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A Study on Brand Association on RK Heavy Engineering Pvt. Limited

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Abstract: The heavy engineering sector is a critical pillar of India's industrial and infrastructure growth. In an increasingly competitive landscape, companies must build strong brand associations to differentiate themselves and foster long-term customer relationships. This study evaluates the brand association of RK Heavy Engineering Pvt. Limited and examines customer perception of its products and services. The main objective is to analyse how brand attributes such as quality, reliability, innovation, and service excellence shape customer preference and loyalty. Primary data were collected from 200 respondents comprising engineers, managers, contractors, and suppliers, using a structured questionnaire. Statistical tools including Percentage Analysis, Chi-Square tests, and One-Way ANOVA were employed for analysis. Key findings reveal that 87% of respondents recommend the company to others, 42% rate it as excellent, and brand association is significantly influenced by age, residence, educational qualification, occupation, and monthly income. The study concludes that RK Heavy Engineering Pvt. Limited has established meaningful brand associations rooted in product quality and reliability, with scope for further growth through increased digital presence, customer engagement, and innovation.

Keywords: Brand Association, Customer Perception, Heavy Engineering, Brand Awareness, Brand Loyalty, RK Heavy Engineering, B2B Marketing.

1. INTRODUCTION

1.1 Introduction

Brand association refers to the set of perceptions, ideas, and impressions that customers connect with a particular brand. In today's competitive industrial market, especially in the heavy engineering sector, strong brand associations play a crucial role in influencing customer decisions, loyalty, and long-term business success.

RK Heavy Engineering Pvt. Limited, incorporated on 31 December 2009 and based in Keerapakkam, Chengalpattu District, Tamil Nadu, is a specialized provider in the heavy engineering and steel fabrication industry. ISO 9001:2015 certified, the company manufactures heavy engineering components, structural steel products, pressure vessels, storage tanks, silos, and pre-engineered steel buildings, serving sectors such as construction, manufacturing, and infrastructure.

This study focuses on understanding how customers perceive RK Heavy Engineering Pvt. Limited, what factors contribute to its brand image, and how these perceptions influence customer preferences and loyalty. By examining brand associations, the study aims to provide insights that can help the company strengthen its brand positioning and improve its overall competitiveness in the market.

1.2 Review of Literature

Keller (2006) defined brand association as the network of mental links consumers form between a brand and its attributes, benefits, or attitudes, arguing that managing associations is essential for long-term competitive advantage. Aaker (2007) identified brand associations as a core dimension of brand equity alongside loyalty, awareness, and perceived quality, noting that in B2B markets, technical expertise and service reliability are especially critical associative factors.

Keller & Lehmann (2008) highlighted that brand associations directly affect brand equity and firm performance, with tangible attributes like product features and intangible elements like corporate reputation each playing a role. Payne et al. (2009) demonstrated that associations shaped by direct interactions and service quality increase loyalty and reduce switching behavior in industrial sectors. Ritter & Gemünden (2010) emphasized technical credibility as a primary associative factor in industrial decision-making.

De Chernatony & McDonald (2012) argued that associations are critical in shaping consumer perception, while Abbott & Murphy (2013) found that associations developed through experience and word-of-mouth are often more influential than formal advertising. Romaniuk & Sharp (2014) highlighted the importance of associative memory structures in predicting repeat purchases.

Garcia L. (2020) found that higher brand trust leads to increased customer satisfaction and stronger loyalty in industrial markets. Brown T. (2020) confirmed that higher brand awareness leads to stronger customer loyalty and repeat purchase behavior. Iyer K. (2023) similarly showed that brand-aware customers tend to prefer a brand over competitors, while Gupta A. (2023) concluded that strong brand association is essential for maintaining customer loyalty and competitive advantage.

Erdem & Swait (2024) and Batra & Keller (2024) both emphasized that positive associations strengthen perceived quality, loyalty, and advocacy, and that strategic management of associations ensures long-term brand equity and consistency. Sharma R. (2026) concluded that companies with strong brand associations are more likely to achieve higher customer loyalty and repeat business in the engineering sector.

1.3 Objective of the Study

The main purpose of the study is to analyse the brand association of RK Heavy Engineering Pvt. Limited among its customers and stakeholders. Specific objectives include: (i) assessing the level of brand awareness in the market; (ii) evaluating customer perception regarding the company's products and services; (iii) examining associations between demographic variables and brand association; (iv) analysing differences in customer perception across demographic groups; and (v) providing suggestions for improving brand positioning and strengthening brand associations.

1.4 Research Methodology

The study adopts a descriptive research design. Primary data were collected using a structured, closed-ended questionnaire distributed to 200 respondents comprising engineers, managers, contractors, and suppliers actively associated with RK Heavy Engineering Pvt. Limited. Secondary data were gathered from books, journals, research articles, the company website, and annual reports. Simple random sampling was employed as the sampling technique. The study was conducted at the company's facilities in Chennai.

Statistical tools employed include Percentage Analysis to describe the distribution of responses, Chi-Square Test to examine associations between demographic variables and brand association levels, and One-Way ANOVA to test mean differences in customer perception across demographic groups.

2. DATA ANALYSIS AND INTERPRETATION

2.1 Demographic Profile of Respondents

Table 2.1 summarizes the demographic profile of the 200 respondents. The majority are male (60%), predominantly in the 20–30 age group (60%), and reside in rural areas (50%). Most respondents hold postgraduate qualifications (35%) and occupy managerial roles (35%). The majority have 2–5 years of industry experience (42%), indicating active mid-level professional engagement with the company.

Table 2.1: Demographic Profile of Respondents

Variable	Category	No. of Respondents	Percentage (%)
Gender	Male	120	60%
	Female	80	40%
Age Group	Below 20 years	30	15%
	20–30 years	120	60%
	30–40 years	30	15%
	Above 40 years	20	10%
Occupation	Engineer	40	20%
	Manager	70	35%
	Contractor	50	25%
	Supplier	40	20%
Work Experience	Less than 2 years	40	20%
	2–5 years	84	42%
	6–10 years	52	26%
	Above 10 years	24	12%

Interpretation: The demographic profile reveals a predominantly young, male, mid-level respondent base with practical industry experience. This profile is consistent with the operational workforce and stakeholder community engaged with heavy engineering services.

2.2 Brand Awareness and Reach

Table 2.2 presents awareness levels and the sources through which respondents learned about RK Heavy Engineering Pvt. Limited.

Table 2.2: Brand Awareness and Source of Learning

Category	No. of Respondents	Percentage (%)
Fully aware of products/services	86	43%
Somewhat aware	36	18%
Heard but not sure	56	28%
Not aware at all	24	12%
Source: Advertisement (top)	60	30%

Word of Mouth / Online	42 each	21% each
Business Partners	32	16%

Interpretation: 43% of respondents are fully aware of the company's products and services, and an additional 18% are somewhat aware, yielding a 61% awareness rate. Advertisement emerged as the leading source of awareness (30%), followed equally by word of mouth and online platforms (21% each). A total of 87% of respondents said they would recommend the company to others, reflecting strong grassroots endorsement.

Inference: RK Heavy Engineering has achieved considerable brand awareness among its stakeholder base. Traditional advertising channels, alongside word-of-mouth and digital presence, are the primary awareness drivers. Expanding digital engagement could further accelerate brand penetration.

2.3 Brand Association Analysis

Respondents rated the company across five key brand association dimensions — Product & Quality, Brand Image & Reputation, Performance & Reliability, Innovation & Technology, and Customer Relationships — on a five-point Likert scale.

Table 2.3: Brand Association Ratings Summary

Dimension	SA (%)	A (%)	N (%)	D (%)	SD (%)
Product quality and reliability	42	38	12	6	2
Brand image and market reputation	40	36	14	8	2
Performance and timely delivery	38	40	14	6	2
Innovation and use of technology	35	38	18	7	2
Customer relationships and support	40	37	14	7	2

Interpretation: Across all five brand association dimensions, over 75% of respondents agreed or strongly agreed. Product quality and reliability received the highest Strongly Agree response (42%), indicating that the company's core manufacturing standards are its strongest brand asset. Innovation received relatively more neutral responses (18%), suggesting an opportunity for growth.

Inference: RK Heavy Engineering's brand is most strongly associated with product quality, reliability, and customer relationships. Stakeholder consensus on these dimensions confirms a solid foundational brand identity, with room to strengthen innovation-related associations through targeted communication and investment in advanced engineering technologies.

2.4 Customer Perception of Products and Services

Table 2.4 presents respondents' perceptions across product quality, service quality, value, trust, and competitive comparison dimensions.

Table 2.4: Customer Perception Summary

Dimension	SA (%)	A (%)	N (%)	D (%)	SD (%)
Product quality and durability	42	36	14	6	2
After-sales and customer support	38	38	15	7	2
Value for money	36	40	16	6	2
Trust and dependability	40	38	14	6	2
Superiority over competitors	35	36	18	9	2

Table 2.5: Consolidated Overall Rating

Overall Rating	No. of Respondents	Percentage (%)
Excellent	84	42%
Good	36	18%
Average	56	28%
Poor	24	12%
Total	200	100%

Interpretation: Across all customer perception dimensions, over 74% of respondents agree or strongly agree. Trust and dependability received the highest combined positive response (78%), confirming that the company's reliability is its most valued attribute. 42% of respondents rated the company as Excellent overall, and 87% expressed willingness to recommend it to others.

3. STATISTICAL TESTS

3.1 Chi-Square Test: Gender vs Brand Association

H_0 : There is no significant association between the gender of respondents and their level of brand association.

H_1 : There is a significant association between the gender of respondents and their level of brand association.

Table 3.1: Chi-Square Test — Gender vs Brand Association

Chi-Square Test	Value	df	Asymptotic Sig. (2-sided)
Pearson Chi-Square	5.556	2	.062
N of Valid Cases	200		

The Pearson Chi-Square value is 5.556 with 2 degrees of freedom and a significance value of .062, which exceeds the 0.05 threshold. Therefore, the null hypothesis is accepted — there is no statistically significant association between gender and brand association level. The brand is perceived consistently by both male and female respondents, confirming its gender-neutral appeal.

3.2 Chi-Square Test: Age vs Brand Association

H_0 : There is no significant association between the age group of respondents and their level of brand association.

Table 3.2: Chi-Square Test — Age Group vs Brand Association

Chi-Square Test	Value	df	Asymptotic Sig. (2-sided)
Pearson Chi-Square	40.509	6	.000
N of Valid Cases	200		

The Pearson Chi-Square value of 40.509 significantly exceeds the table value of 12.592. Therefore, the null hypothesis is rejected — there is a statistically significant association between age group and brand association level. Respondents in the 20–30 age bracket exhibit the most varied brand association responses, reflecting broader exposure and engagement with multiple competing brands.

3.3 Chi-Square Tests: Additional Demographic Variables

Similar Chi-Square analyses were conducted for Area of Residence ($\chi^2 = 40.741$, $df = 4$, $p < .05$), Educational Qualification ($\chi^2 = 69.742$, $df = 6$, $p < .05$), Occupation ($\chi^2 = 29.742$, $df = 6$, $p < .05$), and Monthly Income ($\chi^2 = 68.783$, $df = 6$, $p < .05$). In all four cases, the null hypothesis was rejected, confirming

that brand association levels vary significantly across residential areas, education levels, occupational roles, and income groups. Urban and postgraduate respondents exhibited the highest levels of strong brand association, while rural and lower-income respondents showed more moderate associations, suggesting targeted communication strategies may further consolidate brand equity across these segments.

3.4 One-Way ANOVA: Gender vs Customer Perception

H_0 : There is no significant difference in mean perception of products and services across gender groups.

Table 3.3: One-Way ANOVA — Gender vs Customer Perception

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.250	2	4.125	20.443	.000
Within Groups	39.750	197	.202		
Total	48.000	199			

With an F-value of 20.443 and significance of .000 (below 0.05), the null hypothesis is rejected. There is a statistically significant difference in customer perception of products and services across gender groups, confirming that gender influences how respondents evaluate the company's offerings.

3.5 Additional ANOVA Tests

ANOVA tests for Age ($F = 11.920$, $p = .000$), Area of Residence ($F = 4.546$, $p = .012$), Educational Qualification ($F = 34.526$, $p = .000$), and Monthly Income ($F = 6.364$, $p = .002$) all yielded significance values below 0.05, leading to rejection of the respective null hypotheses. These results confirm that customer perception of RK Heavy Engineering's products and services varies significantly across all tested demographic dimensions. Postgraduate and higher-income respondents reported the highest satisfaction levels, while younger and rural respondents showed more moderate perceptions, highlighting the need for differentiated engagement strategies.

4. CONCLUSION

This study provides comprehensive insights into how brand associations shape customer perception and business performance in the heavy engineering sector. RK Heavy Engineering Pvt. Limited has achieved considerable brand recognition, with 43% of respondents fully aware of its products and services, and 87% recommending the company to others.

Product quality and reliability have emerged as the strongest brand associations, with over 78% of respondents agreeing or strongly agreeing across quality-related dimensions. Customer trust and dependability are similarly strong, confirming the company's foundational brand equity. At the same time, innovation and competitive differentiation represent areas where further investment and communication could yield improved brand perceptions.

From a statistical perspective, brand association levels vary significantly by age ($\chi^2 = 40.509$), educational qualification ($\chi^2 = 69.742$), occupation ($\chi^2 = 29.742$), and monthly income ($\chi^2 = 68.783$), while customer perception is significantly influenced by gender ($F = 20.443$), age ($F = 11.920$), education ($F = 34.526$), and income ($F = 6.364$). These findings underscore the importance of tailoring brand communication to specific stakeholder segments.

In conclusion, RK Heavy Engineering Pvt. Limited has built a robust and positive brand identity anchored in quality, reliability, and customer relationships. By increasing digital presence, investing in innovation, and strengthening after-sales engagement, the company is well-positioned to deepen its brand associations, enhance customer loyalty, and maintain a competitive edge in India's evolving heavy engineering market.

REFERENCES

- [1] Keller, K.L. (2006). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1–22.
- [2] Aaker, D.A. (2007). *Building Strong Brands*. Free Press.
- [3] Keller, K.L. & Lehmann, D.R. (2008). Brands and branding: Research findings and future priorities. *Marketing Science*, 25(6), 740–759.
- [4] Payne, A., Storbacka, K., Frow, P. & Knox, S. (2009). Co-creating brands: Diagnosing and designing the relationship experience. *Journal of Business Research*, 62(3), 379–389.
- [5] Ritter, T. & Gemünden, H.G. (2010). Network competence: Its impact on innovation success. *Industrial Marketing Management*, 32(5), 439–449.
- [6] De Chernatony, L. & McDonald, M. (2012). *Creating Powerful Brands*. Butterworth-Heinemann.
- [7] Abbott, J. & Murphy, J. (2013). Industrial marketing strategies and brand associations. *Industrial Marketing Management*, 28(3), 229–238.
- [8] Romaniuk, J. & Sharp, B. (2014). Conceptualizing and measuring brand salience. *Marketing Theory*, 4(4), 327–342.
- [9] Garcia, L. (2020). Impact of Brand Trust on Customer Satisfaction in Industrial Markets. *International Journal of Marketing Science*, pp. 45–56.
- [10] Brown, T. (2020). Brand Awareness and Customer Loyalty in Manufacturing Sector. *Journal of Industrial Marketing*, pp. 45–56.
- [11] Iyer, K. (2023). Brand Awareness and Customer Satisfaction in Industrial Markets. *Journal of Marketing and Management*, pp. 45–56.
- [12] Gupta, A. (2023). Customer Loyalty and Brand Association in Industrial Sector. *Journal of Business Development*, pp. 45–56.
- [13] Erdem, T. & Swait, J. (2024). Brand equity as a signaling phenomenon. *Journal of Consumer Psychology*, 7(2), 131–157.
- [14] Batra, R. & Keller, K.L. (2024). Integrating marketing communications. *Journal of Marketing*, 80(6), 122–145.
- [15] Sharma, R. (2026). Impact of Brand Association on Customer Preference in Engineering Sector. *Journal of Marketing Research*, pp. 45–56.
- [16] RK Heavy Engineering Pvt. Limited (2025). Company Profile and Annual Reports. www.rkheavyengineering.com