulting in 397 respondents. A stratified random sampling technique was applied based on regional work areas. The questionnaire employed a five-point Likert scale. Causal analysis in this study was conducted using Covariance-Based Structural Equation Modeling (CB-SEM). The results indicate that both product attributes and distributor relationships significantly affect business customer dependency, with distributor relationships exerting a stronger influence. This study contributes to the existing literature on business customer dependency, particularly in the context of the bagged cement industry in Indonesia. The findings offer managerial implications for cement distributor management to foster higher-quality relationships with retail stores by strengthening elements of trust, communication, and reliability, as well as enhancing product attributes in terms of packaging, safety, and brand reputation.

Keywords: Business customer dependency, Distributor relationship, Product attributes.

1. Introduction

The increasingly competitive business environment has exerted significant pressure on producers of commodity products, intensifying competition for market share and shrinking profit margins [1]. In such a context, fostering close relationships with customers has become increasingly vital. *Relationship marketing* has thoroughly examined various dimensions, including client loyalty, trust, satisfaction, and dependency, all of which are crucial in building and maintaining long-term partnerships [2].

Customer dependency plays an essential role in enhancing relational harmony and reducing opportunistic behavior between firms, thereby fostering greater motivation and commitment among business partners. Customer dependence describes the extent to which a customer maintains a relationship with a particular supplier so they can access specific resources [3]. Moreover, customer dependency is regarded as a structural constraint in relationship outcomes and a critical initiating factor in buyer-seller relationships [2].

On the other hand, business customers have the potential to be more actively involved in enhancing a firm's marketing performance [4]. This is because enthusiastic customer support can influence purchasing decisions and significantly drive sales [5].

This research focuses on business customer dependency in the context of cement distributors in Indonesia, where competition in the bagged cement distribution sector has become increasingly intense. According to data [6], the market share of new players in Indonesia grew from 12% in 2014 to 26% in 2015, and continued to increase to 37% by 2022. This indicates rapid brand switching among customers following the emergence of new competitors in the market. consequently, fostering strong business customer dependency, specifically cement retailers' dependency on cement distributors, has become essential so that retailers may serve as advocates for the product among end-users.

Research on this topic remains scarce, with limited attention in existing literature, thereby underscoring the urgency of this study. In the cement industry, the influx of new competitors has provided customers with more choices in selecting cement suppliers. This compels firms to alter their traditional behaviors [7]. Industrial markets tend to favor long-term relationships, in contrast to consumer markets, and once such relationships are established, they are difficult to dissolve [7]. An increasing number of retailers recognize the importance of developing mutual trust in their business relationships [8].

Additionally, retailers generally acknowledge that customers' product knowledge can enhance customer loyalty and, in turn, improve retail performance [9]. In marketing and consumer behavior studies, product attributes serve as qualifications and determinants in the purchasing process, acting as evaluation criteria used by customers to assess alternative purchase options [10]. Consumers will proceed with sufficient information to evaluate available alternatives and select the most appropriate product [11]. As a result, a major factor in determining the purchase and use of a product is the assessment of its attributes (or the comparison of alternatives).

In light of the arguments above, this study attempts to examine the extent to which product attributes and distributor relationships influence business customer dependency in the context of bagged cement distributors. The novelty of this research lies in its focus on business customer dependency within the cement distribution sector, a subject that remains underexplored. Thus, this study is expected to contribute to the literature on customer dependency from the perspective of business customers and provide managerial implications for cement distributor management in their efforts to increase retailer dependency.

2. Literature Review

In marketing and consumer behavior studies, product attributes function as product qualifications and key determinants in the consumer decision-making process, serving as evaluative criteria used by consumers to assess alternative purchase options [10]. As economies grow, product variation and complexity also increase. Consequently, consumers are often required to choose between products that differ across multiple attributes. While information about product availability and pricing is relatively easy to access, it can still be challenging for consumers to determine which product best suits their needs [12]. Therefore, product attributes are essential in distinguishing between the sustainability levels of different products [13].

Consumers will proceed with sufficient information to evaluate available alternatives and select the most appropriate product [11]. Product attributes include reputation, safety, price, authority, packaging, and authenticity. These six dimensions are distinct, and their influence on purchase decisions varies among consumers. When consumer involvement is high either due to the importance or cost of a product consumers are more likely to invest greater effort in evaluating product attributes. Conversely, if consumers are familiar with a product due to prior positive experiences, they may engage in minimal or no evaluation before making a purchase decision.

A study of the Indian fiber cement sheet industry found that firms are required to enhance customer engagement by emphasizing their superior product features [14]. When alternative suppliers are uncertain or unavailable, customers are generally motivated to continue existing supplier relationships due to the difficulty of switching within the input market. Such switching barriers in customer-supplier relationships increase customer dependency on the supplier [2].

Based on this rationale, distributors must be able to emphasize and assure their retailers that the products they offer possess strong and desirable attributes. Therefore, the following hypothesis is proposed:

H₁: Product attributes have a significant influence on business customer dependency.

It is a crucial task for manufacturers to persuade retail salespeople to become brand ambassadors while maintaining solid ties with retailers, as the retail sales environment is often characterized by conflicts between manufacturer and retailer objectives. As previously highlighted, it is essential for manufacturers to focus on influencing the resource allocation

behavior of marketing channel members [15]. Consequently, more retailers are beginning to recognize the importance of developing mutual trust [8].

Marketing channel research provides valuable insights into how to design, develop, sustain, and manage effective relationships with channel partners [16]. One of the major challenges for manufacturers is to influence retail sales personnel to prioritize their brand over competing brands while maintaining positive relations with retailers. As emphasized by Hughes and Ahearne [15] targeted efforts are necessary to ensure that retailer sales forces remain focused on promoting a specific brand. Increasingly, retailers acknowledge the need to build trusting relationships [8].

Accordingly, maintaining strong distributor-retailer relationships can foster greater dependency of retailers on distributors. Preserving such business customer dependency is particularly crucial because these retailers serve as distribution channels that interact directly with end consumers. Therefore, the following hypothesis is proposed:

H_2: *Distributor relationships have a significant influence on business customer dependency.*

3. Methodology

The unit of analysis in this study is the cement industry in Indonesia, while the unit of observation is retail building supply stores that regularly sell bagged cement products. The research data were collected using a cross-sectional (one-shot) time horizon, specifically in the year 2024. The population in this study comprises 46,118 retail stores that consistently sell bagged cement. The sample size was determined using Slovin's formula, which is commonly applied in survey research where the population is considerably large. This formula provides a method to obtain a smaller yet representative sample from a large population.

$$n = \frac{N}{1 + Ne^2}$$

The sample size is determined using the following formula, which has a 95% confidence level and a 5% margin of error:

$$n = \frac{46118}{1 + (46118)(0,05^2)} = 396,56 \approx 397$$

The sampling technique employed in this study is stratified random sampling based on regional working areas. Stratified random sampling is a structured probability sampling technique in which members of the population are divided into several subgroups called strata, and a sample is then randomly selected from each stratum. The data collection instrument used in this study is a questionnaire designed using a five-point Likert scale, with five response categories.

Table 1.
Sample Distribution.

Region		Population	Sample
Region 1	Banten	2.631	23
	DKI Jakarta	1.935	17
	West Java	13.810	119
Region 2	DI Yogyakarta	1.518	13
	Central Java	11.820	102
Region 3	Bali	1.022	9
	East Java	13.382	115
Total		46.118	397

The measurement of the product attribute variable includes three dimensions: product reputation, product safety, and product packaging [17]. The distributor relationship variable is measured using three dimensions: communication, reliability, and trust [18]. Meanwhile, business customer dependency is assessed using four dimensions: marketing research support, word-of-mouth referrals, affective commitment, and repatronage intention [5, 19-21].

This study employs causal analysis to examine the existence of cause-and-effect relationships among the research variables. The analysis utilizes Covariance-Based Structural Equation Modeling (CB-SEM). SEM is a multivariate statistical technique that explains the causal relationships among research variables [22]. It is used to confirm the underlying theory and hypotheses and to assess how well the proposed theoretical model reproduces the covariance matrix derived from the observed sample data. The use of SEM is considered appropriate in this study due to the complexity of the causal relationships formulated in the proposed model. These causal relationships require an analytical method capable of simultaneously explaining multiple interdependent paths, making SEM the most suitable method. This analytical approach aligns with the recommendations [22].

4. Results and Discussion

4.1. Evaluation Model

4.1.1. Structural Model

The research hypotheses were tested using LISREL 8.80 and the structural equation modeling (SEM) technique [23]. The structural model yields a χ^2 of 343.34 (df = 392, p-value = 0.96340 > .05), other fit indicators (RMSEA = 0.000; NFI = .97; NNFI = 1.00; CFI = 1.00 IFI = 1.00 were used to evaluate the model fit [24, 25].

4.2. Measurement Model

A five-point Likert scale, with 1 being the lowest and 5 the highest, was used to measure each of the study's constructs. The magnitude of the estimated factor loadings and their significance (t-values) were assessed to evaluate convergent validity [24, 25]. The t-values of all indicators are greater than 1.96, and all factor loadings are higher than the 0.70 cut-off point. Because the AVE for each concept consistently exceeded the mean variance, along with the other constructs, evidence of discriminant validity was observed [26]. Overall, the measures used in the study have adequate reliability and validity.
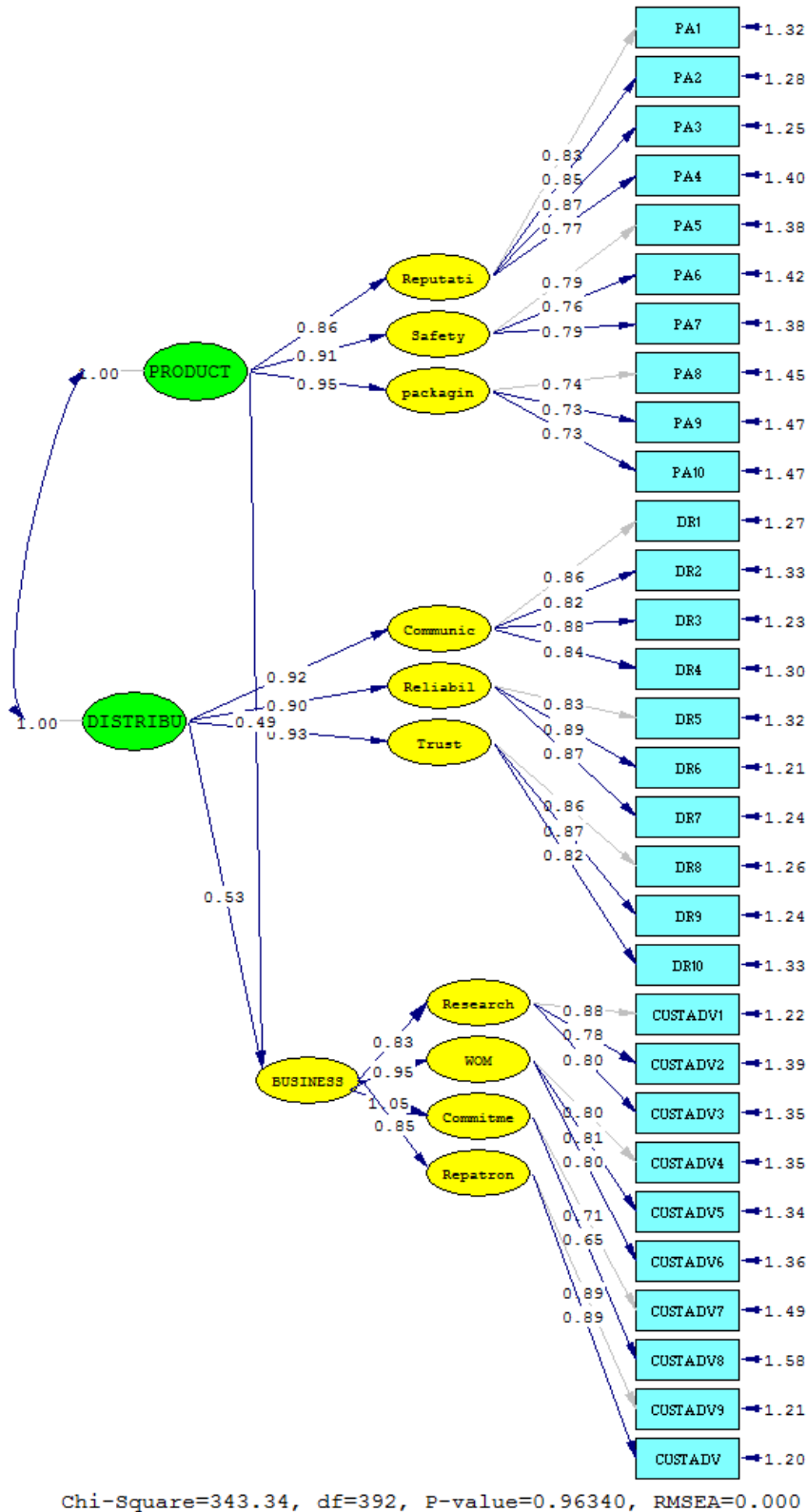

Chi-Square=343.34, df=392, P-value=0.96340, RMSEA=0.000

Figure 1.
Research result.

Table 2.
Research measurements.

Variable	Dimension	Indicator	Loading factor (l)	t value	Prob	Average Variance Extracted (AVE)	Composite Reliability
Product Attribute	Product Reputation		0.86	11.92	0.000	0.690	0.899
		PA1	0.83	-	0.000		
		PA2	0.85	10.44	0.000		
		PA3	0.87	10.58	0.000		
		PA4	0.77	9.85	0.000		
	Product Safety		0.91	11.54	0.000	0.609	0.823
		PA5	0.79	-	0.000		
		PA6	0.76	9.15	0.000		
		PA7	0.79	9.34	0.000		
	Product packaging		0.95	11.33	0.000	0.538	0.777
		PA8	0.74	-	0.000		
		PA9	0.73	8.74	0.000		
		PA10	0.73	8.74	0.000		
Distributor Relationship	Communication		0.92	13.45	0.000	0.702	0.904
		DR1	0.86	-	0.000		
		DR2	0.82	10.94	0.000		
		DR3	0.88	11.46	0.000		
		DR4	0.84	11.14	0.000		
	Reliability		0.90	12.57	0.000	0.769	0.909
		DR5	0.83	-	0.000		
		DR6	0.89	10.9	0.000		
		DR7	0.87	10.77	0.000		
	Trust		0.93	13.63	0.000	0.723	0.887
		DR8	0.86	-	0.000		
		DR9	0.87	11.31	0.000		
		DR10	0.82	10.82	0.000		
Business Customer Dependency	Marketing Research		0.83	9.55	0.000	0.674	0.861
		CUSTADV1	0.88	-	0.000		
		CUSTADV2	0.78	9.95	0.000		
		CUSTADV3	0.80	10.15	0.000		
	Word-of-mouth referrals		0.95	9.57	0.000	0.645	0.845
		CUSTADV4	0.80	-	0.000		
		CUSTADV5	0.81	10.34	0.000		
		CUSTADV6	0.80	10.2	0.000		
	Affective Commitment		1.05	9.55	0.000	0.563	0.733
		CUSTADV7	0.71	-	0.000		
		CUSTADV8	0.65	8.8	0.000		
	Repatronage intention		0.85	9.55	0.000	0.792	0.884
		CUSTADV9	0.89	-	0.000		
		CUSTADV10	0.89	10.58	0.000		

Table 2 shows the standard loading factor, t-value, AVE, and the overall model fit index. The latent variables have a loading factor value > 0.50 with a probability < 0.05. Composite reliability (CR), which is greater than the critical value (CR ≥ 0.70), and the average variance extracted (AVE) coefficient, which is greater than the critical value (AVE ≥ 0.50), demonstrate the high dependability of the latent constructs.

4.3. Hypothesis Testing

Table 3.
Hypothesis Testing.

No	Structural Model	Path Coeff.	Std. Error	t-value	P value	R^2	Conclussion
1	Product Attribute → Business Customer Dependency	0.49*	0.065	7.56	0.00	0.24	Significant
2	Distributor Relationship → Business Customer Dependency	0.53*	0.065	8.17	0.00	0.28	Significant

The hypothesis testing in Table 3 demonstrates that product attributes and distributor relationship significantly and positively affect business customer dependency, with t-values > 1.96 (P value < 0.05). The distributor relationship has a dominant effect on business customer dependency, with $R^2 = 28\%$.

Product attributes significantly enhance customer dependency among cement retailers. Attributes such as product reputation, product safety, and product packaging were found to positively influence the dependency of retail outlets selling bagged cement. These findings align with Marcon, et al. [10] who emphasizes that product attributes function as both qualifiers and key determinants in consumer decision-making processes, serving as evaluative criteria for assessing purchase alternatives. As noted by Sun [12], retailers often face difficulties in determining which products best meet their needs due to the increasing complexity and variety of product features. Therefore, product attributes play a critical role in distinguishing the sustainability levels of different products [13].

According to Ting, et al. [11], once retailers believe they have gathered sufficient information, they evaluate product alternatives and select the most appropriate option for resale to end consumers. Superior product attributes provide confidence and assurance for retailers in promoting and recommending a product. High reputation, ensured safety, and secure packaging are considered essential attributes that influence retailers in selecting which products to stock. Based on these findings, it is imperative that distributors emphasize and effectively communicate the strong product attributes they offer to cement retailer relationships.

The second hypothesis testing result reveals that distributor relationships significantly influence business customer dependency. Key relational dimensions, communication, reliability, and trust, are crucial for cement retailers in maintaining strong ties with distributors. Cement companies are required to enhance customer engagement by emphasizing their superior features [14]. Customers are typically motivated to maintain existing supplier relationships due to the challenges involved in switching suppliers, which create exit barriers that, in turn, increase customer dependency [2].

Trust between retail outlets and cement distributors is developed through distributor honesty, strong commitment to fulfilling promises, and the ability to maintain confidentiality of retail data. This trust significantly fosters advocacy from retailers. Honesty and consistency in fulfilling commitments contribute to marketing research support, as retailers report satisfaction with distributor integrity. Trusted retailers are also more likely to generate positive word-of-mouth referrals, recommending reliable distributors to others. Affective commitment is strengthened when retailers feel emotionally bonded with distributors who respect the business relationship and protect their data. Furthermore, repatronage intention is reinforced as retailers prefer to continue working with trustworthy distributors who promote long-term relationships and sustainable loyalty.

Communication is established when cement distributors allocate time to engage with retailers, actively resolve issues, show openness in collaboration, and apply transparent information-sharing practices. These communication efforts significantly influence customer advocacy, manifesting in improved marketing research support, word-of-mouth referrals, affective commitment, and repatronage intention.

Reliability of cement distributors reflected in timely deliveries, fulfillment of quantity and product type commitments, and effective problem resolution also plays a vital role in enhancing retailer advocacy. Distributors' consistency in meeting their obligations contributes to positive marketing research support. Retailers satisfied with accurate deliveries and efficient service are more inclined to offer favorable word-of-mouth referrals. Reliability strengthens affective commitment by fostering emotional bonds, while repatronage intention is increased as retailers show a preference for continued engagement with reliable and consistent distributors, reinforcing long-term business relationships.

Based on the above explanation, the research findings are illustrated in Figure 2.
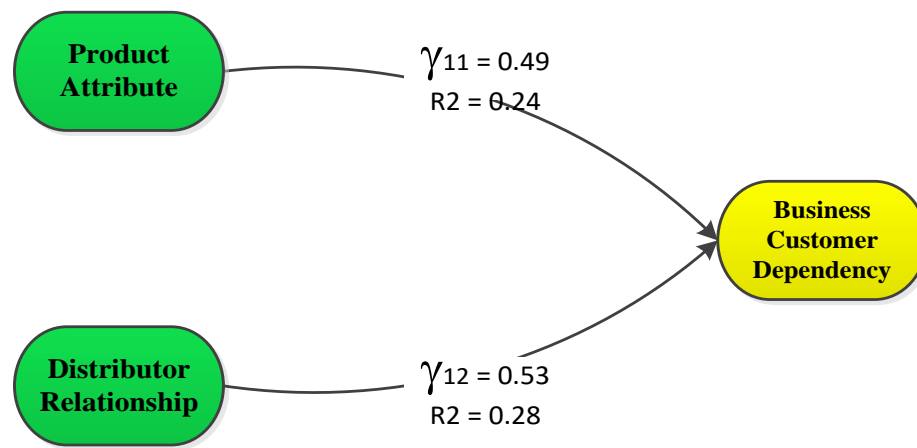
Figure 2.
Research Findings Model.

The findings of this study demonstrate that business customer dependency can be influenced by product attributes and distributor relationships. Building material stores that sell bagged cement tend to develop dependency on cement distributors based on the attributes of the cement products offered and the quality of their relationships with the distributors. Among the two constructs, distributor relationships contribute more significantly (28%) to customer dependency compared to product attributes (24%), although the difference in contribution is relatively small at 4%.

These results highlight the importance of fostering closer relationships between distributors and cement retailers, while also continuing to develop superior product attributes to stay competitive. The findings offer managerial implications for cement distributor management, underlining the need to enhance the quality of their relationships with building material stores through strengthening the aspects of trust, communication, and reliability. Similarly, in order to increase the dependency of their business customers, cement distributors should continuously strive to improve product attributes, particularly in terms of product packaging, product safety, and product reputation.

5. Conclusion

The present study was conducted to examine the extent to which product attributes and distributor relationships influence the formation of business customer dependency in the context of cement distributors. The results confirm that both product attributes and distributor relationships significantly contribute to the development of business customer dependency, with distributor relationships having a stronger influence.

Building material stores that sell bagged cement are likely to develop dependency on cement distributors when trustworthy relationships are established, supported by effective communication and reliable service delivery. Likewise, in terms of product attributes, product packaging, product safety, and product reputation are identified as key components that foster business customer dependency.

The findings offer managerial implications for cement distributor management to strengthen the quality of their relationships with retailers by reinforcing trust, communication, and reliability. Additionally, cement distributors are encouraged to continuously improve the quality of their product attributes, particularly in terms of packaging, safety, and reputation.

The study reveals that product attributes account for 24% of the influence on business customer dependency, while distributor relationships contribute 28%. These findings suggest that other variables may also play a role in enhancing business customer dependency. Therefore, future research could explore additional factors, such as other dimensions of marketing relationships, that may further strengthen business customer dependency.

References

[1]   M. Punniyamoorthy, P. Mathiyalagan, and P. Parthiban, "A strategic model using structural equation modeling and fuzzy logic in supplier selection," *Expert Systems with Applications,* vol. 38, no. 1, pp. 458-474, 2011.

[2]   K. Abdul Waheed and S. S. Gaur, "An empirical investigation of customer dependence in interpersonal buyer-seller relationships," *Asia Pacific Journal of Marketing and Logistics,* vol. 24, no. 1, pp. 102-124, 2012.

[3]   Z. Najafi-Tavani, S. Mousavi, G. Zaefarian, and P. Naudé, "Relationship learning and international customer involvement in new product design: The moderating roles of customer dependence and cultural distance," *Journal of Business Research,* vol. 120, pp. 42-58, 2020.

[4]   R. Lacey and R. M. Morgan, "Customer advocacy and the impact of B2B loyalty programs," *Journal of Business & Industrial Marketing,* vol. 24, no. 1, pp. 3-13, 2009. https://doi.org/10.1108/08858620910923658

[5]   J. Sweeney, A. Payne, P. Frow, and D. Liu, "Customer advocacy: A distinctive form of word of mouth," *Journal of Service Research,* vol. 23, no. 2, pp. 139-155, 2020. https://doi.org/10.1177/1094670519900541

[6]   Indocement Tunggal Prakarsa Tbk, *Public expose.* Jakarta: PT Indocement Tunggal Prakarsa Tbk, 2022.

[7]   P. Mbango and M. Phiri, "Trust and communication as predictors of customer satisfaction in business-to-business relationship marketing in the South African cement manufacturing industry," *Journal of Governance and Regulation,* vol. 4, no. 2, pp. 98-104, 2015.

[8]   K. L. Ailawadi and P. W. Farris, "Managing multi-and omni-channel distribution: Metrics and research directions," *Journal of Retailing,* vol. 93, no. 1, pp. 120-135, 2017.

[9]   M. Srivastava and D. Kaul, "Exploring the link between customer experience–loyalty–consumer spend," *Journal of Retailing and Consumer Services,* vol. 31, pp. 277-286, 2016.

[10]   A. Marcon, J. L. D. Ribeiro, R. M. Dangelico, J. F. de Medeiros, and E. Marcon, "Exploring green product attributes and their effect on consumer behaviour: A systematic review," *Sustainable Production and Consumption,* vol. 32, pp. 76-91, 2022.

[11]   C. Y. Ting *et al.*, "Consumer behaviour towards pharmaceutical products: A model development," *International Journal of Pharmaceutical and Healthcare Marketing,* vol. 13, no. 3, pp. 387-402, 2019.

[12]   M. Sun, "Disclosing multiple product attributes," *Journal of Economics & Management Strategy,* vol. 20, no. 1, pp. 195-224, 2011.

[13]   M. C. Esteves, D. Dean, and M. Balzarova, "Assessment of building products attributes—A comparative study between eco-labelled and non-eco-labelled products available in the New Zealand market," *Sustainable Production and Consumption,* vol. 10, pp. 100-109, 2017.

[14]   D. A. S. Ashutosh, M. A. Beg, and V. S. Tomar, "Brand equity analysis: A case of selected firms in Indian fibre cement sheets industry," n.d.

[15]   D. E. Hughes and M. Ahearne, "Energizing the reseller's sales force: The power of brand identification," *Journal of Marketing,* vol. 74, no. 4, pp. 81-96, 2010.

[16]   S. Y. Tse, D. T. Wang, and T. J. Zhang, "The effects of distributor relationship commitment and relationship exploration on opportunism: the moderating roles of exchange uncertainties and network factors," *Industrial Marketing Management,* vol. 83, pp. 301-313, 2019.

[17]   M. Choi, K. Han, and J. Choi, "The effects of product attributes and service quality of transportation card solutions on service user's continuance and word-of-mouth intention," *Service Business,* vol. 9, pp. 463-490, 2015.

[18]   D. W. Cravens and N. F. Piercy, *Strategic marketing*, 10th ed. New York: McGraw-Hill, 2013.

[19]   D. Howard and R. Kerin, "A surname brand effect explanation for consumer brand preference and advocacy," *Journal of Product & Brand Management,* vol. 22, no. 5/6, pp. 362-370, 2013. https://doi.org/10.1108/JPBM-01-2013-0238

[20]   V. Badrinarayanan and D. A. Laverie, "Brand advocacy and sales effort by retail salespeople: Antecedents and influence of identification with manufacturers' brands," *Journal of Personal Selling & Sales Management,* vol. 31, no. 2, pp. 123-140, 2011. https://doi.org/10.2753/PSS0885-3134310202

[21]   L. Hollebeek and R. A. Rather, "Service innovativeness and tourism customer outcomes," *International Journal of Contemporary Hospitality Management,* vol. 31, no. 11, pp. 4227-4246, 2019. https://doi.org/10.1108/IJCHM-03-2018-0256

[22]   J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, 7th ed. Upper Saddle River, NJ: Prentice Hall, 2014.

[23]   K. G. Jöreskog and D. Sörbom, *LISREL 8 user's reference guide*, 2nd ed. Chicago: Scientific Software International, 1996.

[24]   A. Diamantopoulos, J. A. Siguaw, and J. A. Siguaw, *Introducing LISREL: A guide for the uninitiated*. London: Sage Publications, 2000.

[25]   J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, 7th ed. Pearson: New York, 2010.

[26]   C. Fornell and D. F. Larcker, "Structural equation models with unobservable variables and measurement error: Algebra and statistics," *Journal of Marketing Research,* vol. 18, pp. 382-388, 1981.