

**Effectiveness of Marketing Initiatives in Improving "lead-to-sales" Conversion of  
Steel Rebar in Retail Segment of India**

by

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## **Dedication**

Family is the foundation of every achievement. I want to dedicate this to my beautiful wife Rakhi Dasgupta. She has been a continuous source of encouragement to make this possible. Sometimes I was off the path, but her timely intervention and support got me back on track.

I am deeply grateful to my parents for their unwavering positive influence on my life and for instilling in me the value of hard work. Their teachings have ingrained in me the belief that diligent effort and perseverance can lead to great success. Through this research project, I aim to expand my knowledge and expertise while also making a meaningful contribution to the broader community's understanding of the practical application of the research outcome.

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## ABSTRACT

### **Effectiveness of Marketing Initiatives in Improving "lead-to-sales" Conversion of Steel Rebar in Retail Segment of India**

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This research aims to develop a structured framework for capturing & analyzing historical data on the impact of various marketing initiatives in improving the sales revenue of Steel Rebar in the retail segment of India. The need for this research is evident in making objective analysis and allocation of marketing budget among various alternatives. Quantitative research technique is used for analysis and establishing relationship between initiatives and sales. Historical data on marketing initiatives and their impact on sales revenue were merged with the effectiveness survey response of key stakeholders (consumers/Channel partners/Marketers) to arrive at the overall effectiveness score of each marketing initiative. The framework and the model developed should serve as a decision support tool and facilitate the selection of marketing alternatives under budget constraint scenarios. Although the model's insights were derived from studying one of India's leading retail brands in the home construction segment, it can be applied to similar brands and product categories to facilitate decision-making and gaining valuable insights.

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# CHAPTER I

## INTRODUCTION

### 1.1 Introduction

Steel rebar is a crucial component of the construction industry, providing the strength and durability necessary for reinforced concrete structures. In India, steel rebar is produced by a mix of integrated and secondary steel producers and is consumed by two customer segments: Business to Business (B2B) and Retail. In the Retail segment, individual home builders purchase steel rebars from local Dealers/Retailers spread across the country to construct their homes. Given India's vast population spread across 28 states and eight union territories. Organizations must continuously understand the target segment's purchase behavior, attract new leads, and convert them into customers to sustain the business.

Marketing is crucial in driving customer engagement, enhancing brand loyalty, and ultimately improving sales. Indeed, research has shown that companies that invest in marketing strategies have higher customer engagement and increased sales (Kotler and Armstrong, 2021). Additionally, studies conducted on marketing effectiveness has pinpointed several crucial elements that play a significant role in achieving prosperous marketing campaigns. These elements include comprehending the demands and inclinations of customers, distinguishing the products from those of competitors, and making use of focused advertising techniques (Nagle and Holden, 2020). To influence the purchase decision-making of diverse customers at the sales territory level, each steel rebar brand in India designs its own set of marketing initiatives, such as shop painting, wall painting, banners, hoardings, Retailer loyalty schemes, cashback schemes, consumer meets, influencer meets, road shows, celebrity endorsement

and media advertisements. However, the impact of marketing campaigns may not be uniform across the country due to differing consumer preferences, competitive scenarios, and economic activity. This complexity requires decision-making in selecting marketing activities for each sales territory, which is made more challenging by limited marketing budgets.

To address this issue, previous studies have developed decision-support tools to overcome personal bias in the selection of marketing initiatives and improve lead-to-sales conversion. However, to the best of my knowledge, there needs to be more research on the impact of marketing initiatives on the sales of steel rebars in the Retail segment of India. This study shall address the identified gap during the literature review by developing a framework that captures the relative impact of marketing initiatives on the sales of steel rebars by establishing a relationship between the initiatives and their effectiveness in lead-to-sales conversion. In the retail segment of the steel rebar market, the lead-to-sales conversion is affected by several factors, such as price, quality, brand, and customer service. The proposed framework will provide organizations with a decision support tool to objectively select marketing initiatives that will improve lead-to-sales conversion of steel rebar in a resource-constrained scenario.

## **1.2 Research Problem**

Multiple factors influence purchase behavior, such as social, economic, cultural, and product availability. However, in a diverse country like India, even a set of marketing initiatives that produce certain level of impact on one individual, may have a different impact on another. Without proper means to capture and analyze changing consumer purchase behavior, businesses may spend millions of dollars on marketing with inadequate returns. Effective marketing initiatives should differentiate products and

create a perception or pull in the minds of consumers, which in turn should facilitate the conversion of a prospect to a consumer. Steel rebars are primarily used for building houses by retail customers who are widely distributed nationwide. Thus, the challenge is to analyze the effectiveness of past initiatives and integrate them with the latest stakeholder responses to facilitate better selection of marketing initiatives.

Several models have been developed to illustrate consumer decision-making behavior and the factors that impact it, such as those proposed by Kotler et al. (2013) and Engel, Kollat, and Blackwell (1968). Among these models, the Zero Moment of Truth (ZMOT) model (Lecinski, 2011) and Engel-Kollat-Blackwell (EKB) model (Engel et al., 1969) have gained widespread use in the field of marketing research. With the increased internet use, digital influence has become a powerful force in shaping the decision-making process across all product categories, including retail sales of steel rebars. However, during the literature review, we were still looking for a framework that captures the weights of marketing initiatives or factors influencing the purchase behavior of steel rebar consumers. Without a formal structure, these decisions are subject to manual interpretation of data, which may suffer from individual bias. Furthermore, some marketing initiatives may be attractive in the short term, but they may not be good in the long term. For example, price promotions might produce an immediate impact on sales, however, they may erode brand equity and margin if continued for long as competitors can replicate them, leading to a price war.

Without proper framework, the problem is deciding on the data elements to be captured and the period for which it is to be analyzed to gain insight into marketing alternatives for improving sales revenue. Marketing conditions are dynamic, and

organizations must make decisions faster to retain market share. The absence of a decision support tool increases dependency on individuals, increasing the probability of bias and suboptimal decision-making. This research aims to address this problem by developing a decision support tool that captures the relative impact of marketing initiatives on the sales of steel rebars by establishing a relationship between the initiatives and their effectiveness in leading to sales conversion. By doing so, the proposed framework will provide organizations with an objective way to select marketing initiatives that will improve lead to sales conversion of steel rebar in a resource-constrained scenario.

### **1.3 Purpose of Research**

This study aims to address the gap in the current literature and industry practice by developing a decision support tool for marketers of steel rebar in the Indian retail market. Specifically, this research aims to capture and analyze the effectiveness of past marketing initiatives, integrate stakeholder responses, and develop a framework for selecting and prioritizing marketing elements that improve lead to sales conversion and overall sales revenue. The model combines the theoretical relationship established between factors influencing past sales and survey responses captured from key stakeholders. The net result is to arrive at a “relative effectiveness score” among the various marketing alternatives in influencing sales revenue of steel rebar in the retail segment of India. Thus, this relative effectiveness score can be used to decide on the marketing budget allocation to generate desired returns. By doing this, the study seeks to provide a more objective and data-driven approach to marketing decision-making, reducing personal bias and improving the efficiency and effectiveness of marketing investments in a resource-constrained scenario. The research outcome is expected to

significantly contribute to the marketing research field by filling a critical gap in knowledge and practice in the steel rebar industry of India.

#### **1.4 Significance of the Study**

The research study holds great importance for the academic community and the commercial world as it aids in optimizing marketing spending. According to Roetzer (2014), marketers face growing challenges in quantifying their campaigns' return on investment (ROI) and demonstrating the value of their expenses. This suggests that it is necessary to adequately prepare and provide objective justification for the marketing expenditures. Marketing aims to create a distinct impression in the target audience's mind to attract customers and drive sales revenue. Marketing strategies may have varying effects in different sales territories of India due to its cultural diversity and varying perception of value. Therefore, analyzing data over a prolonged period using analytical tools is necessary to determine general characteristics and responsiveness to various marketing initiatives. However, relying solely on historical performance may be misleading since it may not guarantee future results (Ho, 2021). Therefore, this research is significant as it incorporates stakeholder feedback on the impact of different marketing initiatives in purchase decisions alongside theoretical findings. The research outcomes help simulate different business scenarios by modifying marketing elements and weighing stakeholder feedback for the relevant product and territory combination (Kumar & Kumar, 2022). Although this research is based on a case study of one of India's leading Steel rebar brands, the concept, and framework are generalizable, serving as a foundation for the marketing mix selection of an organizations.

## CHAPTER II: REVIEW OF LITERATURE

### **2.1 Theoretical framework**

The Steel Rebar market in India is a significant segment for steel producers. According to a report by Mordor Intelligence, the steel rebar market in India is segmented by end-user groups into infrastructure, residential, and non-residential construction (Mordor Intelligence, 2021). The residential segment can be divided into individual home builders distributed across the country and contractors or large builders building residential complexes. This study focuses on the individual home builder segment, which is served by retailers and is quite extensive. The revenue generated from steel rebar sales in India was valued at US\$ 7.9 billion in 2020 (ResearchAndMarkets, 2021). The market was expected to grow at a CAGR of 7.75 from 2021 to 2026, driven by the increasing demand for steel rebar in the construction of residential and commercial buildings (ResearchAndMarkets, 2021). India is a vast country of around 3.29 million square kilometers, and individual home builders buy in small lots as needed from retailers or dealers distributed across the country. The demand for home building is also driven by the Government of India's scheme of providing homes to those who need the most. The literature review reveals that past studies have primarily focused on understanding and modeling the "Return on Marketing Investment" (ROMI) or consumer behavior (Seggie et al., 2007). However, limited resources are available to help industry practitioners simulate scenarios and gain insights into the effectiveness of various marketing initiatives organizations take to improve revenue from sales of steel rebar. The Literature study is



aimed to study the work done in evaluating the effectiveness of marketing initiatives for developing a decision support framework that can assist marketers of steel rebar in selecting the right mix of initiatives to improve lead to sales conversion ratio.

The literature insights on factors influencing sales, such as consumer behavior, ROMI, and the impact of technology on consumer behavior, shall be brought together to understand the impact of various factors influencing the steel rebar purchase decision-making process. Yang and Peterson (2004) found that customer-perceived value, satisfaction, and loyalty play a significant role in the purchase decision-making process. While this applies to almost all product categories, which marketing initiatives under each of the above categories drive the purchase decision are to be investigated. Marketing strategies related to omnichannel, and technology use can significantly impact customer behavior and purchase decision-making (Chaffey & Ellis-Chadwick, 2012). Ngai et al. (2015) argue that social media research effectively understands consumer behavior and can help marketers make informed decisions about marketing initiatives. This also applies to steel rebar sales, as customers may understand the product features online and buy offline. The source of traffic in the sales portal or the influence of social media during customer interviews is also to be investigated. The literature reviewed also highlights the importance of measuring ROMI to increase marketing accountability and enable comparison across alternatives to decide on the best action (Pauwels & Reibstein, 2008). These are valuable insights in building the questionnaire for conducting the consumer survey and validating the hypothesis during customer interaction on factors governing retail customers' purchase decisions of steel rebars.

Given below are broad categories under which the literature review was carried out to gain insights into work done and identify opportunities to add value during the research:

- a. Consumer purchase behavior
- b. Omni-channel & use of technology
- c. Marketing initiatives considering ROMI
- d. Matrices for measuring marketing effectiveness
- e. Brand Equity and purchase decision,

**A. Consumer purchase behavior.**

Steel Rebar's purchasing decision is affected by individual factors as well as by factors such as product specifications, marketing communication, point of purchase promotions activities, group/brand association, after-sales support, and availability of competing alternatives. The purchasing behavior of consumers is influenced by various factors, such as internal or psychological, social, cultural, economic and personal factors (Ramya & Ali, 2016). Organizations must understand the factors that affect their customers' purchasing behavior to develop a brand strategy, a marketing message, and advertising campaigns efficiently and in line with their target consumers' needs and thinking processes (Ramya & Ali, 2016). Customers' online purchase intentions are also impacted by gender, education, age, security concerns, technological familiarity, past online purchase frequency, product type, expensiveness, and online retailers' services like return, refund, and delivery services (Kanchan et al., 2015). Identifying influencers in the purchase decision-making process is essential, as customers are conscious of innovative

and trendy products, brands and quality (Kumar et al., 2018). In today's dynamic world, the factors chosen based on certain logic in the past may not hold in the future under the changing external environment. Therefore, there is a need to address the changing scenario and plan marketing interventions dynamically. According to Hanaysha (2018), corporate social responsibility significantly affects a purchase decision. From a steel rebar purchase perspective, the impact of initiatives related to corporate social responsibility need to be adjudged during research.

Panwar et al. (2019) introduced 5 stage decision-making model (need recognition, information search, alternative evaluation, purchase, and satisfaction), which is also relevant for steel rebar customers. However, organizations must decide on the initiatives to be undertaken at each stage based on the relative effectiveness and available budget. According to Chaubey & Pant (2017), perception plays a role in shaping a consumer's thought process towards anything they purchase; it is an essential and powerful motivator that acts as a catalyst in forming an image of the company or product they buy. For steel rebar, especially in non-metropolitan cities, "Word of mouth" plays an important role. Various brand initiatives and their associated communications must complement each other and build a positive impression of the brand, reinforcing customers' drive for brand association. Perceived value about a product or brand drives decision-making in almost all product segments. Product quality is one of the elements of a brand's overall excellence or superiority and addresses overall quality rather than individual elements of quality (Yoo et al., 2000). Any product that a consumer buy is associated with a service experience & this plays a vital role in framing the brand image and influencing the

purchase decision. Customers consciously and unconsciously perceive experiences and organize them into sets of impressions (Berry et al., 2006). These impressions, positive or negative, play a role in the purchase decision-making process, but the effectiveness of each marketing element may vary based on product and consumer combination. The challenge is to objectively ascertain which initiative can create a positive impact and drive buying decisions. Perception of security risk associated with online payment is another critical criterion that can make or break a deal, mainly because the Steel Rebar purchase is a high-value transaction. Because of cyber security risks, consumers may not be willing to make payments or do transactions online. Mobile contactless payment (MCP) technology brings a significant dual-use dilemma where consumer adoption can be halted if the consumer is not entirely convinced that the security risk behind the technology used is very low (Silic et al., 2014). This factor may determine whether a consumer will purchase the product online or place an order online but make the payment offline at the retail outlet. The marketing interventions must be adjusted based on customers' perceptions and engagement with a specific channel.

## **B. Omni channel and use of technology**

With the increased penetration of the internet in non-metro cities of India, digital platforms are gaining importance in influencing the buying journey of steel consumers in India. Online purchases expressed a boom during Covid, and organizations responded by increasing digital marketing spend. According to Berman & Thelen (2018), consumers often channel hop within a given transaction among retail stores, computers, smartphones, tablets, in-store kiosks, and social media sites. This implies that technology interventions regarding what the consumers see or hear online can influence the purchase decision. The challenge for a marketer is understanding which one to focus on more to increase sales conversion. The consumer can use a tablet to preview a product, a computer for surfing multiple pages to obtain product and competitive information, a smartphone to check the latest prices and make payment while in a store and then arrange for pickup and or return at a local store (Berman & Thelen, 2018). Multichannel systems offer an array of shopping experiences and, in the process, deliver not only more value but also different kinds of value (Sigala et al., 2001). There are many options to attract a lead, but every option comes with a cost, and judging relative importance becomes critical for a decision-maker. A well-designed website can build trust and confidence in the company and reinforce the image of competence, functionality, and usefulness. Search engine optimization, recommendation engine, and cookies guide persons toward a particular brand. It recommends to the visitor on the company's range of products and services, points out local dealers and upcoming special events, and establishes reasons to come back again (Yoo & Donthu, 2001a). The updated IS model (DeLone & McLean,

2004) covering system quality, information quality, service quality, and user satisfaction gives a comprehensive picture of factors to be considered while influencing the net benefit that customer considers while making the purchase decision. It is to be seen whether Brand Image and perception of product quality hold greater significance in purchase decision-making of steel rebar than other factors like after-sales service. According to Ghandour et al. (2008), an organization's e-commerce expenditure is justified by the financial payoff resulting from customers' interaction with the website covering Informational, transactional, customer service, promotional, and website design. Diges & Debasa (2020) found that implementing strategies based on User Experience, Social Media Marketing, Search Engine Optimisation, and Search Engine Marketing is fundamental to achieving profitable results in this type of business. As per the Economic Survey of India (2022), average wireless data usage in a gigabyte (GB) per data user per month has increased tremendously from just 1.24 GB per month in Q1:FY18 to a whopping 4.1 GB per month in Q1:FY22, which effectively means that huge opportunity is unfolding in the digital marketing space which Steel Rebar producers can explore. Digitalization is transforming the purchase decision-making process, including how customers search for information, consider and evaluate products and services, interact with the organization, and make purchases (Vassileva, 2017). The target segment of steel rebar marketers is individual homebuilders residing in non-metropolitan cities. Affordability and reach of the internet are democratizing information and changing how individual home builders residing in non-metropolitan cities of India consume marketing information. Vassileva (2017) suggests that organizations must consider critical issues to

achieve complete digital transformation in marketing, including investigating alternatives, setting goals, involving top management, assessing expertise, and identifying execution gaps. These have been considered in the current research while developing the framework to assist marketing initiatives. A transformational mindset that favors curiosity, creativity, and innovative thinking introduced in Marketing 4.0 (Kotler et al., 2017) delves into organizational practice and indicates that Marketers and managers should be open-minded, they should be able to react both to market opportunities and threats as well as to take the risk. Despite the explosive growth of electronic commerce and the rapidly increasing number of consumers who use interactive media (such as the World Wide Web) for purchase information search and online shopping, very little is known about how consumers make purchase decisions in such settings (Häubl & Trifts, 2000). This calls for marketers to find ways to check whether the combination of initiatives being conducted in a territory is producing the desired impact and, if not, what new elements should be introduced to improve sales.

### **C. Marketing initiatives considering ROMI**

Organizations need to decide on strategic marketing alternatives for sustenance and growth depending on the type of product, consumer segment, competitive scenario, and market condition. Marketing initiatives must combine short-term and long-term initiatives aligned with the business objective. Managers are constantly faced with the problem of how to trade off competing strategic marketing initiatives (Rust et al., 2004). Strategically the choice of marketing initiatives and the quantum of spend will change based on the product lifecycle. According to Pauwels & Reibstein (2008), most

organizations experience considerable roadblocks to fulfilling the appealing promise of measuring ROMI and using it to enable better marketing decisions and higher performance. While measuring the impact of marketing spend is difficult due to multiple factors and the dynamism involved, a good business case based on ROMI helps bridge the gap and smoothen the path to management approval. While substantial work has been done on the brand value to customers, there needs to be more research that establishes a mathematical relationship between the amount spent and its impact on the brand's value. Calculating the pay-out period is complicated, as Pauwels et al. (2008) noted. According to Deighton & Blattberg (1996), customer equity is being used as the criterion that balances spending on "getting" vs "keeping" customers for repeat business. According to McDonald & Wilson (2016), a strategic marketing plan depicting a clear and simple summary of key market trends, target segments, and value associated with each, intensions to create superior value (to competitors), with a clear prioritization of marketing objectives and strategies along with financial consequences is beneficial. The factors mentioned above are the building blocks of the customer survey and stakeholder survey and understanding the significance of initiatives in the purchase decision.

#### **D. Matrices for measuring marketing effectiveness**

Deciding on the performance matrices and setting baseline and target values are fundamental to any marketing plan, and steel rebar is no exception. When firms cut costs, all functional disciplines within the firm need to be financially accountable. This reinforces the need for measurement, as without measurement, it is impossible to be



accountable (Seggie et al., 2007). Marketing effectiveness helps managers optimize their spending to achieve short-term and long-term results by evaluating matrices (Solcansky & Milichovský, 2011). Marketing matrices are classified into the following categories (Lolich et al., 2002)

- a. Financial measures (turnover, contribution margin, and profits)
- b. Competitive measures (market share, advertising share, and promotional share)
- c. Measures of Consumer behavior (customer penetration, customer loyalty, and new customers gained)
- d. Measures of Consumer intention (brand recognition, satisfaction, and purchase intention)
- e. Measures of Channel to serve (distribution level, the profitability of intermediaries, and quality of service)
- f. Measures of innovativeness (new products launched and revenue from these products as a percentage of total turnover).

Marketing initiatives selected to drive product or brand sales must deliver consistently on one or more of the above parameters. While marketers are investing in the development of performance measurement abilities there have been no empirical studies of whether the ability to measure marketing performance has any actual effect on either firm performance or marketing's stature (O'Sullivan & Abela, 2007). Finding the appropriate key metrics should contribute to the evaluation of marketing effectiveness. There is an increasing trend of measuring effectiveness in companies, and it is necessary

to check returns and search for the efficiency of the funds put into marketing (Milichovsky & Simberova, 2015). This lays the foundation that some work needs to be initiated to address the gap. Having proper Metrics and measuring performance against those metrics helps make necessary course corrections and eventually generate value for the organization.

#### **E. Brand equity and purchase intension**

For survival & growth, organizations must carefully choose a set of campaigns or programs that reinforces vital messages & builds an image of integrity, values, beliefs, and quality. Organizations strive to identify the most effective marketing elements that can give the organization a cutting edge over the competition in converting a prospect to a customer. Yoo et al. (2000) presented a conceptual framework in which marketing elements are related to the dimensions of brand equity, perceived quality and brand associations combined with brand awareness. Marketing initiatives are to be carefully chosen with the end objective in mind and the interplay these initiatives may have in the short term and long term. According to Aaker (1991), various elements of brand equity is linked with benefit for customers and the organization. Marketers work on various constituents of Brand Equity. However, since the budget is limited, the challenge is to identify which makes the most impact in lead-to-sales conversion. Aaker (1996) mentions that while a brand image is how a brand is perceived, a brand identity is aspirational and is related to how the brand would like to be perceived. Little systematic research has been done to develop a scale to measure consumer-based brand equity (Yoo & Donthu,

2001b). However, the author presents a multidimensional measure of consumer-based brand equity and assesses its psychometric properties. It is well established that Brand awareness, brand association, brand loyalty, and perceived quality significantly impact consumers' intention to purchase products. The weight customer gives to the brand during purchase has to be measured to understand its effectiveness. The impact of loyalty programs on the purchase decision of Steel Rebar consumers needs to be assessed during detailed research.

## **2.2 Theory of reasoned action**

Due to high cost, steel rebar requires strategic marketing interventions at key points in the consumer decision journey to optimize the use of funds. Retail consumers of steel rebars are distributed across the country, and India is a large country with diversity in culture. Therefore, demand is triggered at different times. Many times, more than one marketing activity is to be run in parallel as some are short-term in nature while the effectiveness of others like, brand-building exercises, is to be run over an extended period. This complicates the process as each lead-to-sales conversion's impact may differ. The choice of marketing initiatives for a territory must be based on an objective assessment of their influence on the consumer purchase decision.

Given below is a representative mapping of the initiatives along the customer decision-making journey formulated based on preliminary interaction with consumers and marketing officials of one of the leading Steel Rebar brands:

Table 1: Consumer journey vs marketing interventions

<b>Sl no</b>	<b>Consumer decision journey</b>	<b>Marketing Intervention</b>
1	Realizing the need / recognizing the desire to fulfill a need.	Interest generation through product awareness/ usage. Example: Where is steel rebar used, why is it used, the significance of the quality of the product
2	Explore alternatives to satisfy the need	Google Ads, social media ads, cookies
3	Explore the availability of desired product or service at the consumption point.	Expanding retail network: retailer meets, influencer meet, Communication, online dealer search.
4	Explore the price of options available in the market to address needs & relative benefits	Product Awareness / Value proposition, point of purchase initiatives
5	Explore recommendations & reviews among peer groups, influencers, and social media.	Channel management, influencer management, and social media marketing.
6	Consume information on product and service benefit	Mass media campaigns, customer meets, brand persona building, google ads, search engine optimization, digital marketing
7	Processing of information and grading of purchase intention for a product or service	Address "Why me" questions through marketing communication
8	Relative price benefit analysis	Product benefit communication (influencer)
9	Affordability vs Benefit vs Availability analysis	Finance schemes, promotional offer, Communication on product benefit – long term
10	Purchasing from physical/digital platforms	Enhancing consumer experience at various touch points (physical/digital), Point of Purchase promotion initiatives
11	Feel good factor post-purchase	Complaint & feedback management, after-sales support, promotion of associated products, and loyalty programs.

### **2.3 Summary**

The available literature suggests that consumer purchase decisions are influenced by various factors, including internal/psychological, social, cultural, economic, and personal factors. Diges & Debesa (2020) suggested that strategies based on user experience, search engine optimization, search engine marketing, and social media marketing are essential for achieving profitable results in the case of online sales. Regardless of the product line, these factors often influence perception and purchasing intent. Effective measurement metrics are essential for businesses to remain competitive and sustainable (Solcansky & Milichovský, 2011). Perceived quality is a critical factor in a consumer's subjective judgment about a brand's overall excellence or superiority (Yoo et al., 2000). Related Literature review established the foundation and helped in understanding the gap. It was evident that a structured approach is not available to determine the effectiveness of various marketing initiatives that Steel Rebar producers do to win customers of Steel Rebar in the retail segment. In the absence of a structured approach, much is left to individuals' interpretation, which increases the element of risk. If the choice of marketing initiatives and period of execution goes wrong, businesses may end up with lower lead-to-sales conversion and hence lower returns on investment. During this research, the pain point captured during interaction with Marketing and Sales professionals shall be addressed by evolving a framework to determine the relative effectiveness of marketing initiatives in improving the sales revenue of steel rebar and ways to use this relative effectiveness in the selection of marketing initiatives. Historical data on marketing initiatives vs monthly brand sales shall be collected and analyzed to

understand the sensitivity. Stakeholders' feedback (company officials, Channel partners, consumers) capturing and data analysis shall be done to generate a relative effectiveness score for each initiative. The objective is to help Marketing managers objectively assess the effectiveness of each initiative and make rational decisions on the choice of initiative for improving lead-to-sales conversion of Steel Rebar in the retail segment of India. This research shall lay the foundation for further studies (using advanced analytical models) to improve the return on invested resources.

## CHAPTER III: METHODOLOGY

### **3.1 Research Purpose**

Steel rebar is a crucial raw material for reinforcing the concrete structures of homes and buildings. However, purchasing steel rebar is less frequent than other fast-moving consumer goods since it's only needed during the construction phase of a building. This challenges marketers in choosing effective marketing initiatives to improve lead-to-sales conversion. In India, selling branded steel rebar to individual home builders is complex due to the widely distributed population, regional economic stimulus, competitive scenario, small ticket size, and logistics challenges. In addition, the demand for steel rebars in the retail segment of India is dependent on agricultural and cultural activity, which is not uniform across the country. This poses a challenge, as a standard set of initiatives across the country may be easier to design but it may not be very effective in generating the desired lead to sales conversion as the effectiveness of factors influencing consumer purchase decisions is not uniform.

Preliminary research showed that the choice of marketing initiatives heavily depends on individual skill sets and is subjected to personal bias or preferences without a structured approach. Therefore, a structured framework is needed to facilitate faster and more informed decisions about marketing initiatives. This framework should consider historical sales impact and the current consumer perspectives on the effectiveness of each initiative.

The purpose of this study is the following:

- a. Evolve means to facilitate marketers make faster and better decisions on the selection of marketing initiatives and address the gap identified during the literature review
- b. Develop a structured framework to capture various marketing initiatives undertaken in a territory and their impact on lead-to-sales conversion.
- c. Means for collecting retail consumers' perspectives on marketing factors influencing the purchase decision.
- d. Develop an objective mean to determine the relative effectiveness of marketing initiatives leading to sales conversion of Steel Rebars in the retail segment.

### **3.2 Research Objective**

The purchase decision of Individual Home builders who buy Steel Rebars from local retailers is a function of multiple factors like brand image, product quality, price, availability, competitor's activity, the intensity of need, economic activity/demand stimulus, availability and value proposition of substitutes, Government policies, and regulations, trust on the recommendation of the retailers and influencers. Marketing initiatives to influence the consumer decision journey could be many. For a large country like India with diversity in terms of consumer behavior and demand influencers, marketing investment by Steel Rebar brand managers may run into thousands of dollars. Organizations need to objectively assess the marketing alternatives and improve the effectiveness of this marketing investment as resources are limited. The challenge is to analyze the effectiveness of past initiatives and integrate it with stakeholder responses on



key influencers to arrive at a weighted average impact of each initiative for arriving at relative effectiveness. Since the marketing budget is limited, the decision is to be taken by a marketer on the set of initiatives to choose for improving lead to sales conversion and to retain customers till the entire home building is over. This research aims to develop a decision support tool that marketers can use to gain insights into the effectiveness of marketing initiatives and decide on the set of initiatives for the future to improve the lead-to-sales conversion of Steel Rebars.

### **3.3 Research Questions**

This research aims to address the following questions:

- a. How can we objectively determine the relative effectiveness of marketing initiatives in improving Retail sales of Steel Rebar in a territory?
- b. How can the relative effectiveness of marketing initiatives be used in better allocation of marketing budget to improve “Lead-to-Sales” conversion of Steel Rebars in a budget constrained scenario?

Additionally, the study seeks to answer the following sub-questions:

- What are the current marketing initiatives used in the retail segment of India to promote steel rebar?
- How effectively are these marketing initiatives generating leads and converting them into sales?
- What factors influence the lead-to-sales conversion of steel rebar in the retail segment of India? Does this vary based on factors like age, sex, type of retailer association, sales territory, purpose of buy?
- What are the challenges marketers face in promoting steel rebar in the retail segment of India, and how can these challenges be addressed?
- What recommendations can be made to improve the effectiveness of marketing initiatives for steel rebar in the retail segment of India?

### 3.4 Research Design

Multiple factors influence consumer purchase behavior. Organizations often undertake several marketing initiatives simultaneously, making it crucial to obtain a comprehensive overview of the key marketing initiatives carried out and their impact of sales. In this case, the past 18 months' data on marketing initiatives and monthly sales of steel rebar was collected for each territory for analysis as per the following format:

Table 2: marketing initiatives vs monthly sales

Marketing Initiatives (Y-done/influenced sales)	FY23				
	Aug	July	June	May	Apr
1. Wall/Shop painting/hoardings in the locality	Y				
2. Roadshows/Haat/local awareness campaigns					
3. Radio/TV/Newspaper advertisement	Y				
4. Recommendation by retailer					
5. Recommendation by masons/architect/contractor					
6. Consumer engagement programs					
7. Discounts provided at the time of purchase					
8. Digital advertisement/Social media campaigns	Y				
9. Email campaigns/Telephone calls/SMS campaigns					
10. Company website/ease of online purchase/schemes in websites as applicable					
11. Brand image built by the company (quality, reliability, trust, value)	Y	Y	Y	Y	Y
12. Sponsorship of local events like sports, Corporate social responsibility.					
13. Consumer Loyalty programs with direct benefit to consumers?					
14. Ask Expert /CSE visits					
15. Overall Brand building initiatives					
Month-on-month sales --- Sum of retailer sales in the state-territory combination (tonnage)					

Another important factor is the overall demand or macroeconomic scenario prevailing at the time of purchase. There is a limit to which the marketing activities can influence sales if the macroeconomic changes suddenly. Overall, market demand changed drastically during the outbreak of the pandemic (COVID-19). During COVID, the lockdown was imposed in the country to restrict the spread of the disease, this slowed down economic activities, including construction activity. Any amount of marketing spend during this period would not have successfully pulled sales of steel rebar as the material could not be transported, nor could the construction activity be resumed in the absence of labor. Similarly, relatively lower marketing investment can boost sales when market demand increases. India being an agriculture-based economy, steel rebar demand is triggered by harvesting/festival season, and hence data collection must address the cyclicity of demand. This effectively means that historical data will be collected over an extended period to establish the relationship between marketing initiatives and their influence on sales. The higher the span of data, the more will be the accuracy of the theoretical relationship established by the model. The questionnaire was designed to capture data in a structured manner for quantitative analysis with the provision to add rows as per the data available within the organization.

While past performance is an indicator, during preliminary research, it was realized that the latest views of key stakeholders like channel partners and consumers need to be considered to arrive at the overall impact of each initiative and decide on improving higher lead-to-sales conversion.

Given below is the format developed to capture the feedback on the effectiveness on a scale of 10, with ten being the highest and one being the lowest in terms of effectiveness in influencing the purchase decision:

Table 3: Collecting ratings of marketing initiatives

<b>Sl no</b>		<b>Key marketing initiatives (Channel partner feedback)</b>	Ten being the most effective
a	<b>Marketing initiatives</b>	Wall paintings/Shop paintings in the locality	
b		Roadshows/Haat campaigns done in the locality	
c		Mass media advertisements like Radio/TV	
e		recommendation by mistiry/contractor/friend	
f		Discounts provided at the time of purchase/Cashback schemes (if applicable)	
g		Google Ads/Digital Advertisements	
h		telephone call/SMS/Email campaigns	
i		Company website/ ease of Online purchase/online promotions	
j		Bundled offerings like Super links/accessories	
k		consumer meet	
l		sponsoring local events (sports, social activity)	
m		Overall Brand image	
n		<b>Add</b>	New initiative - 1
o	New initiative - 2		

A separate questionnaire was designed for channel partners and consumers. While the questionnaire will be administered to multiple persons under a stakeholder group, each category's average score is planned to feed the model to arrive at the overall relative effectiveness score. A provision was created to assign weightage to both the rating given by the key stakeholders and the theoretical analysis score, aiming to increase flexibility and applicability across product categories. The authority to assign or change the

weightage of theoretical output vs marketing vs channel partners vs consumers rests with the central team of the company. This was essential as some of the initiatives may be long-term in nature, and marketing is in a better position to decide on the weightage to be assigned to each category of respondent for calculating the overall effectiveness score. The framework is designed so that the model captures the weights and the stakeholder feedback in calculating the relative effectiveness of each initiative automatically, which in turn helps in analyzing and finetuning the model to improve significantly for future analysis. The overall effectiveness score of each marketing initiative is a combination of the “Sensitivity score” derived from historical data and the effectiveness score given by key stakeholders for each initiative as per the format mentioned above.

Sensitivity analysis was planned to arrive at a theoretical relative effectiveness score.

While the central team, chooses marketing initiatives, they must finally impact consumers’ choices at the time of purchase. Hence it is important to capture consumer feedback on initiatives taken by the organization.

The format considers the importance and provision made to collect consumers’ perspectives on the relative effectiveness of the initiatives. This was taken into consideration, and the interview was conducted to capture consumer responses on the effectiveness of each as per the format below:

Table 4: Collecting consumer ratings on marketing initiatives

MI ID	Marketing Initiatives (MI) - Items on which feedback was sought (these were selected based on preliminary interaction with channel partners and company officials)	Consumers to rate (10 most influential in purchase decision)
1	Wall painting / Shop painting/hoardings in the locality	
2	Roadshows/Haat campaigns/local public awareness campaigns	
3	Radio/TV/Newspaper advertisement	
4	Recommendation by retailer	
5	Recommendation by mistiry/architect/contractor	
6	Consumer engagement programs/ recommendations by family or friends	
7	Discounts provided at the time of purchase/cashback schemes	
8	Online/Digital advertisement/Social media campaigns	
9	Email campaigns/Telephone calls/SMS campaigns	
10	Company website/ease of online purchase/schemes in websites as applicable	
11	Brand image built by the company (quality, reliability, trust, value)	
12	Sponsorship of local events like sports, Corporate social responsibility.	
13	Consumer Loyalty programs with direct benefit to consumers	

The research will collect past data and feedback from key stakeholders on the effectiveness of each marketing initiative as per the format explained above. Since India is a large country with multiple brands in the steel rebar segment, it is impossible to collect data for all brands in a short time frame. Therefore, for ease of conducting the study, this research focuses on one of the leading steel rebar brands in the retail segment, having a presence across every state of India.

As part of the survey design, participants were asked to respond to a series of questions about the marketing tool employed to influence the purchase decision. Participants were to rate each influencing factor relative to the other by giving a score to make an objective analysis. Since multiple stakeholder groups are involved from lead generation to conversion, and the level of influence of each marketing component need not be the same, a separate set of questionnaires was designed for each. While the questionnaire was administered to the participants on a one-to-one basis to capture additional viewpoints, a soft copy of the questionnaire was shared with the channel partner to capture customer feedback using google forms. To keep the feedback relevant to the current initiatives, customers who purchased steel rebars of any brand within the last 12 months were chosen for the interview. Other stakeholder categories were channel partners (Distributors and retailers), marketing managers, and sales managers of the territory. The option to change the weightage of stakeholders' viewpoints was given to the central team of the company (in charge of marketing and sales) as some initiatives are strategic. Weights help in finetuning the model output on test data based on the local marketing condition.

The purpose of administering the survey is to discover the level of influence of initiatives on consumers' purchase decision journeys. The information collected will assist in supporting the identification of successful marketing techniques utilized by leading brands. To effectively obtain information for this study from key stakeholders, a set of most used marketing initiatives were included in the reference set with the option to rate them relatively. Provision was kept in the questionnaire to capture additional items of



significance in the purchase decision-making process. Participants were to select the items which they felt helped in the purchase decision-making process and then assign a relative score on a scale of 10 (10 being the most effective initiative influencing the purchase decision). The response of each respondent under a stakeholder category (marketing, Channel partners, and Consumers) was averaged, and the average score was fed into the model for a particular territory.

### **3.5 Population, sample, and participant selection**

Sampling aims to collect sufficient information from the representative set wherever 100% population coverage is impossible due to resource constraints. Determining the size of a sample is critical to establish the credibility of the research outcome (Daniel, 2019). Even if the sample size is small but is representative of the population, the researcher can collect meaningful information and derive a helpful perception from the interviewees (Creswell, 2003). An interview helps the researcher to gather rich primary information and data required to conduct the research and gain necessary insights. Creswell (2003) suggested that a small sample size of 3 to 5 participants can be used for case study research, while a larger sample size of 10 or more can be used to study phenomena along with other data. During the research and interaction with the brand's marketing team, it was found that the historical sales performance of the brand connecting marketing initiatives is an indicator. However, recent factors influencing consumer purchases must be taken into consideration. Key stakeholder representatives from the Marketing team (internal stakeholder), channel

partners (i.e., distributors/retailers), and consumers were surveyed to ensure impartiality and objectivity in decision-making. Given the resources available, the survey questionnaire was administered on three sales territories in the state of Orissa based on the recommendation of the Marketing team. Feedback from the marketing team was taken on territory selection to check the model's effectiveness in decision-making and its applicability for usage. The plan was to connect with the maximum number of respondents for the Channel Partner and consumer surveys. However, a backup plan was also put in place whereby the target was set to cover at least 5% of the channel partners and 50 consumers in each sales territory. An online survey using google forms was designed and administered over WhatsApp to increase reach. The survey link was sent to more than 100 consumers based on the contact details shared by the dealers and their willingness to participate. Since consumers are generally exposed to multiple marketing communications, an initial briefing was done explaining the purpose and requesting to respond unbiasedly. The distributors' sales team was used to shortlist consumers in the territory. The format used to collect the response is mentioned in section 3.2. Moreover, the introduction of the survey questionnaire is mentioned in Annexure B. Consumer selection for the questionnaire was based on the following criteria:

- a. Must have purchased steel rebar in the last 12 months, irrespective of the brand under consideration
- b. Willingness to participate in the interview/survey without any compensatory commercial to get unbiased feedback.

- c. No objection from the participant to using the response for internal analysis on assurance of anonymity which was mentioned at the top of the questionnaire.

### **3.6 Data collection procedures**

Two types of data were used during the research. Primary data was collected through in-person interviews with key stakeholders (sales team of the organization, Distributors/Retailers, and consumers), like the list of initiatives carried out in the territory month-on-month for the last 18 months and the month-on-month sales in the territory. The feedback on the relative effectiveness of the marketing initiative from company officials was collected as a group, while from external stakeholders. it was collected one-on-one basis through interviews wherever feasible. and for the balance, a survey was administered over WhatsApp. The survey URL (google form) was sent over WhatsApp with a request to click on it to access the questionnaire. Secondary data was collected from the marketing team in terms of what all marketing initiatives were carried out in the past by the organization to improve monthly sales performance (18 months) in the selected territories. This list helped in preparing the survey questionnaire on initiative rating.

Following points were considered during data collection:

1. Preparation of specific questions which can be answered within 10 min, and responses can be used in the analytical model.
2. Brief the team on what to communicate to the respondent and how to do that. This was done as we had to reach a larger set of consumers, and the plan was to use Distributor's sales force to brief the consumers before taking the survey.
3. Make follow-up calls to fix a date and time for the interaction and subsequently to get the response to the survey over google forms.
4. Applying Moustakas's strategy for the briefing / conducting physical interviews such that "a phenomenological interview beginning with a social conversation, or a brief meditative activity aimed at creating a relaxed and trusting atmosphere" (Moustakas, C, 1994, p.114).
5. As ice breakers, ask 2-3 questions to gain information on the participant's role in the buying decision.
6. Take written notes wherever possible and acceptable by the interviewee to note down specific queries to be responded to or important remarks for analysis.
7. Conduct interviews in the participants' favorable languages to create a personal connection and unbiased answering.

Response to the questionnaire depends on how the questionnaire is administered. The list of questions, the script, and how it shall be administered for a physical interview was planned and rehearsed in advance.

As preparation for data collection, Sproull's (2002) work was referred which broadly speaks about the following steps:

1. Assign a unique identification to each participant
2. Build up coding and data retrieval process
3. Conduct a pilot run as a trial run
4. Edit inconsistent or incomplete data
5. Exercise data reduction

The interview format of this research is arranged as semi-structured with a set of prepopulated initiatives to trigger the thought and take views on the influence of relevant ones. This was also associated with open-ended questions on other factors which are relevant from the customer perspective but not included in the prepopulated set. The interview is well set up and prepared beforehand. Interview dates, time frames, and interview locations are fixed and confirmed with each retailer and planned in a way that the retailer is comfortable interviewing the consumers or prospects visiting the store.

### **3.7 Data analysis**

Data analysis is a time-consuming and tedious process, but it determines the research outcome and hence needs to be planned properly. For proper analysis and deriving insights, the interview response is to be converted to quantitative data. My knowledge of business and consumer interaction was used to structure the questionnaire & collect the data in a way that it can be fed into the proposed model easily. Clean and correct data is important for any analysis, and hence suitable measures were taken to explain the purpose at the time of data collection. To increase the usefulness and

relevance of data, four major steps (Taylor &Powel, 2004), as enumerated below, were carried out:

1. Reviewing the data for appropriateness and relevance before any analysis.
2. Organizing the data in proper order and converting the same into a numerical score.
3. Coding the respondents for ease of understanding the stakeholder category and the responses that were given by each.
4. Interpreting the data collected in the form of a response. Identifying the similarities and differences in responses from the participants with different characteristics.

The notes taken during the interview process were reviewed to connect them appropriately with the right relative effectiveness score of each initiative influencing the purchase decision. To facilitate the uniqueness of data collection and analysis, each initiative was coded so that the effectiveness score of different consumers could be averaged. The territories in which the questionnaire was administered were also coded along with the stakeholder code and means of response collection for easy analysis. The marketing initiatives were also coded as the score of each stakeholder category, territory, and initiative were to be averaged out.

## CHAPTER IV: RESULTS

The sections below present the key findings of the research. Explanation of the same and implication of each of the findings are mentioned in Discussion Chapter (Chapter V).

### **4.1 Research Question One**

One of the objectives of this research was to address the question of “How can we objectively ascertain the relative effectiveness of marketing initiatives in improving sales revenue of steel rebar. It is a fact that organizations spend millions of dollars in creating the pull for the product or service they offer and hence the need for objective assessment of the marketing elements. In addition, every brand manager wants to know how various product attributes drive the sales of a product (Winston, 2014). In the sections below, the results obtained during the research are mentioned. Furthermore, during historical data analysis of factors influencing sales of steel rebar, it was found that effectiveness different across territories.

The consumer survey response on the relative effectiveness of factors influencing a purchase decision is represented below. These are the average score across all consumers:

Table 5: Consumer ratings

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>Avg Score (Consumer)</b>
1	Wall painting/Shop painting/hoardings in the locality	7.87
2	Roadshows/Haat campaigns/local public awareness campaigns	7.50
3	Radio/TV/Newspaper advertisement	7.69
4	Recommendation by retailer	8.58
5	Recommendation by mistiry/architect/contractor	8.54
6	Consumer engagement programs/ recommendations by family or friends	8.18
7	Discounts provided at the time of purchase/cashback schemes	8.58
8	Online/Digital advertisement/Social media campaigns	7.57
9	Email campaigns/Telephone calls/SMS campaigns	7.09
10	Company website/ease of online purchase/schemes in websites	7.97
11	Brand image built by the company (quality, reliability, trust, Value)	9.69
12	Sponsorship of local events like sports, Corporate social responsibility	6.80
13	Consumer Loyalty programs with direct benefit to consumers	9.26

The top 5 Initiatives impacting consumer decision-making based on the customer survey were

1. Brand Image (9.69)
2. Consumer loyalty programs/direct consumer benefit programs (9.26)
3. Recommendation by retailers (8.58)
4. Discounts provided at the time of purchase (8.58)
5. Recommendation by mistiry/architect/contractor (8.54)



The survey response on the relative effectiveness of marketing initiatives conducted on the marketing and sales team (the central team which decides on initiatives and the investment to be made) is represented below:

Table 6: Average rating of central team

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>Avg Score (Mktg)</b>
1	Wall painting/Shop painting/hoardings in the locality	7
2	Roadshows/Haat campaigns/local public awareness campaigns	9
3	Radio/TV/Newspaper advertisement	8
4	Recommendation by retailer	7
5	Recommendation by Influencers (mistiry/architect/contractor)	8
6	Consumer engagement programs/recommendations by family or friends	9
7	Discounts provided at the time of purchase/cashback schemes	10
8	Online/Digital advertisement/Social media campaigns	7
9	Email campaigns/Telephone calls/SMS campaigns	6
10	Company website/ease of online purchase/schemes in websites	8
11	Brand image built by the company (quality, reliability, trust, Value)	9
12	Sponsorship of local events like sports, Corporate social responsibility	9
13	Consumer Loyalty programs with direct benefit to consumers	8

The top 5 Initiatives (in terms of joint rating by the Marketing and Sales team during the personal interview) impacting consumer decision-making as per the central team are mentioned below:

1. Discounts provided at the time of purchase (10)
2. Brand Image (9)
3. Consumer engagement programs (9)
4. Sponsorship of local events (9)
5. Roadshows/Haat Campaigns (9)

The survey response on the relative effectiveness of marketing initiatives conducted on Channel partners (Retailers/Dealers) is represented below:

Table 7: Channel partner ratings

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>Avg Score (Channel)</b>
1	Wall painting/Shop painting/hoardings in the locality	9.4
2	Roadshows/Haat campaigns/local public awareness campaigns	8.6
3	Radio/TV/Newspaper advertisement	8.4
4	Recommendation by retailer	9
5	Recommendation by Influencers (mistiry/architect/contractor)	9.5
6	Consumer engagement programs/ recommendations by family or friends	9.2
7	Discounts provided at the time of purchase/cashback schemes	9.1
8	Online/Digital advertisement/Social media campaigns	8.4
9	Email campaigns/Telephone calls/SMS campaigns	8.8
10	Company website/ease of online purchase/schemes in websites	9
11	Brand image built by the company (quality, reliability, trust, Value)	9.9
12	Sponsorship of local events like sports, Corporate social responsibility	8.3
13	Consumer Loyalty programs with direct benefit to consumers	9.2

The top 5 Initiatives impacting consumer purchase decision-making as per the Channel partners are mentioned below:

1. Brand Image (9.9)
2. Recommendation by Influencers (9.5)
3. Wall Painting/Shop Painting/Hoardings (9.4)
4. Consumer Loyalty programs (9.2)
5. Consumer engagement programs (9.2)

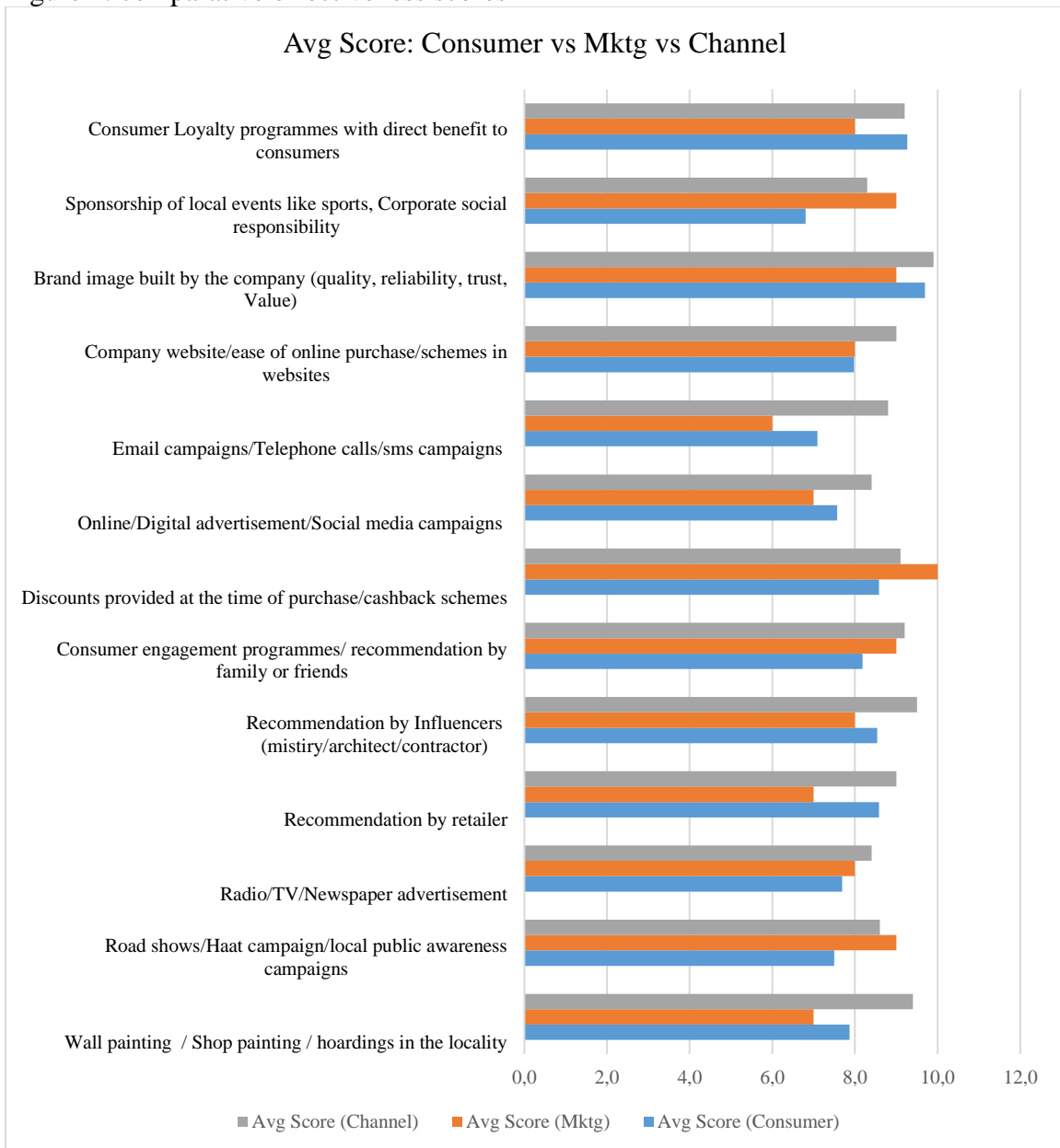
The consolidated average scores of various marketing initiatives derived through the survey for all three stakeholders are represented below in the tabular form:

Table 8: Comparative ratings of Consumers, company, and channel partners

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>Avg Score (Consumer)</b>	<b>Avg Score (Mktg)</b>	<b>Avg Score (Channel)</b>
1	Wall painting/Shop painting/hoardings in the locality	7.9	7.0	9.4
2	Roadshows/Haat campaigns/local public awareness campaigns	7.5	9.0	8.6
3	Radio/TV/Newspaper advertisement	7.7	8.0	8.4
4	Recommendation by retailer	8.6	7.0	9
5	Recommendation by Influencers (mistiry/architect/contractor)	8.5	8.0	9.5
6	Consumer engagement programs/recommendation by family or friends	8.2	9.0	9.2
7	Discounts provided at the time of purchase/cashback schemes	8.6	10.0	9.1
8	Online/Digital advertisement/Social media campaigns	7.6	7.0	8.4
9	Email campaigns/Telephone calls/SMS campaigns	7.1	6.0	8.8
10	Company website/ease of online purchase/schemes in websites	8.0	8.0	9
11	Brand image built by the company (quality, reliability, trust, Value)	9.7	9.0	9.9
12	Sponsorship of local events like sports, Corporate social responsibility	6.8	9.0	8.3
13	Consumer Loyalty programs with direct benefit to consumers	9.3	8.0	9.2

Given below is the visual representation of the comparative effectiveness score of marketing initiatives mentioned in the above table:

Figure 1: comparative effectiveness scores



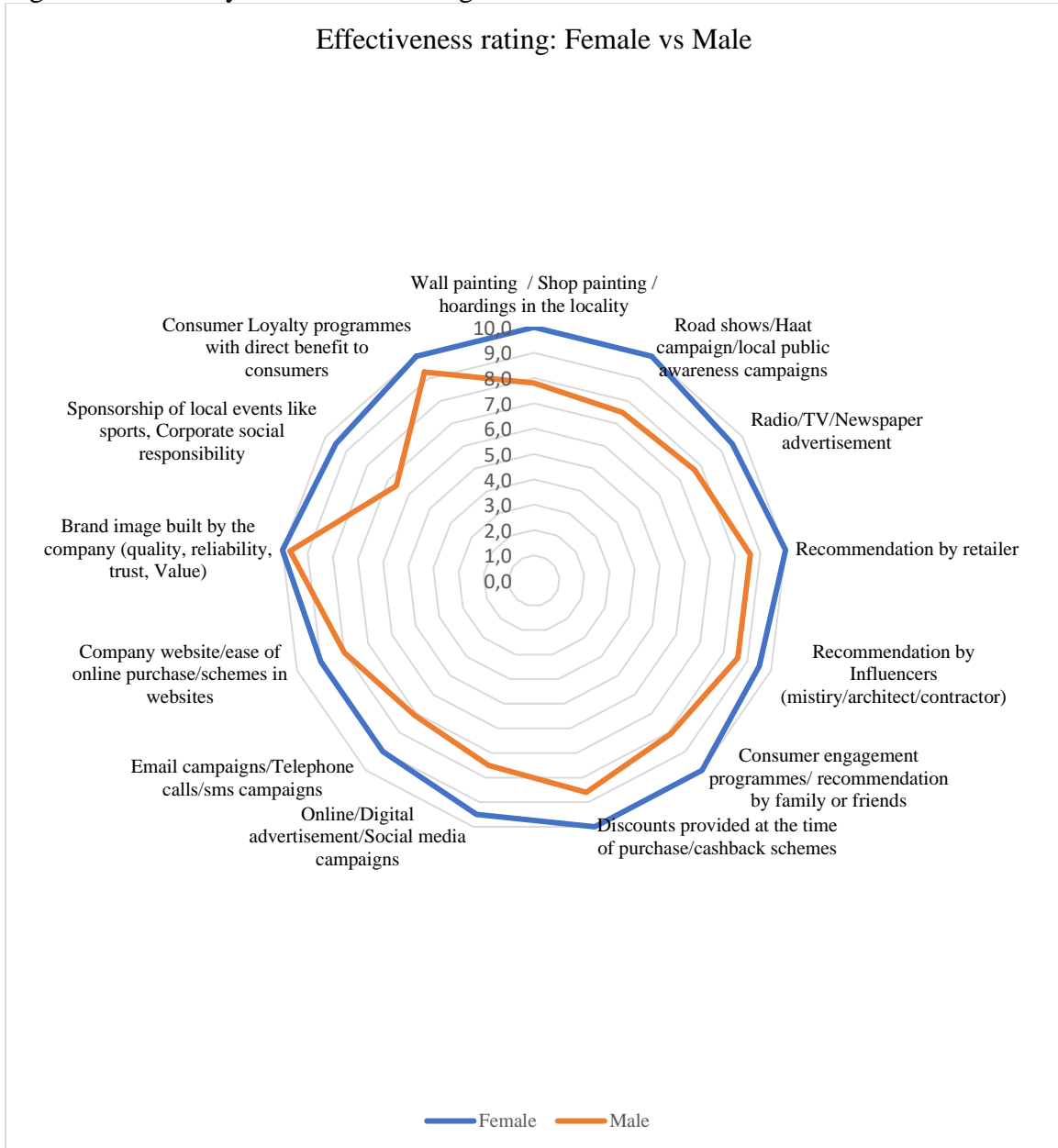
The table below shows the difference in the relative importance of factors influencing consumer decision-making based on gender.

Table 9: Gender dependency of ratings

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>Female</b>	<b>Male</b>
1	Wall painting/Shop painting/hoardings in the locality	10.0	7.8
2	Roadshows/Haat campaigns/local public awareness campaigns	10.0	7.5
3	Radio/TV/Newspaper advertisement	9.5	7.7
4	Recommendation by retailer	10.0	8.6
5	Recommendation by Influencers (mistiry/architect/contractor)	9.5	8.6
6	Consumer engagement programs/ recommendations by family or friends	10.0	8.1
7	Discounts provided at the time of purchase/cashback schemes	10.0	8.6
8	Online/Digital advertisement/Social media campaigns	9.5	7.5
9	Email campaigns/Telephone calls/SMS campaigns	9.0	7.1
10	Company website/ease of online purchase/schemes in websites	9.0	8.0
11	Brand image built by the company (quality, reliability, trust, Value)	10.0	9.7
12	Sponsorship of local events like sports, Corporate social responsibility	9.5	6.6
13	Consumer Loyalty programs with direct benefit to consumers	10.0	9.3

The pie chart below is the visual representation of how the male and female respondents got influenced by the various marketing initiatives in making a purchase decision.

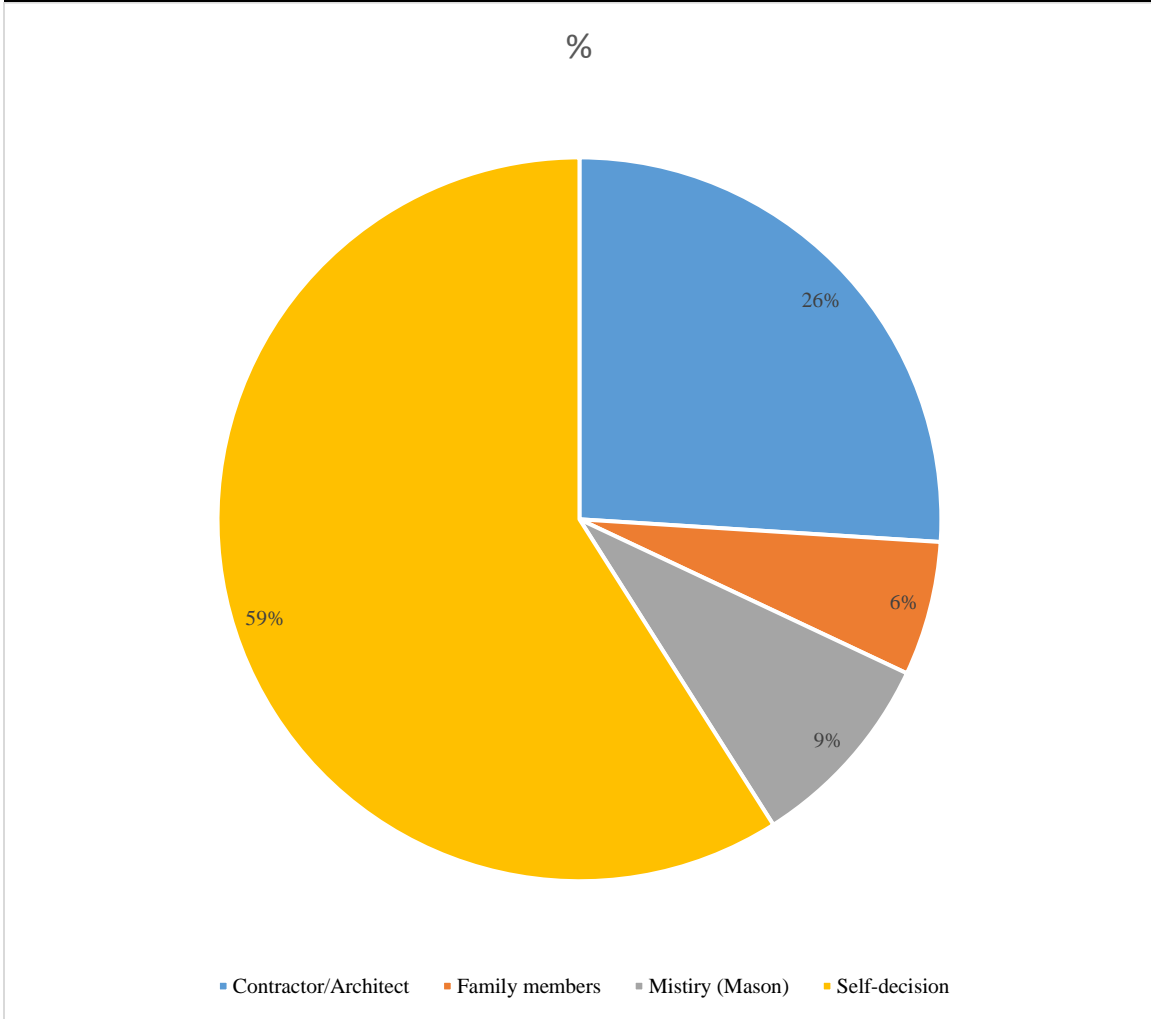
Figure 2: variability of score based on gender



Survey response of consumers on the category of influencer that contributed to a purchase decision is depicted below:

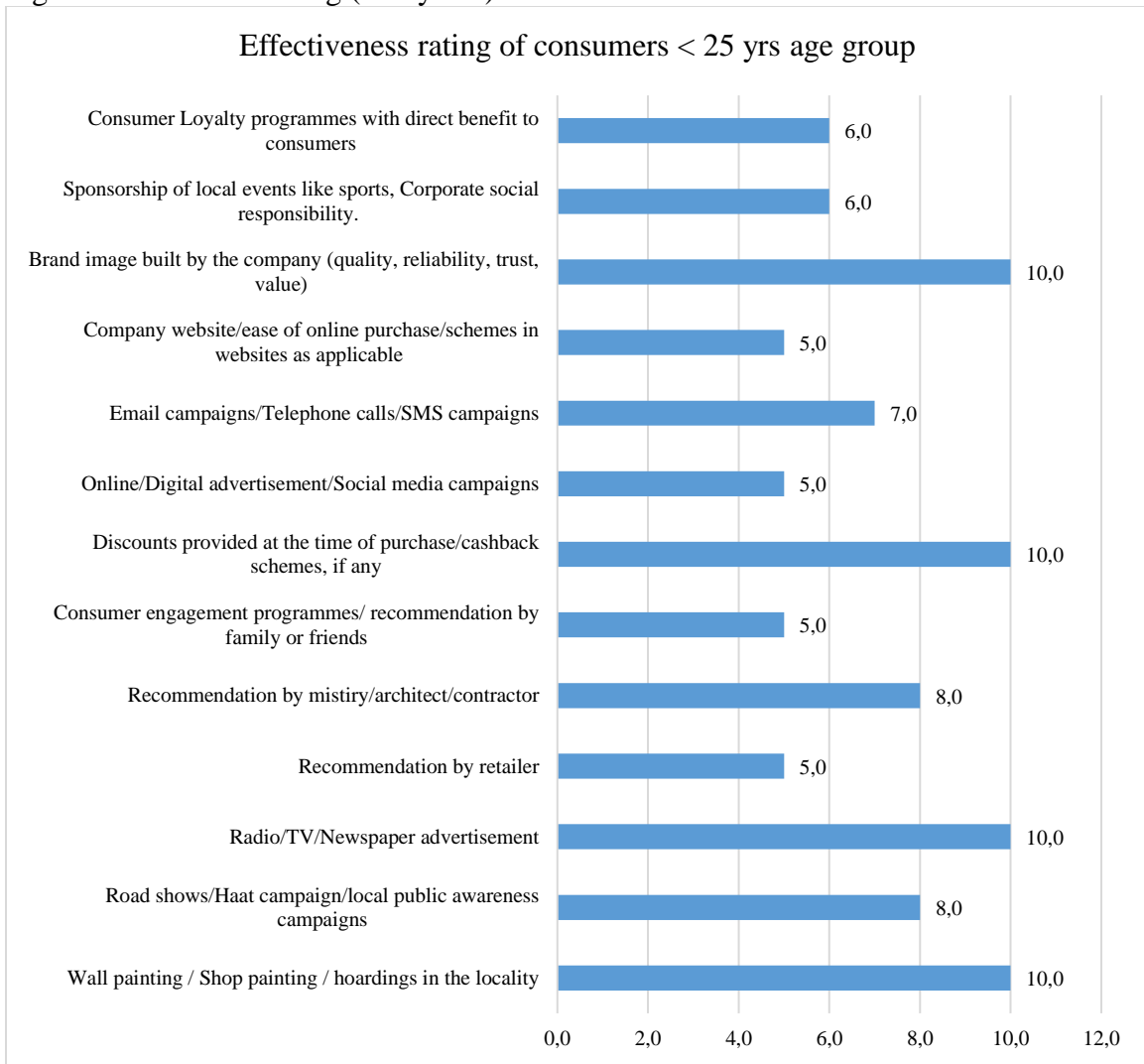
Figure 3: Category of influencers

Influencer category (part of the prepopulated category to capture feedback)	%
Contractor/Architect	26%
Family members	6%
Mistry (Mason)	9%
Self-decision	59%



Out of the customers surveyed it came out that 74 % of the sales happened to consumers aged 25 to 45 years. The graph below shows the rating of Key marketing initiatives which impact decision-making for the < 25 years age group of Steel Rebar consumers (Retail):

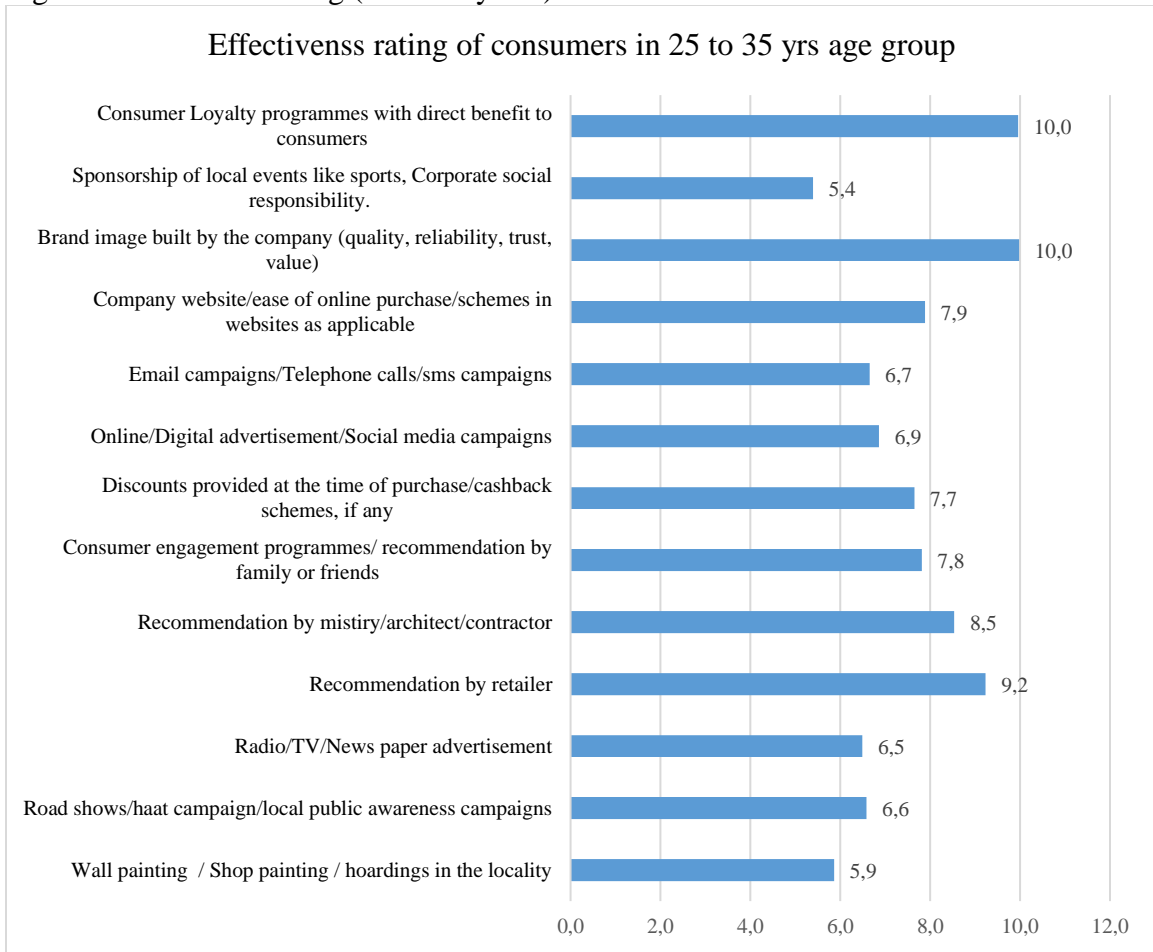
Figure 4: Consumer rating (<25 years)





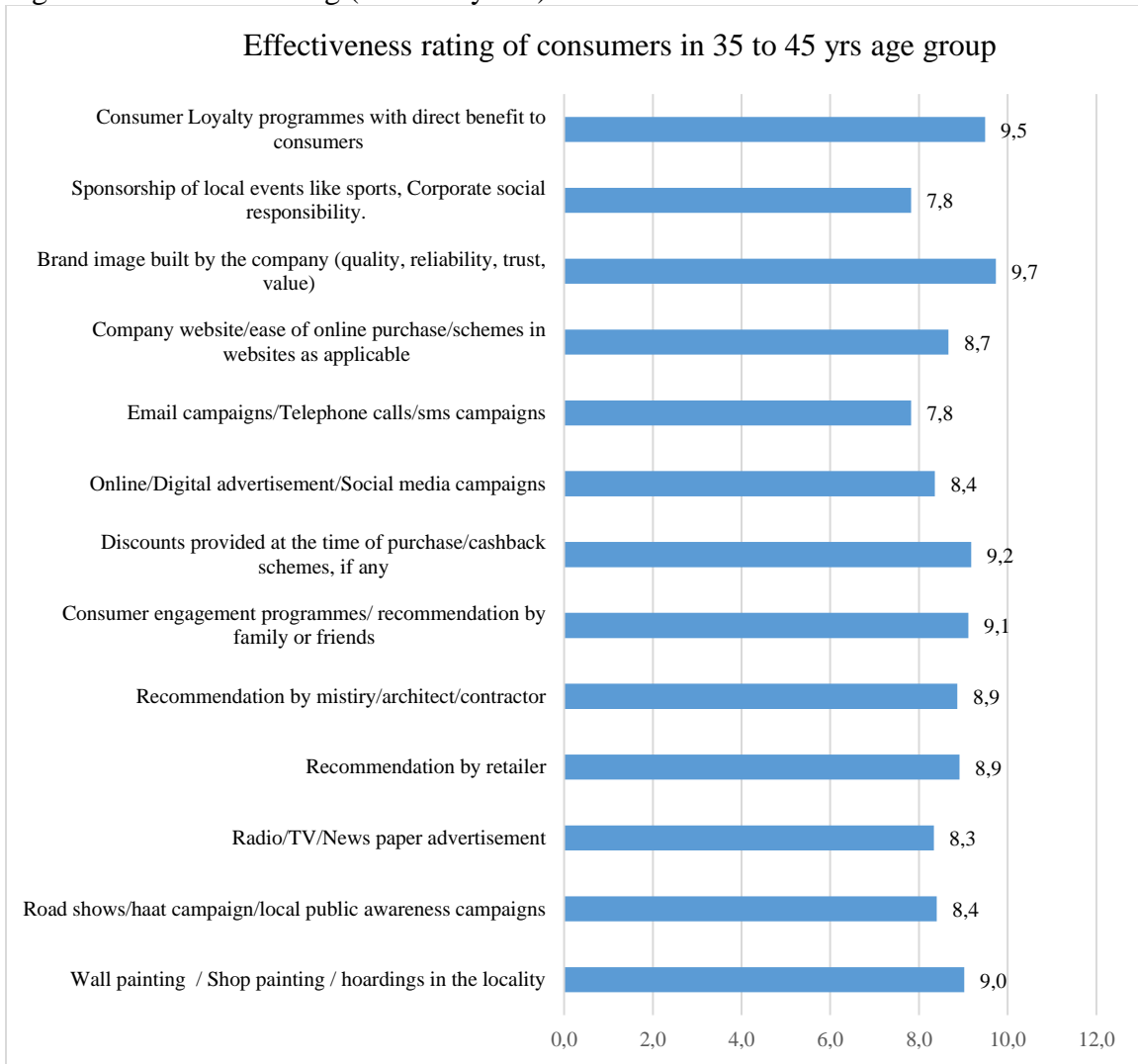
The graph below shows the rating of Key marketing initiatives which impact decision-making for the 25 to 35 years age group of Steel Rebar consumers (Retail):

Figure 5: Consumer rating (25 to 35 years)



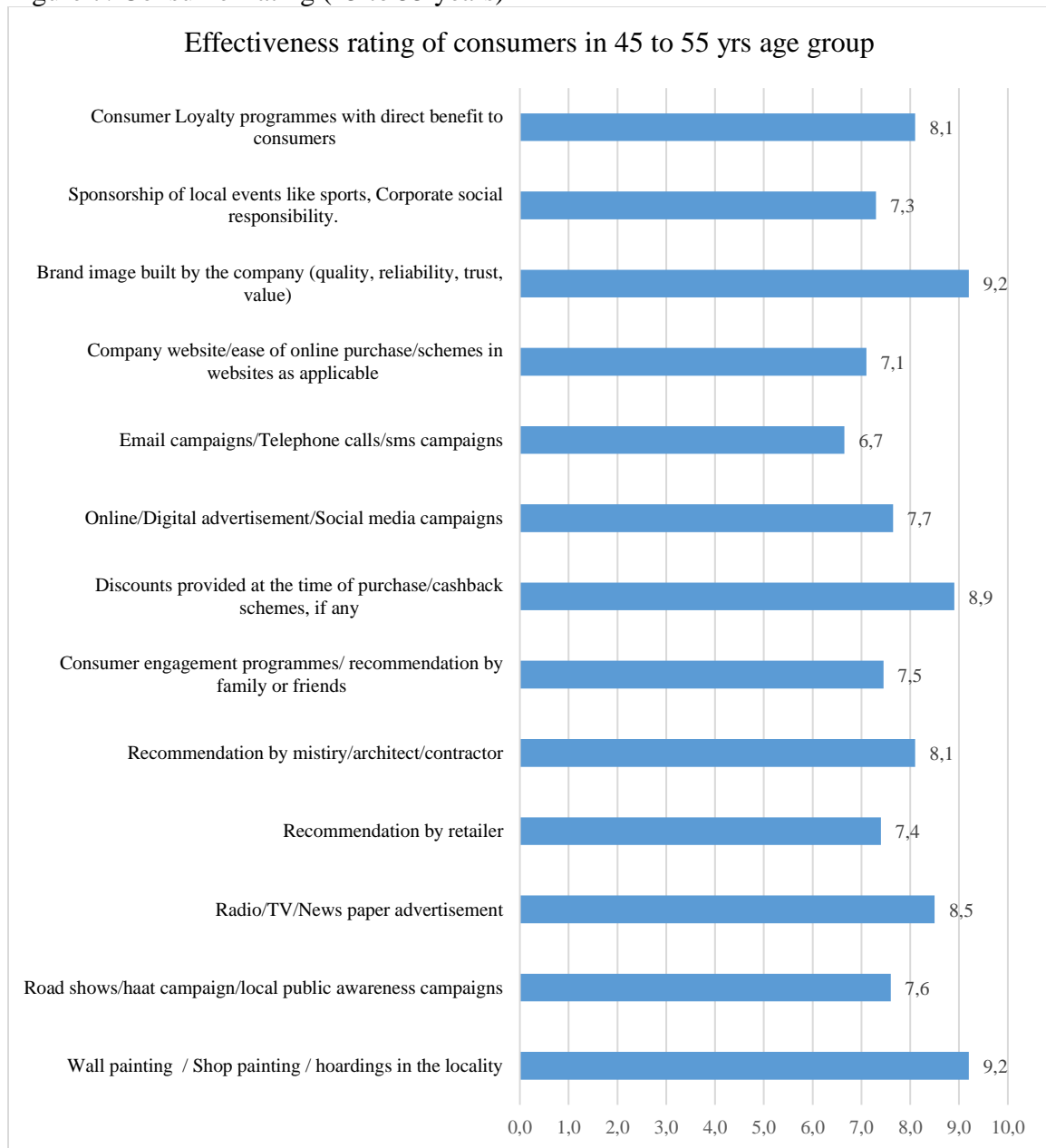
The graph below shows the rating of Key marketing initiatives which impact decision-making for the 35 to 45 years age group of Steel Rebar consumers (Retail):

Figure 6: Consumer rating (35 to 45 years)



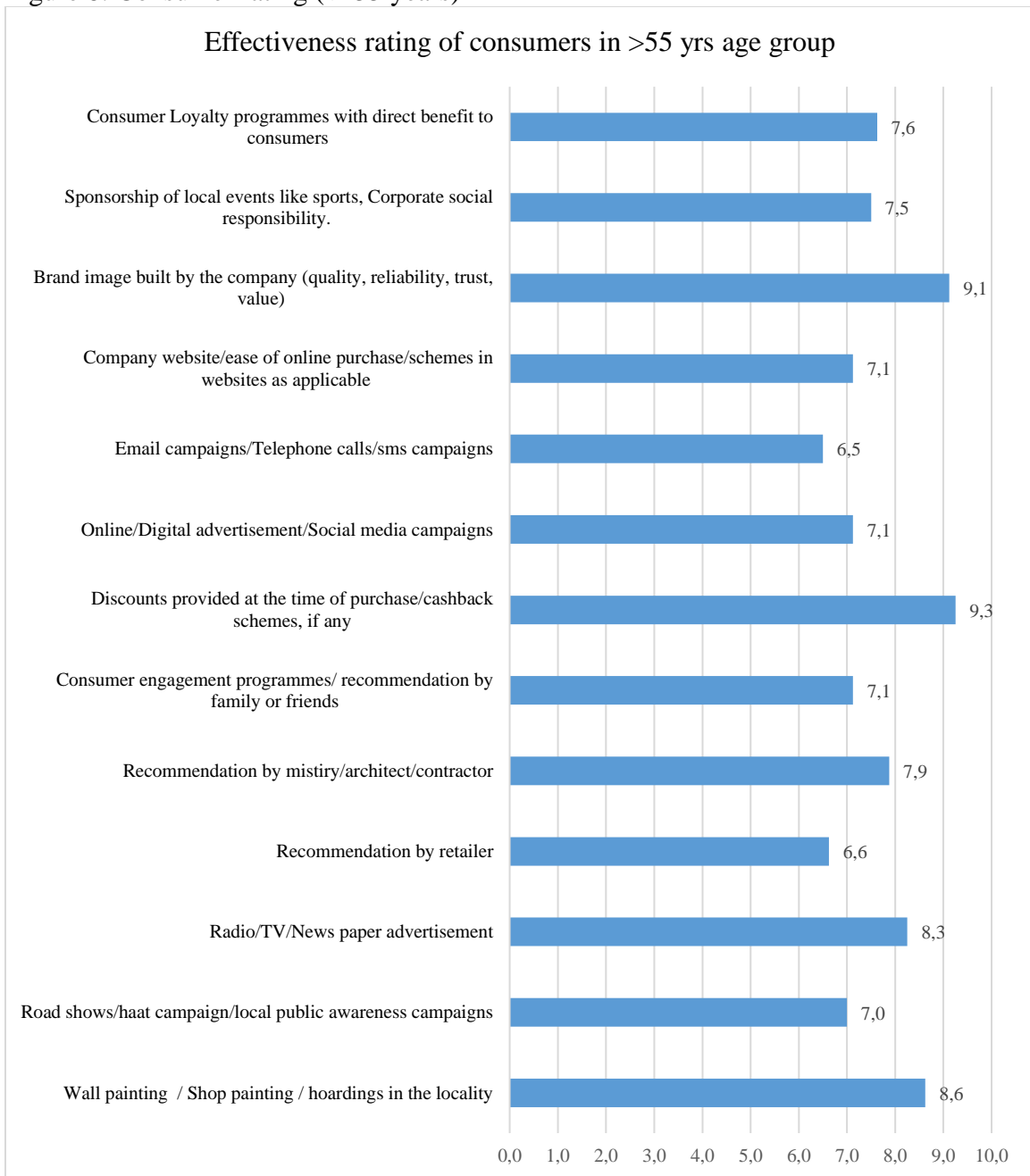
The graph below shows the rating of Key marketing initiatives which impact decision-making for the 45 to 55 years age group of Steel Rebar consumers (Retail):

Figure 7: Consumer rating (45 to 55 years)



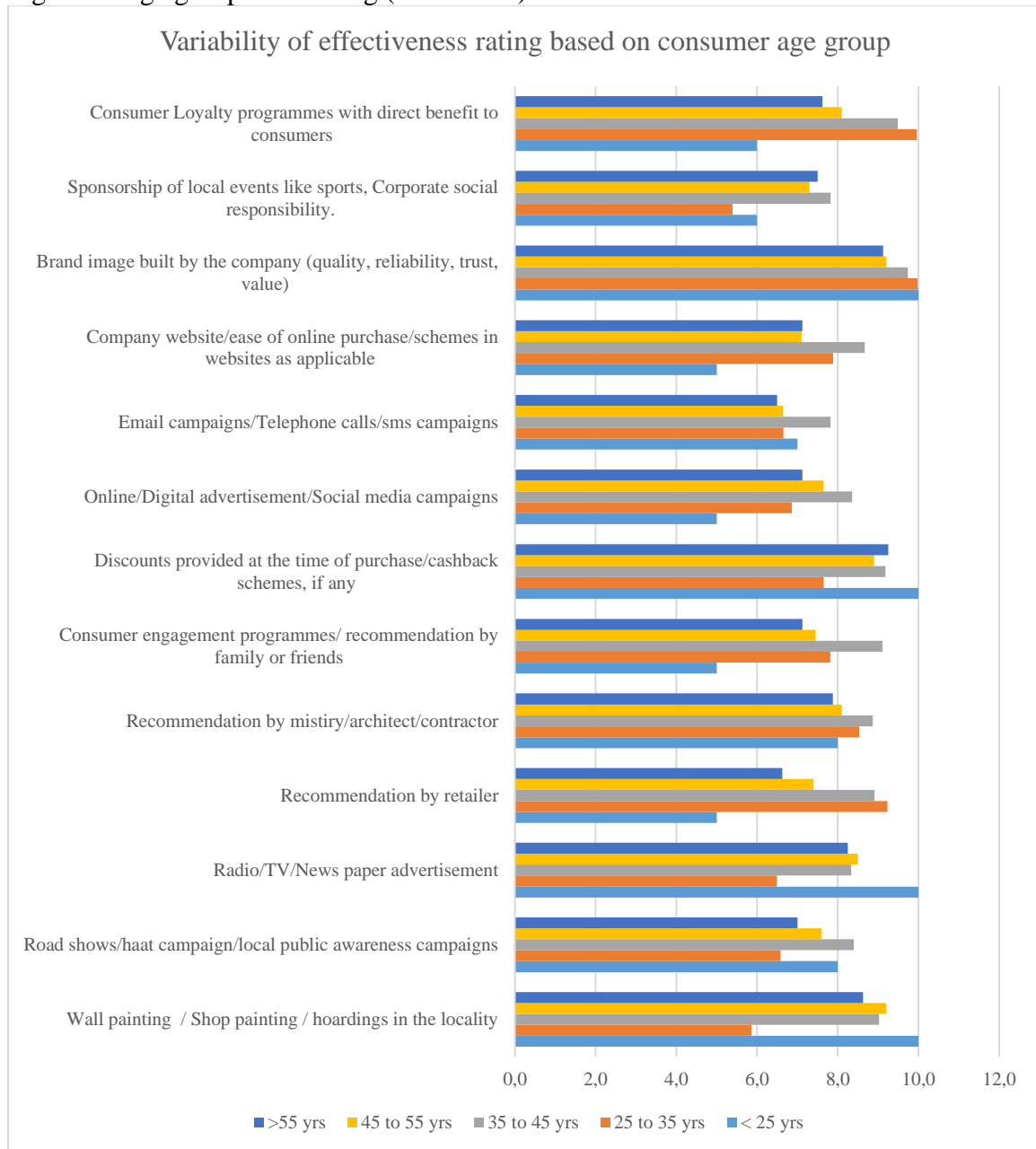
The graph below shows the rating of Key marketing initiatives which impact decision-making for the > 55 years age group of Steel Rebar consumers (Retail):

Figure 8: Consumer rating (> 55 years)



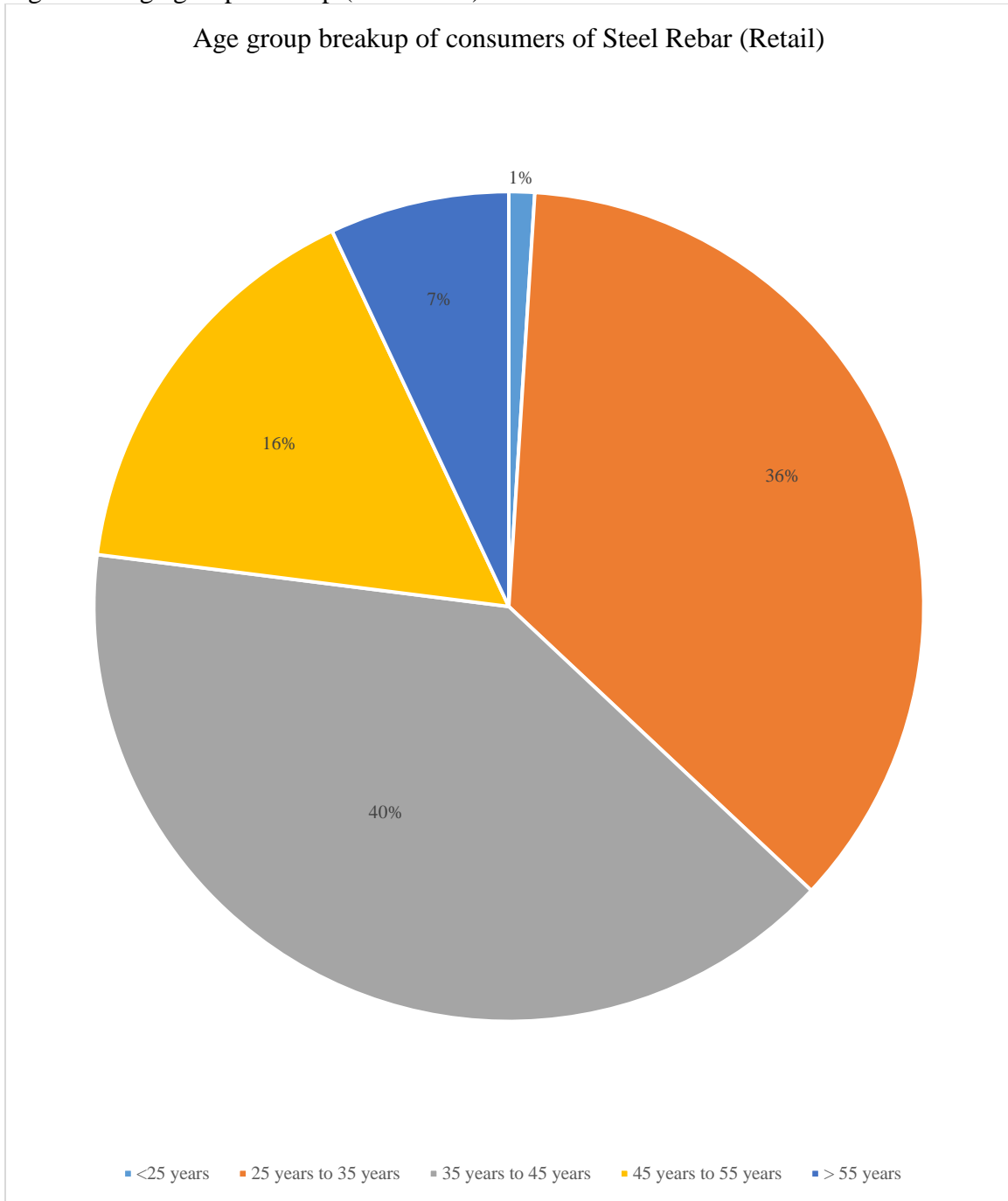
Given below is the graphical representation of how the same initiative is rated by different age groups of consumers of Steel Rebar (Retail):

Figure 9: Age group-wise rating (consumers)



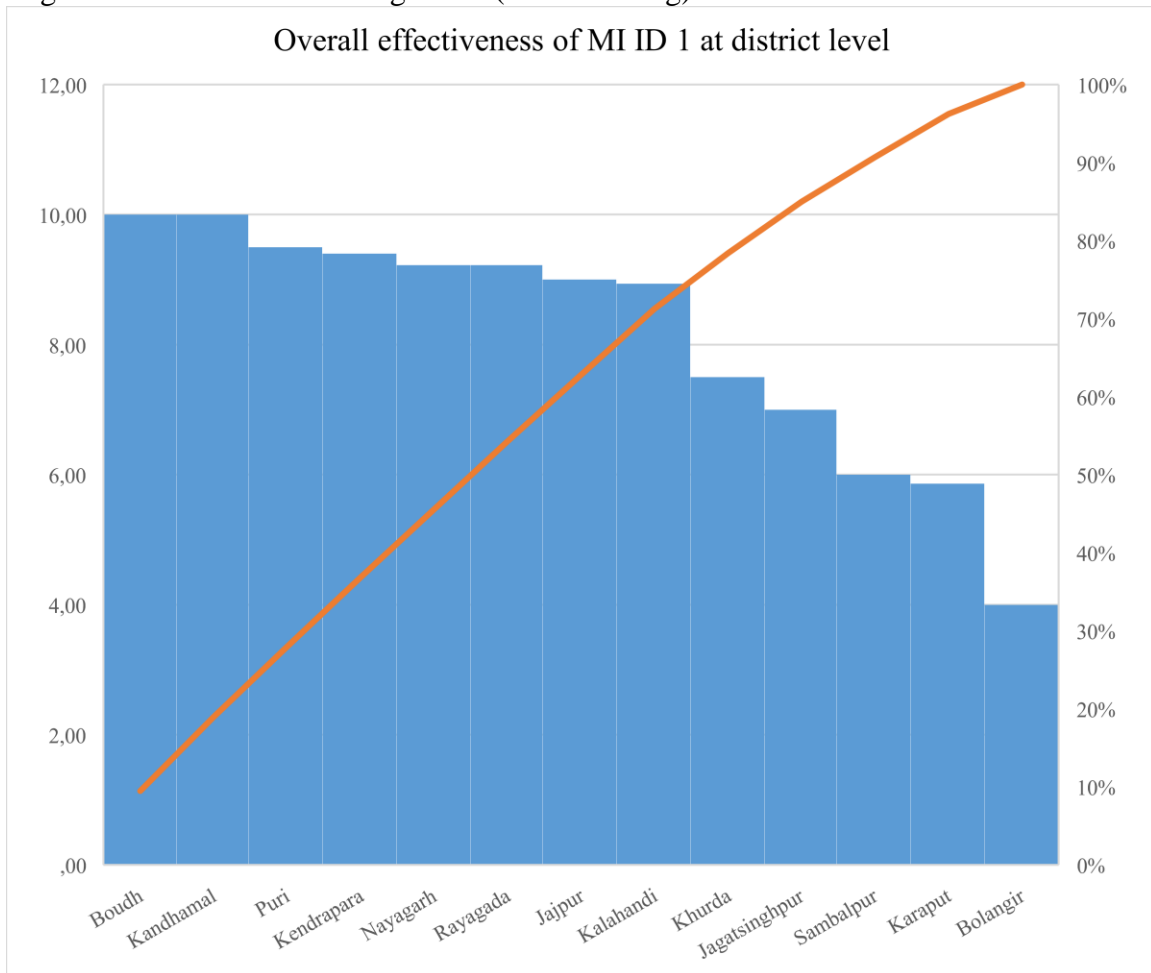
Given below is the graphical representation of the breakup of sales as per age (count) based on the sample studied:

Figure 10: age group breakup (consumers)



The consumer survey was conducted in multiple districts within the state of Orissa. This state was chosen as the Steel Rebar Brand of the company needed to do better in the retail segment, and the guideline was to analyze the effectiveness of marketing initiatives to grow the business. Given below is the visual representation of the extent of variability in the perception of the relative effectiveness of one of the marketing initiatives (Wall Painting/Shop painting/hoarding: average effectiveness score of this was 7.7):

Figure 11: District-level rating on 10 (Wall Painting)



Given below is the table showing the variability in the effectiveness of marketing initiatives based on the ticket size from the customer perspective

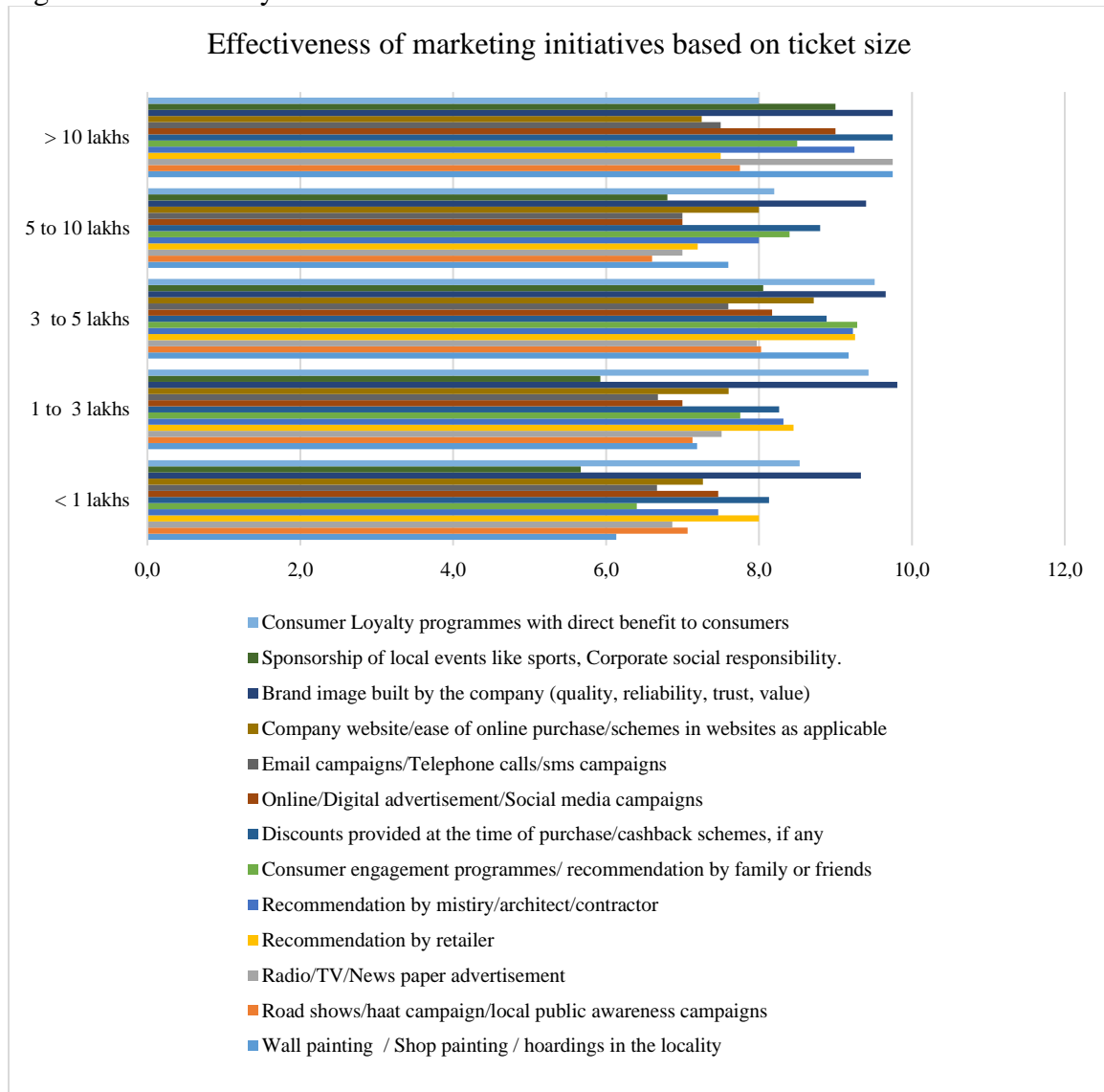
Table 10: Ticket size-wise rating (consumers)

<b>MI ID</b>	<b>Marketing Initiatives (MI)</b>	<b>&lt; 1 lakh</b>	<b>1 to 3 lakhs</b>	<b>3 to 5 lakhs</b>	<b>5 to 10 lakhs</b>	<b>&gt; 10 lakhs</b>
1	Wall painting / Shop painting / hoardings in the locality	6.1	7.2	9.2	7.6	9.8
2	Roadshows/Haat campaign/local public awareness campaigns	7.1	7.1	8.0	6.6	7.8
3	Radio/TV/Newspaper advertisement	6.9	7.5	8.0	7.0	9.8
4	Recommendation by retailer	8.0	8.5	9.3	7.2	7.5
5	Recommendation by mistiry/architect/contractor	7.5	8.3	9.2	8.0	9.3
6	Consumer engagement programs/ recommendation by family or friends	6.4	7.8	9.3	8.4	8.5
7	Discounts provided at the time of purchase/cashback schemes, if any	8.1	8.3	8.9	8.8	9.8
8	Online/Digital advertisement/Social media campaigns	7.5	7.0	8.2	7.0	9.0
9	Email campaigns/Telephone calls/SMS campaigns	6.7	6.7	7.6	7.0	7.5
10	Company website/ease of online purchase/schemes in websites as applicable	7.3	7.6	8.7	8.0	7.3
11	Brand image built by the company (quality, reliability, trust, value)	9.3	9.8	9.7	9.4	9.8
12	Sponsorship of local events like sports, Corporate social responsibility.	5.7	5.9	8.1	6.8	9.0
13	Consumer Loyalty programs with direct benefit to consumers	8.5	9.4	9.5	8.2	8.0



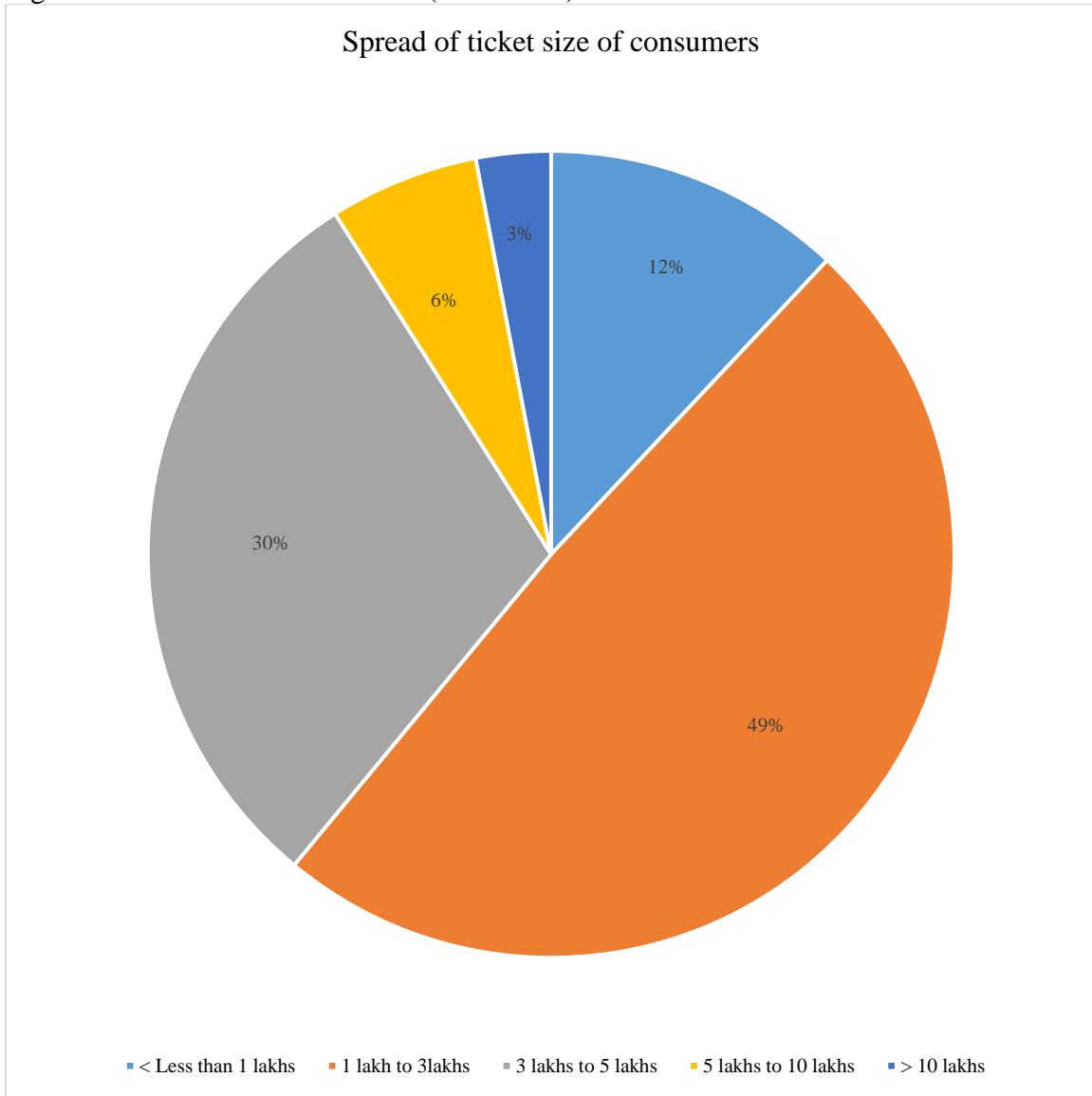
Data was analyzed to understand consumers' perception of the effectiveness of marketing elements based on the size of the buy, i.e., whether the influencing element of a high-volume retail customer is different from a small-volume customer and the variability of effectiveness based on the size of the buy. The figure given below is the depiction of variability.

Figure 12: Variability based on ticket size



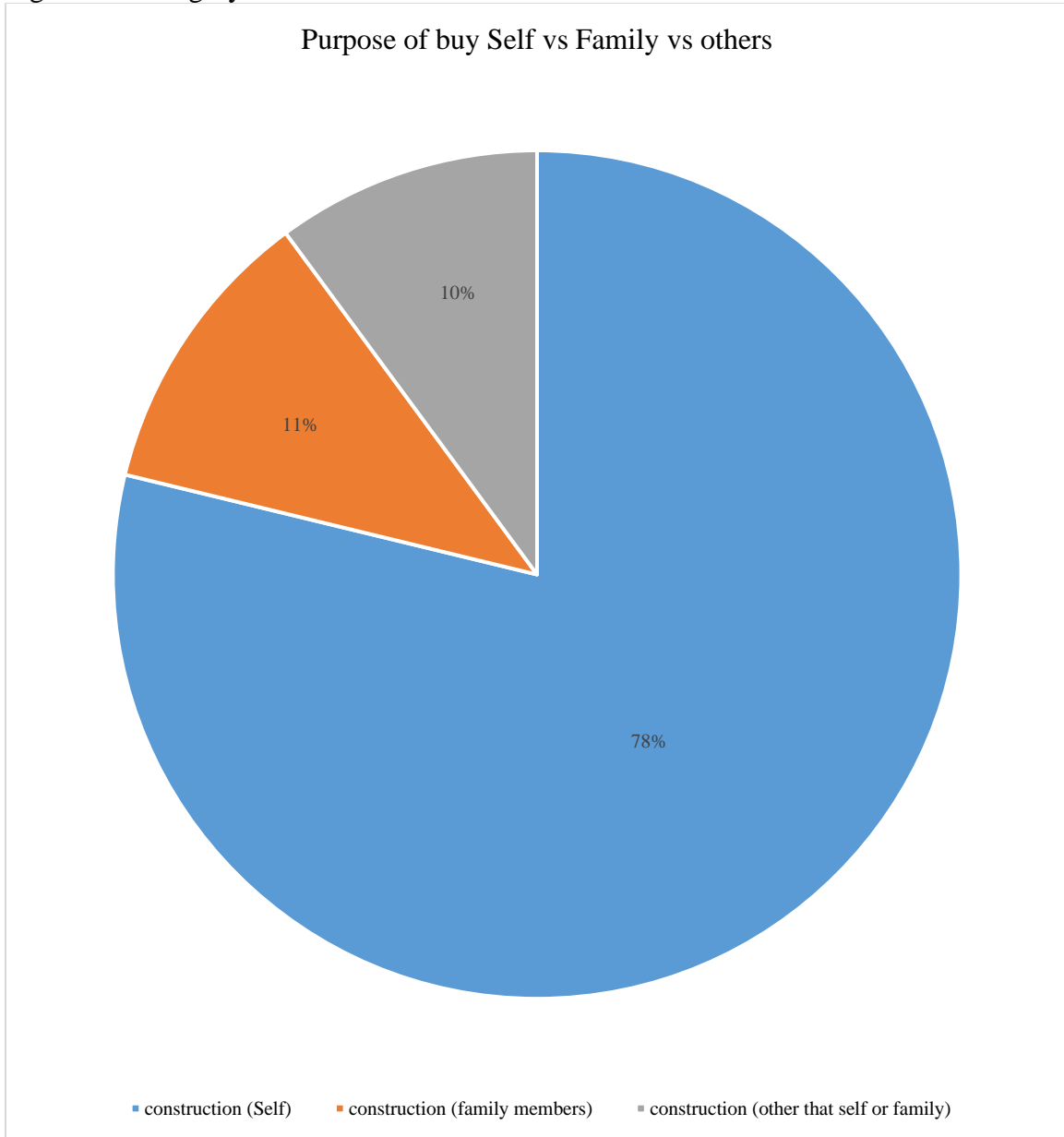
Consumers in the retail segment buy Steel Rebars in varying quantities based on the construction activity being carried out. Therefore, data was captured on the value of buying and their perspective of effectiveness in influencing the purchase decision. The figure given below shows the spread of ticket size of consumers surveyed:

Figure 13: Ticket size distribution (consumers)



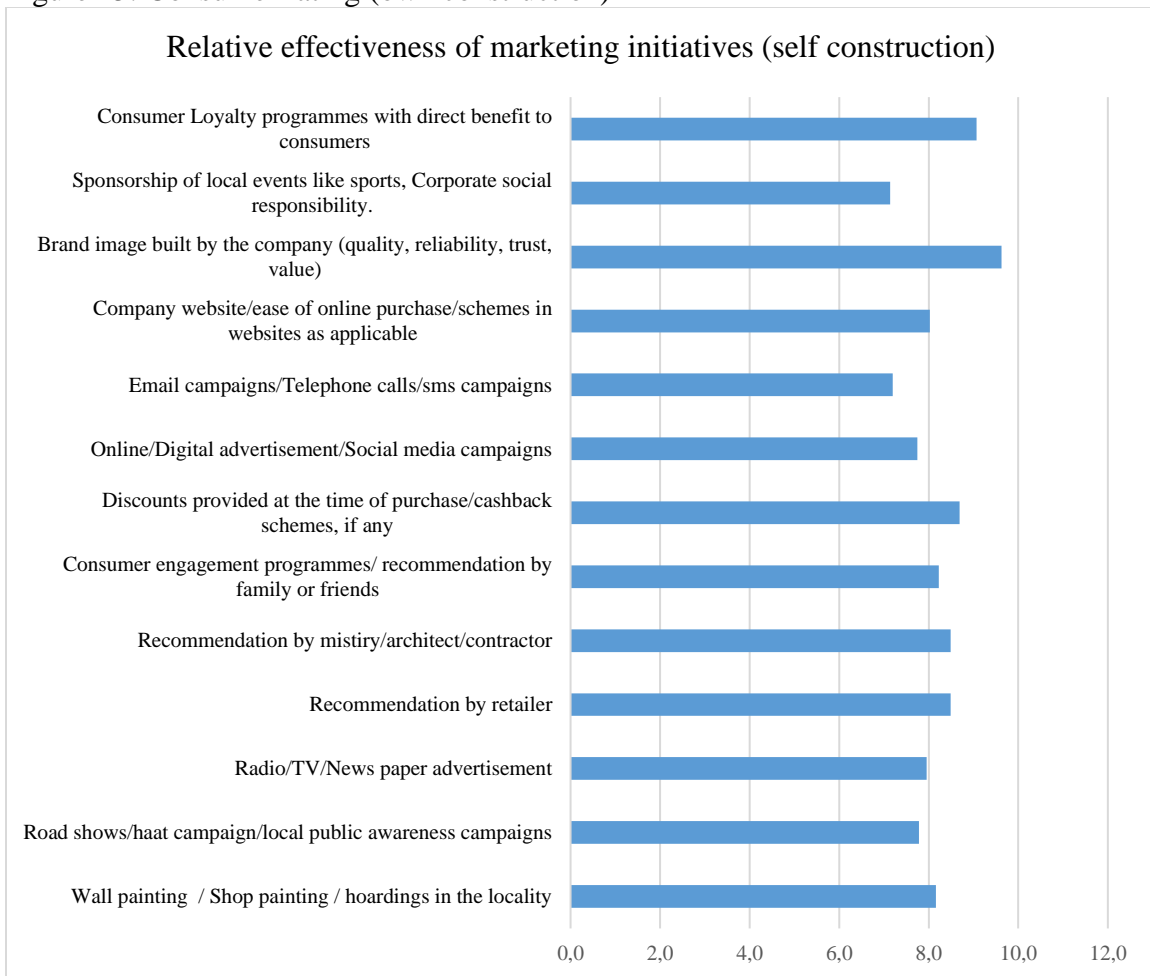
The figure below gives the impression of the purpose of buy of Steel Rebar, whether for the construction of their own houses and, if so, which all marketing initiatives are most effective in purchase decision-making of the target segment:

Figure 14: Category of consumers



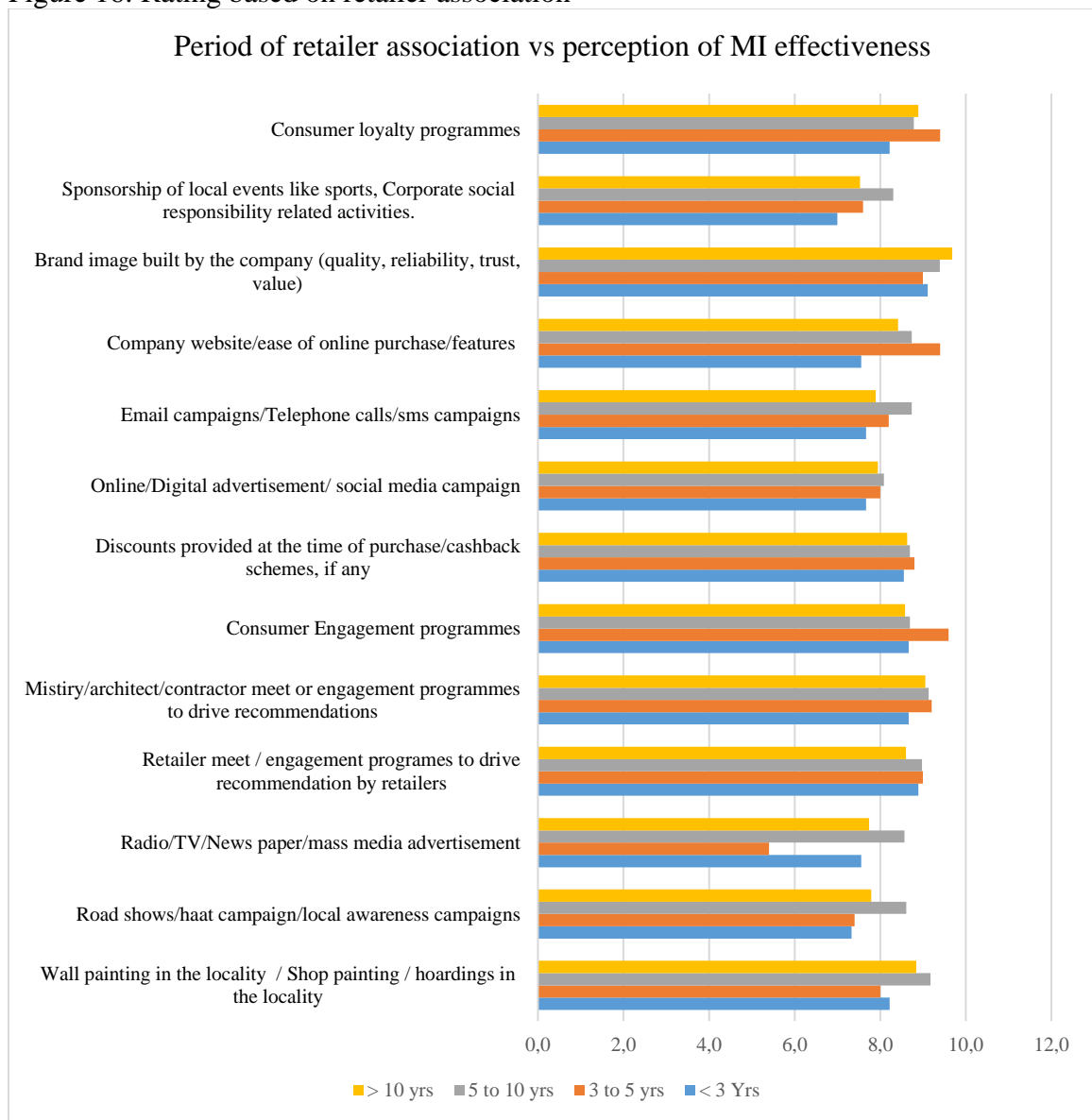
During analysis it was found that most customers bought steel rebars to construct their own houses (for self and not family members or relatives). The other two segments were those who purchased for family members and intermediaries (contractors/masons buying on behalf of the customer). Therefore, to understand the relative effectiveness of factors influencing the consumers constructing their own houses, the responses were analyzed, and the same is depicted below in bar chart form.

Figure 15: Consumer rating (own construction)



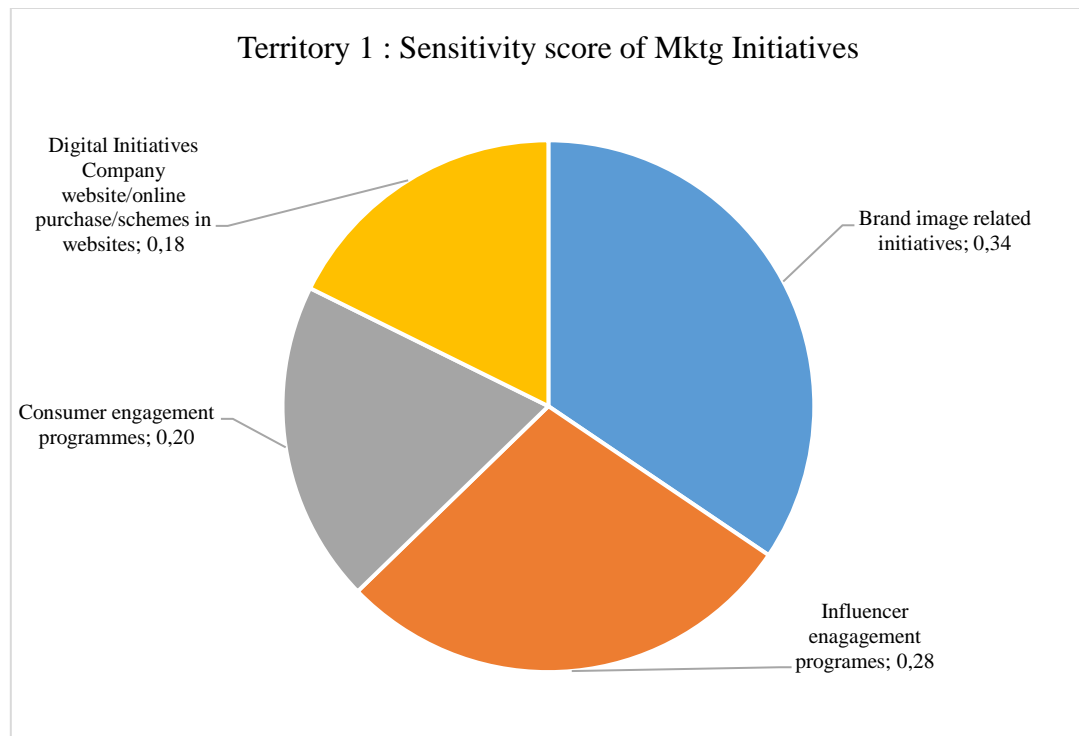
Interaction with the company officials revealed that retailers could influence consumers' purchase decisions as they are generally local and know the consumers. The ability to influence is also a factor in the experience and reputation the dealer/retailer enjoys. The graph below shows the relative effectiveness expressed by the retailers under various periods of association with the brand.

Figure 16: Rating based on retailer association



To understand the impact of each marketing initiative on a territory's lead to sales conversion, data collected on the marketing initiatives month on month and the sales for that territory was fed into a machine learning model to do sensitivity analysis. The theoretical analysis was carried out using a machine learning model for one of the states of India. The state being big, it was split into three territories (T1 to T3). Sensitivity analysis was carried out with all three territories separately to check whether there is variability in consumer behavior and the relative importance of factors governing lead to sales conversion. Below is the visual representation of the sensitivity/effectiveness score for each of the territories established by the model based on the data fed into the model.

Figure 17: Sensitivity score (Territory 1)



The figure below depicts how the importance of marketing factors influencing sales conversion changed as the territory changed. This also depicts the choice of initiatives done for territory 2 to influence lead-to-sales conversion. The score is based on the relationship established between marketing initiatives and month-on-month sales.

Figure 18: Sensitivity score (Territory 2)

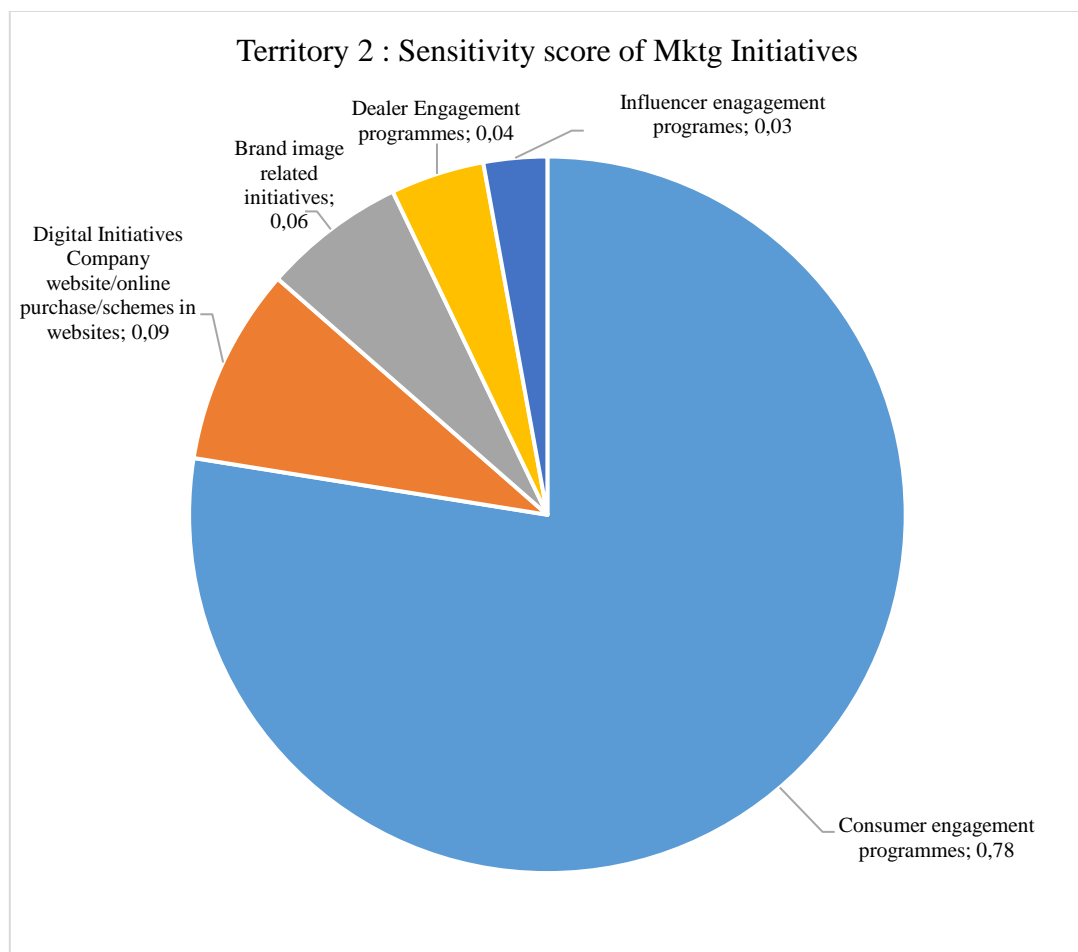
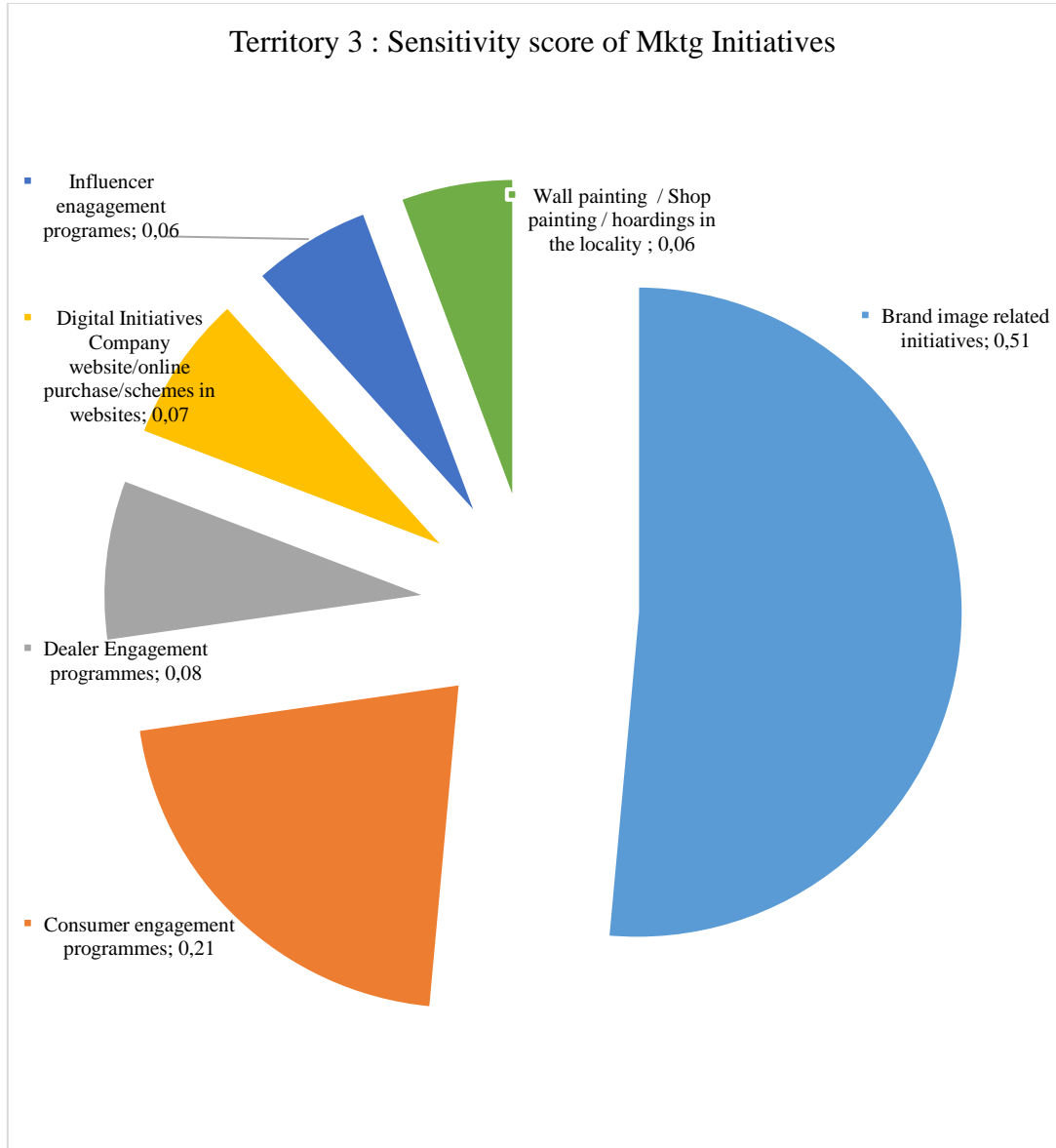


Figure 19: Sensitivity score of marketing initiatives (Territory 3)





## **4.2 Research Question Two**

The 2<sup>nd</sup> question to be addressed during the research process was, “How can the above relative effectiveness be utilized in selecting proper marketing initiatives under a budget constraint scenario?”. According to Grigsby (2015), “marketing is about understanding and incentivizing consumer behavior in such a way that both the consumer and the firm get what they want.” Going by survey responses and theoretical analysis of past data, it came out that there is variation in effectiveness score against each initiative, stakeholder and territory combination, this insight will help to review and modify the choice of initiatives to deliver value to the customer for making the purchase decision. In addition, taking cognizance of variability in relative effectiveness can help the marketing team improve the return on marketing investment. To improve relevance, provision is created in the model to change the weightages between various stakeholder score and theoretical score for simulating various business scenarios.

The composite effectiveness score is calculated based on the weighted average score assigned by each stakeholder, the sensitivity analysis score, and the average survey response of each category of respondents. The table below shows the overall effectiveness score for Territory 1.

Table 11: Sensitivity score (Territory 1)

		FY23							
Weightage ( <u>theoretical</u> vs <u>marketing</u> vs Channel vs customer)	➔	20	0.2	20	0.2	10	0.1	50	0.5
	Overall RES	I (influence felt)	Sensitivity score	Avg Marketing Score on 10	RES - Marketing	Avg Effectiveness Score Channel on 10	RES - Channel	Avg Influence score Customer on 10	RES - Customer
Marketing Initiatives (MI) to improve Lead to sales conversion of Steel Rebar in Retail segment									
1. Wall painting/Shop painting	0.06	0	0.00	7	0.07	8.9	0.08	8.1	0.07
2. Roadshows/Haat campaign	0.06	0	0.00	9	0.09	8.1	0.07	7.7	0.07
3. Radio/TV/Newspaper ad	0.06	0	0.00	8	0.08	7.9	0.07	7.9	0.07
4. Dealer Engagement	0.06	0	0.00	7	0.07	8.8	0.08	8.8	0.08
5. Recommendation by mistiry/architect/contractor	0.12	1	0.28	8	0.08	9.0	0.08	8.7	0.08
6. Consumer engagement initiatives	0.10	1	0.20	9	0.09	8.7	0.08	8.4	0.08
7. Discounts /cashback schemes	0.07	0	0.00	10	0.10	8.6	0.08	8.8	0.08
8. Online/Digital ad	0.06	0	0.00	7	0.07	8.0	0.07	7.8	0.07
9. Email/Telephone campaigns	0.05	0	0.00	6	0.06	8.3	0.07	7.3	0.07
10. Company website/online schemes	0.10	1	0.18	8	0.08	8.5	0.08	8.2	0.08
11. Brand image building initiatives	0.14	1	0.35	9	0.09	9.4	0.08	9.9	0.09
12. Sponsorship of local events	0.06	0	0.00	9	0.09	7.8	0.07	7	0.06
13. Consumer Loyalty programs	0.07	0	0.00	8	0.08	8.7	0.08	9.5	0.09
New initiative - 1	0.00		0.00		0.00		0.00		0.00
New initiative - 2	0.00		0.00		0.00		0.00		0.00
<b>Total</b>	<b>1.00</b>	<b>4</b>	<b>1.00</b>	<b>105</b>	<b>1.00</b>	<b>111</b>	<b>1.00</b>	<b>108.1</b>	<b>1.00</b>

Calculated field
  User input

In a budget constraint scenario, the relative effectiveness score mentioned above in 1st column can help the marketing team to take a call on how to allocate the budget. During the reasearch, data was also collected to understand whether consumers who bought steel rebar for the first time evaluated the effectiveness of marketing initiatives differently from those who were repeat purchasers. Given below is the result of the data in tabular form:

Table 12: Consumer rating (buying frequency)

<b>Marketing Initiatives</b>	<b>1st time</b>	<b>Repeat</b>
Wall painting / Shop painting / hoardings in the locality	7.3	8.9
Roadshows/Haat campaign/local public awareness campaigns	7.4	7.6
Radio/TV/Newspaper advertisement	7.4	8.1
Recommendation by retailer	8.9	8.1
Recommendation by mason/architect/contractor	8.6	8.4
Consumer engagement programs/ recommendation by family or friends	8.2	8.3
Discounts provided at the time of purchase/cashback schemes if any	8.3	9.0
Online/Digital advertisement/Social media campaigns	7.6	7.6
Email campaigns/Telephone calls/SMS campaigns	7.3	6.8
Company website/ease of online purchase/schemes in websites as applicable	8.2	7.7
Brand image built by the company (quality, reliability, trust, value)	9.8	9.5
Sponsorship of local events like sports, Corporate social responsibility.	6.5	7.3
Consumer Loyalty programs with direct benefit to consumers	9.6	8.7

Buy frequency	%
1st time	62%
repeat	38%

The model output depicted above is based on historical data and survey responses from key stakeholder groups over time. The sensitivity analysis score mentioned in the above table is the output of the python based program which establishes the relationship between the set of marketing initiatives conducted over 18 months and the monthly sales.

### **4.3 Summary of findings**

The effectiveness of marketing initiatives depends on multiple dynamic factors. Like any other business decision, improving the return on marketing investment is associated with risk. The research above shows that the perception of the effectiveness of a particular initiative varies between the Central team (Marketing and sales), Channel Partners, Consumers, and the output of the analytical model. Making a decision based on feedback from a single stakeholder group may increase the potential risk associated with the decision. Hence, a comprehensive view based on structured data collection and analysis should improve the chances of meeting the desired return from the investment. The overall effectiveness score of each marketing element depicted above considers the variability of score among the key stakeholders. It gives an overall effectiveness score based on the weights attached to that group.

#### **4.4 Conclusion**

As illustrated in the previous chapter, the contribution of this study is not aimed at finding a solution applicable to a particular scenario but at arriving at a structured approach to evaluating of marketing alternatives to improve lead-to-sales conversion of steel rebar in the retail segment of India. Though the research was conducted to gain insights into a leading Steel rebar brand in India, the theoretical concept introduced here can be applied to similar product categories and fine-tuned for applicable scenarios by changing the weights. At the beginning of the chapter, consumer survey findings were presented. The variability in the importance of marketing initiatives connecting age, consumption district, the purpose of the purchase and ticket size was depicted. This was followed by the relative effectiveness rating of the other two stakeholders, i.e., Channel partners and the central team of the organization was presented. The final section of the chapter depicts the composite score considering the scores given by all the stakeholders and the relative weightage assigned to each stakeholder. The weights against each stakeholder group considered in the model were based on the feedback from the Marketing & Sales team. This thesis aims to quickly get an unbiased, comprehensive view of relative effectiveness to facilitate the choice of marketing alternatives to improve lead-to-sales conversion.

## CHAPTER V: DISCUSSION

### **5.5 Discussion of Results**

The analysis outcomes presented in the previous chapter provide an overall perspective of the relationships between a combination of marketing initiatives and their impact leading to sales conversion which impacts organization revenue. It also provided a generic comparison of how key stakeholder groups perceive the relevance and relative significance of factors influencing the purchase decision. According to Farris et al., (2010), it is recognized that marketers, general managers, and business students need a comprehensive, practical reference on the metrics used to judge marketing programs and quantify their results. This research was designed to take the feedback of key stakeholders like company officials, channel partners, and consumers on the relative effectiveness of each initiative to arrive at a comprehensive score of the relative effectiveness of each marketing initiative on the purchase decision. This chapter provides an in-depth discussion of the results presented in the earlier section with limitations of this study and suggested future research. At a time when marketers face increasing pressure to measure the return on investment of their campaigns and connect every dollar spent to bottom-line results, they are largely underprepared or underperforming (Roetzer, 2014). The framework introduced in this research should help the marketer to take a decision based on data. This should thereby help in justifying the reason for the allocation of funds and effort towards designing a marketing program and reducing the probability of underperformance. The main objective of this study is to explore and establish an objective method for the selection of marketing alternatives taking into consideration the overall revenue impact for a given period thereby facilitating the marketers to have a structured approach to decision-making. As part of this research, historical data was

collected on month-on-month sales and the influence of marketing initiatives carried out to establish the sensitivity of each initiative on sales. The data collected in a standard excel format was reorganized using a python program and then fed into the random forest model to establish the relationship. The questionnaire was administered to a set of company personnel (from the Marketing and sales team), channel partners, and consumers to get their perspective on the relative importance of marketing alternatives in leading to sales conversion. According to Milichovsky & Simberova (2015), to measure marketing effectiveness, it is necessary to focus on customers and the potential behavior trend of a selected market segment. In this case, the target segment is Individual Home builders buying Steel rebars for home construction. As mentioned earlier, survey was focused on getting the customer's perspective. During the conversation with Marketing and Sales team, it was evident that the central team wanted to give a higher weightage of 50% to consumer feedback, and the balance 50% was distributed between company official, theoretical output, and channel partner feedback. Marketing however wanted to have flexibility to change relative weightages as per need and provision has been made accordingly. The model is also flexible in the sense that each entity got the option of adding relevant initiatives influencing purchase decisions and rating them. The set of options mentioned in the questionnaire is indicative based on common set of initiatives used by marketers of Steel Rebars. In the data collected, similar items were clubbed into relevant category to keep the framework simple as the number of initiatives could be numerous. One of the contributions of this research is to empirically demonstrate that a structured framework for capturing and processing data helps in gaining insight into the relative effectiveness of alternatives to improve lead to sales conversion of steel rebar. The previous chapter showed that there is variance among stakeholder groups on the relative weights of each factor. An organization may choose to give equal weightage to

each stakeholder group or different weights depending upon the scenario. The model output calculates the overall relative effectiveness score against each initiative taking into consideration the weights assigned. The following sections provide a summary of the discussions based on the major findings mentioned in the last chapter.

## **5.2 Discussion of Research Question One**

The findings from the interviews and the result of analysis are mentioned in the previous section. Analyzed data and results depicted in graphical form as shown in the previous chapter need to be considered comprehensively. The means to measure the relative effectiveness of marketing initiatives is slightly different from the popular financial and non-financial metrics. According to Rust et al., (2004) existing financial metrics have proved inadequate, leading to the development, and increasing use of non-financial matrices. This research presents a simpler way to assess the impact the marketing initiatives on the purchase decision-making of the target segment without using complicated financial parameters.

Table 5 depicts that there is variability in the importance of factors influencing the purchase decision of consumers with the relative effectiveness score being highest for “Brand image built by the company” while it is lowest for “Sponsorship of local events”. This means that while selecting marketing initiatives to influence the purchase decision of steel rebar customers, it may be more beneficial to invest in initiatives that create a positive impact on a brand image or increases brand equity. Sponsorship of local events impacts brand recall and is a function of number of events that an organization can conduct and frequency of such activities. During the discussion with stakeholders, it came out that possibly the number of such events was limited, and hence it did not influence the set of respondents in decision-making.



During the interaction with the central team (marketing and sales), it came out that the final decision on the marketing initiatives to be conducted in a territory is done as part of the annual business plan centrally. Since the central team decides on the final set of initiatives to be conducted for each territory and the amount to be invested, it was planned to collect their perspective on the relative effectiveness of marketing initiatives in influencing the consumer purchase decision. Table 6 depicts the relative importance of initiatives which the marketing & sales teams perceive. The questionnaire to the company official was administered in a single session to arrive at a consolidated view. The result depicted in the previous sections shows that there is a difference in the relative importance of marketing initiatives perceived by the central team as compared to consumer perception. While consumers perceived “Brand image built by the company” as the topmost criterion for purchase decision-making, the central team of the organization believed that “Discounts provided at the time of purchase/schemes” is the most important factor driving lead to sales conversion. Organizations relying solely on the views of the central team may end up losing brand value if discounts or cash-back schemes are prioritized over brand-building initiatives. Discounts are very common for pushing sales, but they eventually may erode brand value if the discount is continued for a prolonged period. This is associated with an additional risk of a price war as competition may also replicate the move. The result indicates that after brand image the next criteria which consumers look for are initiatives on consumer loyalty programs and direct benefit from the organization which need not be in the form of cash discounts. The important point to note is while “Sponsorship of local events” was placed lowest in influencing a purchase decision, the central team (marketing and Sales officials) placed it quite high and at par with Brand Image building initiatives. There is however a similarity

between both stakeholders in terms of the least effective marketing initiative in a consumer purchase decision. “Email campaign/Telephone calls/SMS campaigns” was found to be least effective in purchase decision-making by both the consumers and the marketing and sales team. This implies that initiatives related to direct marketing like the one mentioned above may be deprioritized. According to Coughlan & Anderson (1999), the study conducted to analyze 3684 direct marketing campaigns revealed that the type of direct marketing method used (such as email and telephone) had a small effect on the response rate of as low as 2.62%. During the study it was evident that Steel rebar consumers staying in Indian villages are less conversant with digital media and English as a means of communication. The dialect also varies from region to region thus telephone campaigns that are generally conducted in standard languages may not be effective. According to Giese & Cote (2002), the effectiveness of email advertisement depends on the content of the message, the senders’ credibility, and the consumer’s attitude towards the brand. This implies that impact of direct marketing on Steel Rebar consumers’ purchase decisions and sales conversion may vary depending on the specific circumstances, the timing of the campaign, and the aim of the marketing campaign. This indicates that one should judiciously take a call on the amount to be invested in the least effective campaigns.

Analysis of data on the Channel partner’s perspective of factors influencing consumer decision-making showed in Table 8 shows that “Sponsorship of local events like sports, CSR activity” is not very effective and matches with consumer’s rating as the least effective factor. The interesting thing to note is that all 3 stakeholders rated initiatives related to brand building/brand image as the most effective, in other words, Brand image is considered the top criteria for purchase decisions and lead-to-sales conversion. While there is a similarity in the stakeholder group survey response for

“Overall Brand Image building” with all the entities giving a score of  $> 9$ , there is variability in the effectiveness score for other marketing initiatives. Table 8 gives a comprehensive view of the variability in relative effectiveness among the 3 stakeholder groups. Figure 1 is a visual representation of the data to see how each marketing initiative is being rated by the stakeholders in terms of their effectiveness in sales conversion.

Research result shows that based on gender, there is variability in the influence of marketing initiatives in purchase decision-making. Table 9 shows how each initiative is rated by both genders. The variability in effectiveness seems to be much lower in females as compared to males. India being a male-dominated society, marketers need to take a call on the initiatives to focus on. Figure 2 is the spider chart representing the variability among the genders and depicts that on all counts the initiatives were effective in influencing female buyers as compared to male buyers. While male response clearly showed a grading of initiatives, the female response was not very decisive as many initiatives got the highest score in terms of effectiveness in decision-making.

To understand whether the consumers are taking the buying decision on their own or under the recommendation of influencers a questionnaire was administered. Figure 3 reveals that while 59% of the consumers decided on their own, 38% of the buyers were influenced by Contractors, architects, and masons. This implies that correct marketing initiatives targeted to influencers may give an uplift to sales conversion in the retail segment of Steel rebar. Further among the influencer groups, Contractors/architect are quite powerful in influencing the purchase decision of consumers as 29% of the customers surveyed took the buy decision based on this set of influencers.

To understand whether the same set of marketing initiatives are creating a different impact on the consumers as per age, data was analyzed. Figure 4 shows how persons in the less than 25 years category are being influenced by the marketing initiatives. The bar chart indicates that this age group is equally impacted by initiatives that build brand image, discounts provided to push sales, local campaigns like roadshows and, point-of- purchase campaigns like wall painting, they are least impacted by digital campaigns, consumer engagement programs, and retailer recommendations. Since budget is limited and as mentioned in the result section that this is not a significant consumer category, marketers may choose to ignore this segment and focus on the other two groups 25 to 35 years and 35 to 45 years which account for 74 % of the total sales. Figure 5 which is a visual depiction of the relative influence of marketing initiatives on the purchase decision, shows that this group of buyers is influenced by consumer loyalty programs and brand image equally. It also reveals that initiatives like sponsorship of local events and wall painting are the least effective and hence funds may be diverted to initiatives that are relatively more effective. Regarding Figures 5 and 6, the point to be noted is that consumers in the age group of 35 to 45 which is equally important as the 25 to 35 age group but the relative effectiveness of factors impacting the purchase decision shows variability. This means that there will be a need to spread the investment across multiple initiatives. Brand image is however rated by both the key age groups as the most important factor in purchase decision and hence marketers need to put initiatives towards brand building on priority. Figure 8 shows that consumers in the age group showed a similar pattern as buyers in the age group of 45 to 55 as compared to buyers in the age groups of 35 to 45 years. This implies that if all these three age-groups are to be targeted, some amount of averaging is to be done to arrive at the overall relative effectiveness or

the sample size is to be increased to gain more insights before taking a final call on the mix of initiatives.

The graph in Figure 9 is a visual depiction of how each age group is being impacted by the marketing initiative. Based on the target segment, marketers can take a call on the mix of initiatives to be chosen for creating maximum impact on lead-to-sales conversion. From the figure the target segments (two age groups 25 to 35 years and 35 to 45 years are impacted almost equally by Brand image, recommendation by mistiry/architect, and retailers. This means that to improve conversion, marketing initiatives influencing retailer word of mouth, retailer schemes, influencer engagement programs, and brand building initiatives would be more effective.

The spread of the consumer age group is represented in Figure 10. It clearly shows that > 70 % of the sales are coming from two age groups of 25 to 35 years and 35 to 45 years and hence the marketing initiatives influencing the purchase decision-making of these two groups should be key considerations for sustaining business.

To understand whether consumers in different consumption centers are behaving differently to marketing initiatives, the data was analyzed. Figure 11 shows that there is variability across consumption points (represented by district name) for one of the initiatives (Wall Painting). This effectively means that an initiative that has a high impact on sales conversion in one territory need not have the same impact in another territory and hence to make the best utilization of organizational resources, one needs to understand the purchase behavior of each territory and design the mix of initiatives accordingly. Figure 11 is indicative as it represents one of the thirteen initiatives on

which the study was carried out. In this case, districts like Bolangir, Karaput, Sambalpur are not considering “Wall painting/ Shop painting / Hoardings that effective as compared to Boudh & Kandhamal.

During the interaction with channel partners, it came out that customers behave differently based on the purchase amount or ticket size. To check whether the impact of marketing initiatives has any dependency on the ticket size, data were analyzed. Based on feedback taken from the channel partners, the ticket size of buy was split into 5 buckets as mentioned below (1 lakh INR = 1200 USD):

- a. Less than 1 lakh
- b. 1 to 3 lakhs
- c. 3 to 5 lakhs
- d. 5 to 10 lakhs
- e. Greater than 10 lakhs

Table 10 and Figure 12 show how the influencing factors change with the buy size of consumers. For example, the small retail customer in the less than 1 lakhs category does not value discounts as much as those big retail customers in the bracket of greater than 10 lakhs. This implies that big-ticket customers of Steel Rebars are more price sensitive as compared to low-ticket size customers. Data shows that sensitivity increases as the ticket size increases. Figure 13 shows that close to 80 % of Steel Rebar sales come from customers in the ticket size of 3 to 5 lakhs and 1 to 3 lakhs with 1 to 3 lakhs ticket size customers forming the majority. Looking into Table 9 it is evident that Marketers of Steel Rebars need to focus on brand image-building initiatives, consumer loyalty programs, and initiatives driving retailer recommendations to drive lead to sales

conversion. Incidentally, these are also key decision drivers (as per the data collected) for the next big segment in terms of buy size (3 to 5 lakhs) and accounting for 30% of consumers surveyed.

Initial discussion with the channel partners revealed that in the retail segment, Steel Rebars are mostly bought by end consumers. The data collected validates this hypothesis. Figure 14 depicts that 78% of consumers surveyed bought Steel Rebar for the construction of their own houses and the balance was for family members/others. This effectively means that marketing initiatives should be such that it influences individual home builders and not middlemen. To understand the factors which influence the decision-making of this segment, the effectiveness rating of key initiatives was plotted in the form a Bar chart (Figure 15). The Top 2 categories of initiatives which marketers should focus on to attract this segment are “Brand image related” and consumer loyalty programs. During the discussion with the central team, it was mentioned that retailers play an important role in pushing sales. To increase reach and lead to sales conversion, the marketing & sales team keep appointing new retailers. These retailers have various lengths of association. Survey response of retailers was analyzed to understand whether the period of association with the brand has any dependency on their perception of consumer decision drivers. Figure 16 shows that perception of effectiveness of an initiative in sales conversion has dependency on the length of association of the retailer with the brand. The point to be noted is irrespective of the period of association, all retailer categories believed that campaigns like “Radio/TV/Newspaper/mass media campaigns” are the least effective.

The sections above represented the effectiveness of various factors in influencing lead to sales conversion from the perspective of consumers, channels, and the Central team of the organization driving the marketing initiatives. Conducting such surveys are time-consuming and needs dedicated resource to analyze/gain insights. To get a quick view of the effectiveness of marketing initiatives conducted in a territory, historical data was collected on month-month sales of the territory over the last 18 months and marketing initiatives conducted during that period to influence sales conversion (as per the format mentioned in Table 2). While the impact of some marketing initiatives like cashback schemes can be felt immediately, others like campaigns on brand value proposition or CSR are to be run for an extended period and the effect may be felt in the subsequent period. To take care of such cases, an option was provided to marketing managers to finetune the input data in terms of “effect felt” on sales due to an initiative conducted during the month or earlier. Regarding Table 2, “Y” was put in months when the team felt that the influence of the marketing initiative has impacted sales. This exercise was carried out in 3 territories of the state of Orissa where the marketing & sales team wanted to get the analysis done. For each of these territories, data was collected and fed into the Random Forest model to establish the sensitivity of these initiatives on monthly sales. Figure 17 shows the relative effectiveness of the initiatives conducted for Territory 1. The name of the territory is not mentioned as the objective of this study is to develop a framework to understand the relative effectiveness of initiatives in lead-to-sales conversion rather than publicly stating the problems associated with the marketing initiatives conducted in the territory. During the period of study, 4 initiatives were carried out for territory 1. Brand Image building initiatives came out to be the best category of initiatives impacting sales conversion followed by Influencer engagement programs. Figure 19 shows the sensitivity score for another territory. Figure 18 and Figure 19



establish that as territory changes, factors influencing the purchase behavior of consumers also change. For territory 2, initiatives under consumer engagement like Focus group discussion, and consumer meetings seems to be the dominant factor driving the purchase decision of Steel Rebar customers. Figure 19 shows the pattern of another territory. Data shows that Territory 1 and territory 3 are similar in terms of sensitivity of factors influencing the purchase decision. The method introduced should help the marketer to feed the data into the model and do an objective assessment of the effectiveness for making an investment decision or allocation of funds among the competing initiatives.

### **5.3 Discussion of Research Question Two**

In the section above, the discussion is focused on how each stakeholder groups perceive the relative importance of individual marketing initiatives. In a budget constraint scenario, a decision is to be taken on the mix of marketing initiatives and the amount to be invested. The challenge for the marketer is to improve return on investment and hence a structured process to capture and process relevant data is essential for faster and more effective decision-making. Table 11 shows how the data obtained from individual stakeholder sets can be used to facilitate decision-making. The Top row of the table comprises the weightage that the central team of the organization needs to enter. During the preliminary study, it is found that there is a difference in the actual initiative done by the organization and what is perceived to be effective by external stakeholder groups. The table depicts relative score of each stakeholder group along with the sensitivity analysis score assigned against each by the random forest model for the territory. The first column titled “Overall RES” is the weighted average score based on the scores given by individual stakeholders and weights assigned in the top row. This is a means to arrive at

the mix to be selected or the amount to be invested. The result of the exercise shows that for Territory 1, the top initiatives in which the marketing team should invest are:

- a. Brand value proposition
- b. Initiatives toward influencer engagement
- c. Consumer engagement programs
- d. Company's online presence/Ease of Online purchase

The result of such analysis can also help in splitting the overall marketing budget. For example, if the central team puts the overall budget available, the system will split that into amounts to be invested for each line item based on the relative effectiveness score. To keep the solution relevant one needs to take into consideration that the exercise done to collect stakeholder feedback should be recent. This is important particularly for consumers as steel rebar buying is limited to the home construction period only. Unlike FMCG, here the customer set will keep changing and hence the relative score of the consumers should be revisited periodically as per means available to conduct the survey.

The structure presented tries to overcome the bias and make the decision-making objective. The rows at the bottom are to keep room for new initiatives which may be required later. These rows have a dependency on the questionnaire response (Appendix A, B C) but the score will get auto-calculated based on the feedback taken on initiatives conducted by the organization. Scores of the stakeholder group are placed side-by-side, to help one understand which initiatives are perceived higher in decision-making by the consumer and whether the organization is doing enough in those initiatives to influence lead to sales conversion.

The objective of this research was to arrive at a comprehensive framework that helps the marketer in making objective decisions faster. Table 11 is the representation of

how the analysis can help in better decision-making. The row on weightage gives the option to adjust the relative weightage of the score given by the key stakeholders. In Table 11 ratio of weightage between model output (sensitivity score), marketing score, channel partner score, and consumer score are maintained at 20:20:10:50. This means that to calculate the overall effectiveness score of an initiative, each stakeholder score is multiplied by respective weightage. Once this is done for each of the initiatives conducted in the territory, the system will depict the relative effectiveness. The column having “executed” written in it represents whether the initiative was carried out in the territory or not. 1 indicates that the initiative was carried out in the territory while zero indicates that the initiative was not carried out in the territory or influence not felt. The point to be noted is that even if an initiative is not carried out in a territory or influence not felt, consumers and channel partners may have a view on the effectiveness of the factor in driving sales conversion. This is one of the reasons why we may get a score of “Overall Relative effectiveness” even if no data is available on execution. One of the advantages of this framework is that it gives a comprehensive view of the relative effectiveness of each initiative thus helping the marketing team to make a better decision on choice of alternatives. The framework had prepopulated set of initiatives based on preliminary research. The space for “New initiative” is to capture initiatives which are not mentioned in the standard set but has impacted consumer decision. It is possible that based on product category or brand, the set of initiatives may be different. The model is flexible as survey data populated in the model will help to arrive at the overall effectiveness score.

The frequency of purchase of Rebars by retail customers is not high as the product goes into the construction of concrete structures and retail consumers build houses once or twice in a lifetime. It is however to be noted that house building is a lengthy process and depending on the number of floors, the purchase may happen in 2 to more lots. Marketers need to hold on to the customer for repeat buying by designing proper programs to trigger repeat buy. Table 12 shows variability in effectiveness rating of various marketing elements based on buying frequency of customer. It shows how 1<sup>st</sup> time buyers perceive the effectiveness of marketing initiatives as compared to repeat buyers. For 1<sup>st</sup> time buyers, recommendation of retailers and influencers like mason/architect seems to play an important role as compared to repeat buyers. This matched with the general perception of the marketing team as repeat buyers have already tested the product and have less dependency on others to make purchase-decision. Figure 12 also shows that most of the Steel Rebar customers in the retail segment are 1<sup>st</sup>-time buyers which is natural hence marketers need to continuously evaluate alternatives and execute marketing programs that can attract leads and influence sales conversion the most.

CHAPTER VI:  
SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

**6.1 Summary**

Steel Rebar retail market in India is distributed as it is a large country with diversity in culture and purchase triggers. Since factors influencing purchase decisions are diverse, a common set of marketing initiatives across the country may not yield the desired result in terms of lead-to-sales conversion. Under such a situation marketers face a challenge in the selection of initiatives for each consumption center to maximize lead-to-sales conversion. This is critical as Steel Rebars are not bought regularly by the same customer and hence marketers need to attract new leads and convert them to a customer on regular basis. Every marketing initiative consumes resources and hence it becomes important to know which all initiatives are influencing the customer in purchase decisions. Steel Rebar being heavy and large volume product, Steel producers sell this product through a network of retailers who play an important role in influencing customer's decision-making. The purpose of this research was to arrive at a conceptual framework for doing an objective assessment of the effectiveness of marketing initiatives. During preliminary research, it was evident that there are three key stakeholders in decision-making process, company officials who try to influence buying decisions through marketing initiatives, retailers who influence consumer's purchase decisions based on the sales target and the benefit they derive in dealing with the product, and consumers who take decisions based on effectiveness of marketing initiatives/value proposition. Various research work was studied to understand what has been done on measuring the effectiveness of marketing initiatives leading to sales conversion of steel rebar sales in the retail segment of India. While a direct fit to address the scenario was not available in the pieces of literature reviewed, it helped to identify the gap that can be

plugged through this research work. Interaction with the company officials revealed that decisions are mostly taken based on experience and individual skills. It was evident that a structured framework for arriving at a comprehensive view of the relative effectiveness of marketing initiatives was not available for the selection of marketing initiatives at the sales territory level and allocation of the marketing budget. During the interaction of the Marketing & Sales team of the organizations, the need was expressed to address the gap. Through interaction with the central team and channel partners, a set of initiatives were shortlisted for checking effectiveness and a questionnaire was designed to collect feedback from consumers, channel partners, and the central team. To reduce the impact of perception it was also felt that marketing decisions should take into consideration theoretical analysis of past performance i.e, the relationship of the marketing initiatives in impacting lead to sales conversion. Here monthly sales of the brand in a territory were taken as a measure of lead- to-sales conversion to arrive at a sensitivity score using a machine learning model. The result was merged with stakeholder feedback scores to arrive at an overall effectiveness score. The goal of marketing initiatives is to attract prospects and influence sales conversion across all touch points of consumers' decision journey. This research looked into the effectiveness of marketing initiatives from various perspectives like gender, age, period of association with the brand, purpose of buying with reference to sales territory. Today's business world is constantly evolving under market and competitive scenarios and hence if something is more effective in one sales territory, it may not be so for another. Brands need to continuously innovate & reinvent themselves so that it is considered for purchase whenever consumer need arises and Steel Rebars are no exception. During research, it came out that across all stakeholder categories "Brand value" came out to be the most important influencer among all the initiatives undertaken by the organization. The framework introduced in this research

should help in bringing objectivity to selection of marketing initiatives and allocation of funds. Steel rebars are bought by retail customers only during home construction which may be once or twice in the lifecycle of a person. Consumer behavior has person dependency and hence Channel partner's feedback was introduced as they handle customers on daily basis and have good sense of what marketing elements are influencing sales conversion. Based on the ability of retailers to understand consumer behavior, the marketing team can change the weights to be assigned to various stakeholder groups as enumerated in section 5.2.

## **6.2 Implications**

This research was done focussing on means to improve lead to sales conversion of Steel rebar sales of retail customers. Based on actual marketing initiatives relevant to the product/brand, organizations may modify the questionnaire to collect feedback on those initiatives for the key stakeholder groups. If an organization is in B2C business then the questionnaire is to be administered to consumers and the central team of the organization. To get the sensitivity score, organization can populate the initiatives done vs sales for an extended period. An extension of this would be populating the money spent on marketing initiatives month-on-month and establishing the relative impact on monthly/ weekly sales. When multiple marketing initiatives are run in parallel it becomes extremely difficult to ascertain relative impact on sales performance. In such a scenario customer feedback and channel partner feedback on the effectiveness of initiatives may be of great help. It may help in triggering corrective action like discontinuing an initiative or reallocating the marketing budget between the initiatives. Another implication of this is the preparation of a marketing plan and justifying the reason for the choice of initiatives or allocation of funds between the initiatives.

### **6.3 Limitations & Recommendations for Future Research**

This study was not to understand the effectiveness of all possible marketing initiatives of steel rebar brands in the retail segment of India but is focussed on key marketing initiatives of a leading brand to establish a framework that can be used to determine relative effectiveness objectively. While this framework can be extended to study relative effectiveness of marketing initiatives of other consumer brands/product categories in the retail segment, the marketing initiatives mentioned in the questionnaire, may have to be modified, as per scenario. In this research, the case study approach is used as an exploratory tool to generate insights on the approach that can be taken by the marketing team in driving sales and developing the framework to facilitate decision-making. The study has limitations that may hinder the applicability of the findings. Some of the limitations are enumerated below:

- a. India being a big country, data were collected and studied for 3 territories only to develop the framework for decision-making. Consumer behavior may be different depending on competition intensity, cultural activity, language, and buying stimulus. The study was limited to the district level, and we could cover 56 retailers and 124 consumers only, based on willingness to share their perceptions. A bigger sample size may have given more insights but resources to conduct the survey and making consumers voluntarily respond to the questionnaire was a challenge.
- b. The questionnaire was administered to consumers, and the response taken was a combination of physical and digital. Digital means helped in increasing reach and



- capturing unbiased responses, but questions may be interpreted differently as clarifications, if any, could not be addressed at the time of collecting responses but restricted to briefing sessions only.
- c. For sensitivity analysis, we could get access to data for 18 months. A larger data set would have helped in arriving at a more correct correlation between the marketing initiatives and their impact on “lead to sales” conversion. However, the decision support model has the flexibility to input relevant data for an extended period as per availability and gain insights on the relative effectiveness of initiatives shortlisted for evaluation/budget allocation. For the reasons mentioned above, further research with a more diversified population and a bigger sample size of external stakeholders may be considered for other brands in the segment. There could be a lag between a marketing initiative and sales. For simplicity of analysis, monthly sales were taken to represent the lead to sales conversion effectiveness as a proxy.
- d. The insights mentioned are based on the survey and research conducted in three Sales territories in one of the states of India to address business need. The business objective was to gain insights to improve sales in the state of Orissa. Since the effectiveness of marketing initiatives has dependency on consumer behavior at the point of consumption, the result of effectiveness may vary. The point to be noted is that the framework remains effective as it introduces means to capture data relevant to the sales territory and analyze the same objectively to arrive at a basis for faster decision making.

This research work was carried out during the COVID scenario when travel and person-to-person interaction were risky. The research was carried out mostly over virtual platforms (telephonic/Teams meeting) and the response was collected over Google forms and Microsoft forms thus facial expressions and comments on level of significance could not be captured. The sample size was 51 retailers and 124 consumers chosen based on willingness to share their perceptions, purchases made in the last one year, and resources available to conduct the survey.

The effectiveness of marketing initiatives has a dependency on competitive action to gain market share and is also influenced by the overall consumer demand or economic scenario. Future research can consider the above factors and arrive at the relative effectiveness score for each of the marketing elements under the influence of the above two factors. According to Pauwels & Reibestein (2011), the estimate of ROMI is associated with many challenges and perhaps the most critical is the time delay between when marketing dollars are spent and its result realised. This concept will impact the effectiveness score of the consumers as some of the marketing initiatives take a longer time to deliver results. For example, building brand equity is a function of multiple activities carried out by an organisation over an extended period.

To address this, in the current structure, provision exists for the central team to assign weights for the stakeholder categories ( central team, Channel partners, Consumers) and the theoretical sensitivity score at an overall level. Future research can focus on modifying the questionnaire and the structure by incorporating a provision to assign weights for each stakeholder group and initiative combination.

## **6.4 Conclusion**

During this research, different alternatives were explored to ascertain effectiveness of various marketing components objectively. The ultimate goal was to help the central marketing team increase sales or lead to sales conversion ratio by making best utilisation of marketing budget. According to Sullivan & Abela (2007), efforts to drive improvement in ability to measure a single marketing activity, no matter how important the activity is to the firm, are less valuable than a comprehensive approach to develop the ability to measure performance across the entire range of marketing activities employed. Steel rebar sales in the retail segment of India is driven by construction activity which reaches its peak before the festival season or before the rainy season. Consumer demand is cyclic in nature and hence marketing mix is to be selected properly to make use of the opportunities which crop up during the year. This study was triggered from the pain point captured while interacting with key members of the organisation and channel partner representatives. During the idea formulation phase, it was felt that there is a need for a structured framework in capturing feedback on the effectiveness of various marketing initiatives and formulating a solution which gives an unbiased view (taking into consideration historical performance of the brand with reference to marketing initiatives carried out). Based on the initial discussion, it was decided that instead of forming views based on face to face interaction with stakeholder, survey questionnaire shall be administered to collect feedback on relevant initiatives in a structured way. This was done to ensure that feedback received can be utilised for quantitative analysis. It was also realised that since the brand under study is an established brand in India, past marketing initiatives and sales should also be considered to establish sensitivity of these initiatives in impacting sales. During design of the framework, ease of usage and applicability of this for similar product categories was kept in mind. It was decided that user input shall be

taken from marketing team on weightages to be assigned for each category ( theoretical output vs marketing vs channel partner vs consumer). This makes the framework flexible as some organisations in the B2C space may not have a strong retail /channel partner network to push sales. In such cases the weightage can be adjusted to meet specific need. During literature review and searching of published data sources, it was evident that not enough information is available on channel partners and consumers view on which all marketing initiatives are influencing purchase decision making of steel rebar customers in the retail segment. This was the basis for deciding to have a mixed approach.

Questionnaire with structured response was administered on channel partners and consumers to collect biased feedback on relative effectiveness of various marketing initiatives. Historical data on marketing initiatives vs sales for the territory was collected from the organisation's representatives. Average score of each respondent category for each initiative was calculated. This was placed against the sensitivity analysis score established by the machine learning model. The overall relative effectiveness score was derived based on the weightages assigned for each respondent category. During the analysis and visualisation of data as presented in result section above, it is clear that there is a difference in consumers perception of effectiveness of marketing initiatives in influencing purchase decision as compared to other stake holders. While analysing the data it was also found that consumer's effectiveness score rating for marketing initiatives had dependency on age group, purpose of buy (self/family members/others), ticket size of purchase, tech savyness of the consumer. Organisations selling product of similar nature which have very less purchase frequency like cement, paints and steel furniture can also use this framework by modifying the questionnaire. The marketing initiatives chosen for collecting stakeholder feedback are for illustrative purpose and mentioned in a way that respondents are able to connect and respond easily. For usage in similar cases, these are

to be replaced with set of initiatives applicable for relevant product/brand. For sensitivity analysis, more data on sales (month-on-month) vs marketing initiatives would have been better in establishing sensitivity. Data set of longer period would have helped in exposing the machine learning model to more cycles of demand variability (steel rebar sales in retail segment is cyclic in nature) and impact of different marketing initiatives on sales to arrive at a more accurate relationship score. This however is not a constraint as selection of marketing mix is related to how is each initiative compared to other in terms of influencing sales or lead to sales conversion. The concept introduced in this research can be applied to different territories to understand the consumer behaviour and accordingly take a call on marketing mix. As depicted in Fig 4.6 the biggest advantage of this structure is that the effectiveness as judged by different stakeholders are available in a consolidated form. Improvement of the company effectiveness is possible only if first numerically we evaluate activities to show the progress and growth Solkansky & Simberova (2014). In the current case the relative effectiveness score will help the marketers of Steel Rebar to take a decision as it places the initiatives relatively to each other taking into consideration both historical data and stakeholder perception. One can easily get the gap between what central team thinks and what is perceived by consumers as influencers to purchase decision. The relative score can also help in allocation of budget among the initiatives based on the ratio.

## APPENDIX A

### (Questionnaire administered on Channel Partners)

The survey was carried out through digital means by sending the URL. Content of questionnaire covers both the background and acknowledgement of voluntary participation. Given below is the content of questionnaire administered on Channel partners to get their perspective of the effectiveness of marketing initiatives.- It had 2 sections as mentioned below:

#### Section 1 (General)

##### Title

Channel partner feedback on relative effectiveness of marketing initiatives

##### Description

This research is being carried out to gain insights on relative effectiveness of various marketing initiatives carried out either centrally by the organisation or at the local level by Channel partners (Distributors/Retailers/Dealers) for improving “Lead to sales” conversion of Steel rebar to “Individual Home Builders”. Section 1 captures general information, while section 2 captures effectiveness of marketing initiatives to drive sales. Both the sections put together should not take more than 5 minutes to respond. The survey response shall be aggregated to derive insights and shall be confidential. Thanks for your participation in the survey voluntarily.

## Questionnaire

1. Name of your organisation
2. Type of association of your organisation (select from drop down)
3. Respondent's name
4. Official contact number (shall be used for clarification of doubts, if any)?
5. Email address (optional)
6. Name of state in which you operate (select from drop down)
7. District in which you operate (optional).
8. Which rebar brand are you associated with? ( select from drop down)
9. Period of association with the brand (select from drop down)

## Section 2

### Description

Please rate the effectiveness of marketing initiatives carried out centrally by the company or locally by your team in improving sales of steel rebar in retail segment ( “Lead to sales conversion”). Rate 1 if the initiative mentioned below are not relevant/ineffective and 10 if it is most effective in influencing sales (Please add if an initiative is missing but influences customer purchase decision, followed by a score out of 10 ( provision made at the end of the questionnaire). Point 1 to 13 are mandatory- and hence please select 1 if you feel that the point is not considered by customer in purchase decision. Your views shall be confidential and aggregated response shall be considered for gaining insights on relative effectiveness of marketing initiatives.

### Questionnaire

1. Wall painting in the locality /shop painting/hoardings in the locality  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
2. Roadshows/ Haat Campaigns/ Local awareness campaigns  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
3. Radio/TV/Newspaper/mass media advertisement  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).



4. Retailers meet/engagement programmes to drive recommendation by retailers  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
5. Mistiry/Architect/contractor meet or influencer engagement programmes to drive recommendations.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
6. Retailer schemes – Quantity/MOU based discount.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
7. Discounts provided at the time of purchase/cashback schemes, if any  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
8. Online/Digital advertisement/ social media campaigns  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
9. Email campaigns/ Telephone calls/ SMS campaigns  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).

10. Company website/ease of online purchase/features in websites  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
11. Consumer meet and focus group discussion (awareness/engagement/ product promotions)  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
12. Influence of Brand image build by the company  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
13. Sponsorship of local events like sports, corporate social responsibility related Activities.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
14. Long duration consumer schemes like Golden Homes/ Tata Basera  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
15. Any other marketing activity which has influenced your purchase decision (please name the activity, followed by score between 1 to 10. 10 being very effective in influencing purchase decision)

## APPENDIX B

(Questionnaire administered on consumers)

The survey was carried out through digital means for consumers also after initial briefing by sending the URL. Content of questionnaire covers both the background and acknowledgement of voluntary participation. Given below is the snapshot of the questionnaire administered on the customers to get their perspective of the effectiveness of marketing initiatives.

Title

Consumer feedback on purchase decision making process (Individual Home Builders)

Description

The purpose of this survey is to collect feedback on relative effectiveness of marketing initiatives influencing your decision to buy steel rebar of specific brand. The insights drawn from the aggregated response shall help in facilitating improvements. It is anticipated that filling up the form shall take less than 5 minutes. All responses shall be confidential and used for research purpose only. Section 1 is general information, section 2 is taking feedback on the relative importance of marketing activities in enabling buying decision of Steel rebar. Thank You so much for sharing time to fill this survey.

## Questionnaire (Section 1)

1. Your name please
2. Name of the state in which construction is being done (Select from drop down)
3. District to which you belong
4. Your contact number
5. Your email address (optional)
6. Your Age group ( Select from drop down)
7. Your gender ( select from drop down)
8. Purchased Steel rebar from whom ( Select from drop down)
9. When did you purchase? ( Select from drop down)
10. What was the value of purchase? ( Select from drop down ,ranges)
11. Did you purchase for the 1<sup>st</sup> time? ( Select from drop down)
12. Which brand did you buy? (Select from drop down)
13. Who helped you choose the brand that you purchased? (Select from drop down)
14. From which channel did you get to know about the brand that you purchased?  
(Select from Drop down)

## Questionnaire (Section 2)

### Title

Views on relative effectiveness of marketing initiatives/importance of factors in making purchase decision

### Description

Rate the factors influencing purchase decision or effectiveness of marketing initiatives. Rate 1 if the factor/initiative mentioned below is not relevant/ineffective and 10 if it is most effective (you can write if an initiative is missing but has influenced your purchase decision in Question 14, rate it on a scale of 10)

1. Wall painting / Shop painting / Hoardings in the locality

(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).

2. Roadshows / Haat campaigns/ Local public awareness campaigns

(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).

3. Radio/TV/Newspaper/mass media advertisement

(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).

4. Recommendation by Retailers  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
5. Recommendation by mistiry/Architect/contractors.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
6. Consumer engagement programmes/recommendation by family or friends  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
7. Discounts provided at the time of purchase / cashback schemes if any  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
8. Online / Digital advertisement / social media campaigns  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
9. Emails/ Telephone calls/ SMS campaigns  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).

10. Company websites / ease of online purchase / schemes in websites as applicable.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
11. Brand image build by the company (quality, reliability, trust, value)  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
12. Sponsorship of local events like sports, corporate social responsibility.  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
13. Consumer loyalty programmes with direct benefit to consumers  
(Select between 1 to 10 with 1 being not effective/considered in purchase decision and 10 being most effective in purchase decision making of consumers).
14. Any other marketing activity which has influenced your purchase decision  
(Please name the activity followed by a score of 1 to 10. 10 being very effective in influencing purchase decision)

## APPENDIX C

(Questionnaire administered on marketing/sales team)

### Title

Market Research survey – Steel Rebars purchased by individual Home Builders

### Description

The purpose of the survey is to collect feedback on the effectiveness of various marketing initiatives in influencing purchase decision of retail customers of Steel Rebar. The objective is to draw insights and develop a framework to facilitate the choice of marketing initiatives under limited budget scenario for improving sales. Filling up the form shall not take more than 10 minutes. All responses are confidential to derive insights at aggregate level. Thank You so much for sparing your time to fill this survey.

### Questionnaire

1. Please select your role (Select from drop down)
2. Please select the state against which you are giving feedback. (Select from drop down)
3. Mention the territory under the state against which you are giving feedback. (Select from drop down)
4. What are the top Rebar Brands in the territory selected above (select from drop down)
5. Market size of the retail market in Rs Crs ( annual in the state selected earlier). (select from drop down ranges)
6. Please mention the name of the Top 5 brands in the state selected above and mention the approximate market share beside it.



Rate the effectiveness of marketing initiatives in influencing Steel Rebar sales in retail segment of the territory selected. 1 star represents that the initiative is not effective or relevant, 10 represents the most effective initiative. Any initiative that is effective but missing may please be added at the last with your score on a scale of 10.

1. Wall painting/Shop painting/ hoardings ( select between 1 star and 10 star)
2. RoadRoarShows/Haat Campaigns/Local public awareness campaigns ( select between 1 star and 10 star)
3. Radio/TV/Newspaper advertisement/other mass media campaigns of similar nature ( select between 1 star and 10 star)
4. Dealer engagement/Retailer meets/Loyalty programmes ( select between 1 star and 10 star)
5. Influencer engagement (Mistry meets/ Architect/ contractor/ loyalty programmes ( select between 1 star and 10 star).
6. Consumer engagement programmes like FGD /Customer meet/ Loyalty programmes ( select between 1 star and 10 star).
7. Discount provided at the time of purchase / Cash back schemes/ on spot sales promotion initiatives ( select between 1 star and 10 star).

8. Online/ Digital advertisement / social media campaigns ( select between 1 star and 10 star).
9. Emails / Telephone calls / SMS campaigns ( select between 1 star and 10 star).
10. Company website/ ease of online purchase/ schemes in websites ( select between 1 star and 10 star).
11. Overall brand image building ( select between 1 star and 10 star).
12. Sponsorship of local events like sports, CSR activity, PR activity ( select between 1 star and 10 star).
13. Consumer loyalty programmes with direct benefit to consumers ( select between 1 star and 10 star).
14. Ask expert / Customer Service Engineer initiatives ( select between 1 star and 10 star).
15. Additional marketing initiatives that influences retail sales- ( Please enter the initiative name followed by effectiveness score on a scale of 10 in brackets. 10 being the most effective initiative in influencing Steel Rebar sales).

## APPENDIX D

(Additional questions and section addressing the same)

<b><u>Questions/Queries</u></b>	<b><u>Reference</u></b>
1. How do consumers perceive the influence of various marketing initiatives on their purchase decisions? Is there a variability in effectiveness of various marketing initiatives that the organisation conducts for Steel Rebar consumer's perspective?	Table 5 /Chapter 5.2
2. What are the top 5 initiatives that are most effective In lead to sales conversion from customer's Perspective? If budget is limited, which all initiatives Should a marketer focus from customer's perspective?	Table 5
3. How do central marketing team or sales team of the organisation perceive relative importance of marketing initiatives in consumer decision making process?	Table 6 /Chapter 5.2
4. What are the Top 5 initiatives from company company officials' s perspective (marketing & sales team of the steel rebar brand)	Chapter 4.1

5. Is the consumer's perspective of relative effectiveness of marketing initiatives in decision making same as that of company officials ? Table 5 / Table 6
  
6. Retailers are located closest to the consumers and understands consumer mindset. What according to them is the relative effectiveness of various marketing initiatives conducted by organisations in lead to sales conversion? What is the extent of variability in effectiveness rating? Table 7 (page 49)
  
7. What according to the retailers are the Top 5 initiatives that are effective in driving sales. Page 49
  
8. While the marketing initiatives done by an Organisation is a function of available budget, given unconstrained scenario which all initiatives should a marketer close to create maximum impact on sales? / Is there a variability in relative effectiveness of Key marketing initiatives from the perspective of company officials, channel partners and consumers? Table 8 (page 50)

9. What is the variability in effectiveness of “consumer loyalty programmes” as perceived by company officials, channel partners and consumers ?/
10. Taking all 3 stakeholders mentioned above into consideration and assuming there is resource constraint, which all initiatives should be chosen to create maximum impact on sales? Figure 1/page 51
11. Does both male and female consumers, value the marketing initiatives similarly?  
What is the variability in effectiveness of marketing Initiatives based on gender? Figure 2/page 53
12. What % of consumers are taking the purchase decision on their own? / Which all other groups are influencing the purchase decision of consumers? Figure 3 / page 54
13. Which age group of consumers are the main buyers?  
How does each age group value the key marketing Initiatives carried out by the organisation? Is there a variability in the relative effectiveness rating of various marketing initiatives? What is the extent of variability? Are there some initiatives, which are Figure 4 to 10  
page 55 to 61

influencing the purchase decision across all age groups?

If resources are limited, which all initiatives should

be targeted from consumer's perspective ( target age group)?

14. Is the effectiveness of Key marketing initiatives that organisations conduct for Steel Rebar sales same across consumption centers ( assuming that the districts are the consumption centers in the state under consideration)? Is this variability nominal to replicate the same initiative across consumption centers? Figure 11//page 62
15. Consumers may be buying Steel Rebars in different quantity, is there a variability on perception of key influencers in purchase decision based on ticket size of buy? Table 9/Chapter 5.2
16. What is the extent of variability in relative effectiveness among the initiatives for each customer segment based on ticket size? Figure 12/page 64
17. Given the variability depicted in Figure 12, which all customer segments ( based on ticket size) should the marketer focus to attract with limited marketing budget? Figure 13/page 65

18. Are the retail customers buying Steel Rebar for their own house construction, family members or for the construction of house on behalf of someone? Figure 14/page 66
19. If the marketer has to target the consumers buying Steel Rebar for their own house construction and budget is limited, which all initiatives should the marketer choose? Is there a variability in the effectiveness of marketing initiatives as per the “individual home builders”? Figure 15/page 67
20. Retailers are key stake holders in pushing sales, how do retailers with various period of association with the brand perceive the relative effectiveness of marketing initiatives carried out by the organisation? Figure 16/page 68
21. Since initiatives are many, it is possible that marketing is able to conduct only a few initiatives in a territory. While survey response is one of the means, is there a way to arrive at theoretical relationship between the effectiveness of marketing initiative and the sales ( assume overall monthly sales is an indicator of lead to sales conversion) and if so, what are the relative effectiveness Figure 17 to 19 page 69 to 71

established by the theoretical model. Is this relative effectiveness established by the model similar across slaes territories?

22. How do we arrive at the overall effectiveness of each marketing initiative taking into consideration perspective of key stakeholders and theoretical /model output? Table 10/page 73
23. How does the framework introduced here address the issue that some marketing initiatives are short and some are long term in nature and consumers may not always be right in judging the impact? Further, has to be provision to give weightages to the score based on scenario. How does the framework addresses the balancing of various perspective and theoretical /sensitivity score of the model? Table 10/Chapter 5.2
24. Given that consumers are a mix of 1<sup>st</sup> time buyers & repeat buyers, what is the break of 1<sup>st</sup> time buyers and repeat buyers? Are decision drivers dependent on category of consumers? Table 11/Chapter 5.1
25. What is the breakup of 1<sup>st</sup> time buyers and repeat buyers in retail segment of steel rebars? Table 11/page 74



## APPENDIX E

(Illustrative code base for data preparation)

The historical data was collected in excel format as it was easier for Marketing and sales team to understand. The random forest model needs clean data in a different format to process it and establish the sensitivity score. Given below is indicative method of cleaning and structuring the data in a format which can be consumed by the machine learning model.

```
[69]: import pandas as pd
import numpy as np
from sklearn.ensemble import RandomForestRegressor
```

```
[70]: #OSIC=pd.read_excel('DATA SET V2_QC.xlsx',sheet_name='transaction data OSIC')
OSIC=pd.read_excel('Desan.xlsx')
#del OSIC['Unnamed: 0']
#del OSIC['Theoretical Sensitivity(% score)']
del OSIC['State -']
OSIC= OSIC.fillna(0)
OSIC.head()
```

[70]: **Marketing campaigns done over last one year in the territory (put Y in the cells against the month in which the impact of marketing initiative has influenced Sales conversion)**

		Aug	July	June	May	April	Mar	Feb	Jan	Dec	...	Jan.1	Dec.1	Nov.1	Oct.1	Sep
0	1. Wall painting / Shop painting / hoardings ...	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0
1	2. Road shows/haat campaign/local public aware...	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0
2	3. Radio/TV/News paper advertisement	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0
3	4. Dealer Engagement programmes/Recommendation...	0	Y	0	0	0	0	0	Y	0	...	0	0	0	0	0
4	5. Influencer mgmt/Recommendation by mistiry/a...	0	0	0	Y	Y	Y	Y	Y	Y	...	Y	Y	Y	Y	Y

5 rows × 30 columns



```
[71]: OSIC.columns
```

```
[71]: Index(['Marketing campaigns done over last one year in the territory (put Y in the
cells against the month in which the impact of marketing initiative has influenced
Sales conversion)',
          'Aug', 'July', 'June', 'May', 'April', 'Mar', 'Feb', 'Jan', 'Dec',
          'Nov', 'Oct', 'Sept', 'Aug.1', 'July.1', 'June.1', 'May.1', 'April.1',
          'Mar.1', 'Feb.1', 'Jan.1', 'Dec.1', 'Nov.1', 'Oct.1', 'Sept.1', 'Aug.2',
          'July.2', 'June.2', 'May.2', 'April.2'],
          dtype='object')
```

```
[72]: OSIC.rename(columns={'Aug': 'Aug-2022', 'July': 'Jul-2022', 'June': 'Jun-2022', 'May': 'Ma
          'Mar': 'Mar-2022', 'Feb': 'Feb-2022', 'Jan': 'Jan-2022', 'Dec': 'Dec-
          'Sept': 'Sep-2021', 'Aug.1': 'Aug-2021', 'July.1': 'Jul-2021', 'June
          'April.1': 'Apr-2021', 'Mar.1': 'Mar-2021', 'Feb.1': 'Feb-2021', 'Ja
          'Nov.1': 'Nov-2020', 'Oct.1': 'Oct-2020', 'Sept.1': 'Sep-2020', 'Aug
          'June.2': 'Jun-2020', 'May.2': 'May-2020', 'April.2': 'Apr-2020',
          'Marketing campaigns done over last one year in the territory

          }, inplace=True)

OSIC.columns
```

```
[72]: Index(['Types of Campaigns', 'Aug-2022', 'Jul-2022', 'Jun-2022', 'May-2022',
          'Apr-2022', 'Mar-2022', 'Feb-2022', 'Jan-2022', 'Dec-2021', 'Nov-2021',
          'Oct-2021', 'Sep-2021', 'Aug-2021', 'Jul-2021', 'Jun-2021', 'May-2021',
          'Apr-2021', 'Mar-2021', 'Feb-2021', 'Jan-2021', 'Dec-2020', 'Nov-2020',
          'Oct-2020', 'Sep-2020', 'Aug-2020', 'Jul-2020', 'Jun-2020', 'May-2020',
          'Apr-2020'],
          dtype='object')
```

```
[73]: collist=OSIC.columns.tolist()
```

```
[74]: collist
```

```
[74]: ['Types of Campaigns',
          'Aug-2022',
          'Jul-2022',
          'Jun-2022',
          'May-2022',
          'Apr-2022',
          'Mar-2022',
          'Feb-2022',
          'Jan-2022',
          'Dec-2021',
          'Nov-2021',
```

```
'Oct-2021',
'Sep-2021',
'Aug-2021',
'Jul-2021',
'Jun-2021',
'May-2021',
'Apr-2021',
'Mar-2021',
'Feb-2021',
'Jan-2021',
'Dec-2020',
'Nov-2020',
'Oct-2020',
'Sep-2020',
'Aug-2020',
'Jul-2020',
'Jun-2020',
'May-2020',
'Apr-2020']
```

```
[75]: collist1=collist.remove('Types of Campaigns')
collist1
```

```
[76]: OSIC.columns
```

```
[76]: Index(['Types of Campaigns', 'Aug-2022', 'Jul-2022', 'Jun-2022', 'May-2022',
'Apr-2022', 'Mar-2022', 'Feb-2022', 'Jan-2022', 'Dec-2021', 'Nov-2021',
'Oct-2021', 'Sep-2021', 'Aug-2021', 'Jul-2021', 'Jun-2021', 'May-2021',
'Apr-2021', 'Mar-2021', 'Feb-2021', 'Jan-2021', 'Dec-2020', 'Nov-2020',
'Oct-2020', 'Sep-2020', 'Aug-2020', 'Jul-2020', 'Jun-2020', 'May-2020',
'Apr-2020'],
dtype='object')
```

```
[77]: OSIC1=pd.melt(OSIC, id_vars =['Types of Campaigns'], value_vars =collist1)
OSIC1
```

```
[77]:
```

	Types of Campaigns	variable	value
0	1. Wall painting / Shop painting / hoardings ...	Aug-2022	0
1	2. Road shows/haat campaign/local public aware...	Aug-2022	0
2	3. Radio/TV/News paper advertisement	Aug-2022	0
3	4. Dealer Engagement programmes/Recommendation...	Aug-2022	0
4	5. Influencer mgmt/Recommendation by mistiry/a...	Aug-2022	0
...	...	...	...

546	month on month sales --- Sum of retailer sales...	Apr-2020	392
547	Competitor /price differential impacting sales...	Apr-2020	-3.5
548	Demand + Macro/micro factors impacting sales\n...	Apr-2020	-80
549	Relative weightage of competitor scenario (% 1...	Apr-2020	10
550	Relative weightage of Demand ( macro+micro) co...	Apr-2020	90

551 rows x 3 columns

```
[78]: #OSIC1.to_csv('OSIC1.csv')
```

```
[79]: OSIC1['variable'].unique()
```

```
[79]: array(['Aug-2022', 'Jul-2022', 'Jun-2022', 'May-2022', 'Apr-2022',
        'Mar-2022', 'Feb-2022', 'Jan-2022', 'Dec-2021', 'Nov-2021',
        'Oct-2021', 'Sep-2021', 'Aug-2021', 'Jul-2021', 'Jun-2021',
        'May-2021', 'Apr-2021', 'Mar-2021', 'Feb-2021', 'Jan-2021',
        'Dec-2020', 'Nov-2020', 'Oct-2020', 'Sep-2020', 'Aug-2020',
        'Jul-2020', 'Jun-2020', 'May-2020', 'Apr-2020'], dtype=object)
```

```
[80]: OSIC1.dtypes
```

```
[80]: Types of Campaigns    object
      variable              object
      value                object
      dtype: object
```

```
[81]: OSIC1['Mon_YR']=pd.to_datetime(OSIC1['variable']).dt.strftime("%Y-%m")
```

```
[82]: OSIC1
```

```
[82]:
```

	Types of Campaigns	variable	value	Mon_YR
0	1. Wall painting / Shop painting / hoardings ...	Aug-2022	0	2022-08
1	2. Road shows/haat campaign/local public aware...	Aug-2022	0	2022-08
2	3. Radio/TV/News paper advertisement	Aug-2022	0	2022-08
3	4. Dealer Engagement programmes/Recommendation...	Aug-2022	0	2022-08
4	5. Influencer mgmt/Recommendation by mistiry/a...	Aug-2022	0	2022-08
...	...	...	...	...
546	month on month sales --- Sum of retailer sales...	Apr-2020	392	2020-04
547	Competitor /price differential impacting sales...	Apr-2020	-3.5	2020-04
548	Demand + Macro/micro factors impacting sales\n...	Apr-2020	-80	2020-04
549	Relative weightage of competitor scenario (% 1...	Apr-2020	10	2020-04

551 rows × 4 columns

```
[83]: start_date1 = '2020-04'
end_date1 = '2021-03'
OSIC1['Year'] = np.where((OSIC1['Mon_YR']>=start_date1)&(OSIC1['Mon_YR']<=end_date1))
start_date1 = '2021-04'
end_date1 = '2022-03'
OSIC1['Year'] = np.where((OSIC1['Mon_YR']>=start_date1)&(OSIC1['Mon_YR']<=end_date1))
start_date1 = '2022-04'
end_date1 = '2023-03'
OSIC1['Year'] = np.where((OSIC1['Mon_YR']>=start_date1)&(OSIC1['Mon_YR']<=end_date1))

OSIC1
```

```
[83]:
```

	Types of Campaigns	variable	value	Mon_YR	Year
0	1. Wall painting / Shop painting / hoardings ...	Aug-2022	0	2022-08	FY23
1	2. Road shows/haat campaign/local public aware...	Aug-2022	0	2022-08	FY23
2	3. Radio/TV/News paper advertisement	Aug-2022	0	2022-08	FY23
3	4. Dealer Engagement programmes/Recommendation...	Aug-2022	0	2022-08	FY23
4	5. Influencer mgmt/Recommendation by mistiry/a...	Aug-2022	0	2022-08	FY23
...	...	...	...	...	...
546	month on month sales --- Sum of retailer sales...	Apr-2020	392	2020-04	FY21
547	Competitor /price differential impacting sales...	Apr-2020	-3.5	2020-04	FY21
548	Demand + Macro/micro factors impacting sales\n...	Apr-2020	-80	2020-04	FY21
549	Relative weightage of competitor scenario (% 1...	Apr-2020	10	2020-04	FY21
550	Relative weightage of Demand ( macro+micro) co...	Apr-2020	90	2020-04	FY21

551 rows × 5 columns

```
[84]: OSIC1['value'] = OSIC1['value'].replace("y",1)
OSIC1['value'] = OSIC1['value'].replace("Y",1)
OSIC1['value'] = OSIC1['value'].astype(float)
```

```
[85]: OSIC1.rename(columns={'variable':'Month'},inplace= True)
```

```
[86]: OSIC1
```

```
[86]:
```

	Types of Campaigns	Month	value	Mon_YR	Year
0	1. Wall painting / Shop painting / hoardings ...	Aug-2022	0.0	2022-08	FY23

2	3. Radio/TV/News paper advertisement	Aug-2022	0.0	2022-08	FY23
3	4. Dealer Engagement programmes/Recommendation...	Aug-2022	0.0	2022-08	FY23
4	5. Influencer mgmt/Recommendation by mistiry/a...	Aug-2022	0.0	2022-08	FY23
...	...	...	...	...	...
546	month on month sales --- Sum of retailer sales...	Apr-2020	392.0	2020-04	FY21
547	Competitor /price differential impacting sales...	Apr-2020	-3.5	2020-04	FY21
548	Demand + Macro/micro factors impacting sales\n...	Apr-2020	-80.0	2020-04	FY21
549	Relative weightage of competitor scenario (% 1...	Apr-2020	10.0	2020-04	FY21
550	Relative weightage of Demand ( macro+micro) co...	Apr-2020	90.0	2020-04	FY21

551 rows × 5 columns

```
[87]: df3=OSIC1.reset_index().pivot_table(index=['Mon_YR','Year'], columns='Types of Comp
df3.head()
```

[87]:

Types of Campaigns	Mon_YR	Year	1. Wall painting / Shop painting / hoardings in the locality	10. Company website/ease of online purchase/schemes in websites as applicable	11. Brand image built by the company (quality, reliability, trust, value)	12. Sponsorship of local events like sports, Corporate social responsibility.	13. Consumer Loyalty programmes with direct benefit to consumers?	14. Ask Expert /CSE visits	2. Road shows/haat campaign/local public awareness campaigns
0	2020-04	FY21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	2020-05	FY21	0.0	1.0	1.0	0.0	0.0	0.0	0.0
2	2020-06	FY21	0.0	1.0	1.0	0.0	0.0	0.0	0.0
3	2020-07	FY21	0.0	1.0	1.0	0.0	0.0	0.0	0.0
4	2020-08	FY21	0.0	1.0	0.0	0.0	0.0	1.0	0.0

5 rows × 21 columns

```
[88]: df4=df3.sort_values(by=['Mon_YR'],ascending= False)
#df4=df3.sort_index(ascending=False)
df4.head()
```

[88]:

Types of Campaigns	Mon_YR	Year	1. Wall painting / Shop painting / hoardings in the locality	10. Company website/ease of online purchase/schemes in websites as applicable	11. Brand image built by the company (quality, reliability, trust, value)	12. Sponsorship of local events like sports, Corporate social responsibility.	13. Consumer Loyalty programmes with direct benefit to consumers?	14. Ask Expert /CSE visits	2. Road shows/haat campaign/local public awareness campaigns
28	2022-08	FY23	0.0	1.0	0.0	0.0	0.0	0.0	0.0
27	2022-07	FY23	0.0	1.0	0.0	0.0	0.0	0.0	0.0
26	2022-06	FY23	0.0	1.0	1.0	0.0	0.0	1.0	0.0
25	2022-05	FY23	0.0	1.0	1.0	0.0	0.0	1.0	0.0
24	2022-04	FY23	0.0	0.0	0.0	0.0	0.0	1.0	0.0

5 rows × 21 columns

```
[89]: df4.rename(columns={'Demand + Macro/micro factors impacting sales\nFavourable : + %
'Competitor /price differential impacting sales\nFavourable : + %
'month on month sales --- Sum of retailer sales in the state -te
'},inplace=True)
```

```
[90]: del df4['Relative weightage of competitor scenario (% 1 + % 2 = 100%) in impacting :
del df4['Relative weightage of Demand ( macro+micro) competitor scenario ']
```

```
[91]: df4['Month']=pd.to_datetime(df4['Mon_YR']).dt.strftime("%B-%Y")
#df4['Month'].wunique()
```

```
[92]: df4.head()
```

```
[92]:
```

Types of Campaigns	Mon_YR	Year	1. Wall painting / Shop painting / hoardings in the locality	10. Company website/ease of online purchase/schemes in websites as applicable	11. Brand image built by the company (quality, reliability, trust, value)	12. Sponsorship of local events like sports, Corporate social responsibility.	13. Consumer Loyalty programmes with direct benefit to consumers?	14. Ask Expert /CSE visits	2. Road shows/haat campaign/local public awareness campaigns
28	2022-08	FY23	0.0	1.0	0.0	0.0	0.0	0.0	0.0
27	2022-07	FY23	0.0	1.0	0.0	0.0	0.0	0.0	0.0
26	2022-06	FY23	0.0	1.0	1.0	0.0	0.0	1.0	0.0
25	2022-05	FY23	0.0	1.0	1.0	0.0	0.0	1.0	0.0
24	2022-04	FY23	0.0	0.0	0.0	0.0	0.0	1.0	0.0

```
[ ]:
```

```
[93]: data = df4.copy()
```

```
[94]: data.rename(columns={'4. Recommendation by retailer':'4. Dealer Engagement programme',
                          '5. Recommendation by mistiry/architect/contractor':'5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
                          '14. Ask Expert /CSE visits':'14. Ask Expert/CSE Visit'},inplace=True)
```

```
[95]: data.columns
```

```
[95]: Index(['Mon_YR', 'Year',
            '1. Wall painting / Shop painting / hoardings in the locality ',
            '10. Company website/ease of online purchase/schemes in websites as applicable',
            '11. Brand image built by the company (quality, reliability, trust, value)',
            '12. Sponsorship of local events like sports, Corporate social responsibility. ',
            '13. Consumer Loyalty programmes with direct benefit to consumers? ',
            '14. Ask Expert/CSE Visit',
            '2. Road shows/haat campaign/local public awareness campaigns',
            '3. Radio/TV/News paper advertisement',
            '4. Dealer Engagement programmes/Recommendation by retailer',
            '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
            '6. Consumer engagement programmes/ recommendation by family or friends',
            '7. Discounts provided at the time of purchase/cashback schemes, if any',
            '8. Online/Digital advertisement/Social media campaigns',
```



```
'9. Email campaigns/Telephone calls/sms campaigns', 'Price Premium',  
'Demand', 'Sales', 'Month'],  
dtype='object', name='Types of Campaigns')
```

```
[96]: data=data[['Month', 'Year', 'Sales',  
'1. Wall painting / Shop painting / hoardings in the locality ',  
'2. Road shows/haat campaign/local public awareness campaigns',  
'3. Radio/TV/News paper advertisement',  
'4. Dealer Engagement programmes/Recommendation by retailer',  
'5. Influencer mgmt/Recommendation by mistiry/architect/contractor',  
'6. Consumer engagement programmes/ recommendation by family or friends',  
'7. Discounts provided at the time of purchase/cashback schemes, if any',  
'8. Online/Digital advertisement/Social media campaigns',  
'9. Email campaigns/Telephone calls/sms campaigns',  
'10. Company website/ease of online purchase/schemes in websites as applicab  
'11. Brand image built by the company (quality, reliability, trust, value)',  
'12. Sponsorship of local events like sports, Corporate social responsibilit  
'13. Consumer Loyalty programmes with direct benefit to consumers? ',  
'14. Ask Expert/CSE Visit',  
'Price Premium',  
'Demand' ]]
```

```
[97]: data.to_csv('kau.csv')
```

```
[98]: df4.columns
```

```
[98]: Index(['Mon_YR', 'Year',  
'1. Wall painting / Shop painting / hoardings in the locality ',  
'10. Company website/ease of online purchase/schemes in websites as applicab  
le',  
'11. Brand image built by the company (quality, reliability, trust, value)',  
'12. Sponsorship of local events like sports, Corporate social responsibilit  
y. ',  
'13. Consumer Loyalty programmes with direct benefit to consumers? ',  
'14. Ask Expert /CSE visits',  
'2. Road shows/haat campaign/local public awareness campaigns',  
'3. Radio/TV/News paper advertisement',  
'4. Dealer Engagement programmes/Recommendation by retailer',  
'5. Influencer mgmt/Recommendation by mistiry/architect/contractor',  
'6. Consumer engagement programmes/ recommendation by family or friends',  
'7. Discounts provided at the time of purchase/cashback schemes, if any',  
'8. Online/Digital advertisement/Social media campaigns',  
'9. Email campaigns/Telephone calls/sms campaigns', 'Price Premium',  
'Demand', 'Sales', 'Month'],  
dtype='object', name='Types of Campaigns')
```

```
[99]: #data = pd.read_excel("Chattisgarh_rawdata.xlsx")
#data = data.fillna(0)
# # data['Month'] = pd.to_datetime(data['Month'])
#data.head()
```

```
[100]: data.columns
```

```
[100]: Index(['Month', 'Year', 'Sales',
            '1. Wall painting / Shop painting / hoardings in the locality ',
            '2. Road shows/haat campaign/local public awareness campaigns',
            '3. Radio/TV/News paper advertisement',
            '4. Dealer Engagement programmes/Recommendation by retailer',
            '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
            '6. Consumer engagement programmes/ recommendation by family or friends',
            '7. Discounts provided at the time of purchase/cashback schemes, if any',
            '8. Online/Digital advertisement/Social media campaigns',
            '9. Email campaigns/Telephone calls/sms campaigns',
            '10. Company website/ease of online purchase/schemes in websites as applicab
le',
            '11. Brand image built by the company (quality, reliability, trust, value)',
            '12. Sponsorship of local events like sports, Corporate social responsibilit
y. ',
            '13. Consumer Loyalty programmes with direct benefit to consumers? ',
            '14. Ask Expert/CSE Visit', 'Price Premium', 'Demand'],
            dtype='object', name='Types of Campaigns')
```

```
[101]: print(data['1. Wall painting / Shop painting / hoardings in the locality '].sum())
print(data['2. Road shows/haat campaign/local public awareness campaigns'].sum())
print(data['3. Radio/TV/News paper advertisement'].sum())
print(data['4. Dealer Engagement programmes/Recommendation by retailer'].sum())
print(data['5. Influencer mgmt/Recommendation by mistiry/architect/contractor'].sum)
print(data['6. Consumer engagement programmes/ recommendation by family or friends']
print(data['7. Discounts provided at the time of purchase/cashback schemes, if any']
print(data['8. Online/Digital advertisement/Social media campaigns'].sum())
print(data['9. Email campaigns/Telephone calls/sms campaigns'].sum())
print(data['10. Company website/ease of online purchase/schemes in websites as appl.
print(data['11. Brand image built by the company (quality, reliability, trust, valu
print(data['12. Sponsorship of local events like sports, Corporate social responsib
print(data['13. Consumer Loyalty programmes with direct benefit to consumers? '].su
print(data['14. Ask Expert/CSE Visit'].sum())

0.0
0.0
0.0
7.0
20.0
13.0
```

0.0  
0.0  
0.0  
12.0  
18.0  
0.0  
0.0  
15.0

```
[102]: data_train = data[data['Month'] != 'August-2022']  
data_test = data[data['Month'] == 'August-2022']  
data_train.tail()
```

[102]:

Types of Campaigns	Month	Year	Sales	1. Wall painting / Shop painting / hoardings in the locality	2. Road shows/haat campaign/local public awareness campaigns	3. Radio/TV/News paper advertisement	4. Dealer Engagement programmes/Recommendation by retailer	mgmt/Rec mistiry/arc
4	August-2020	FY21	1886.0	0.0	0.0	0.0	0.0	0.0
3	July-2020	FY21	1727.0	0.0	0.0	0.0	0.0	0.0
2	June-2020	FY21	1779.0	0.0	0.0	0.0	0.0	0.0
1	May-2020	FY21	1968.0	0.0	0.0	0.0	0.0	0.0
0	April-2020	FY21	392.0	0.0	0.0	0.0	0.0	0.0

```
[103]: data_test
```

[103]:

Types of Campaigns	Month	Year	Sales	1. Wall painting / Shop painting / hoardings in the locality	2. Road shows/haat campaign/local public awareness campaigns	3. Radio/TV/News paper advertisement	4. Dealer Engagement programmes/Recommendation by retailer	mgmt/Re mistiry/ar
28	August-2022	FY23	1927.46	0.0	0.0	0.0	0.0	0.0

```
[104]: data.columns
```

```
[104]: Index(['Month', 'Year', 'Sales',
            '1. Wall painting / Shop painting / hoardings in the locality ',
            '2. Road shows/haat campaign/local public awareness campaigns',
            '3. Radio/TV/News paper advertisement',
            '4. Dealer Engagement programmes/Recommendation by retailer',
            '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
            '6. Consumer engagement programmes/ recommendation by family or friends',
            '7. Discounts provided at the time of purchase/cashback schemes, if any',
            '8. Online/Digital advertisement/Social media campaigns',
            '9. Email campaigns/Telephone calls/sms campaigns',
            '10. Company website/ease of online purchase/schemes in websites as applicab
le',
            '11. Brand image built by the company (quality, reliability, trust, value)',
            '12. Sponsorship of local events like sports, Corporate social responsibilit
y.',
            '13. Consumer Loyalty programmes with direct benefit to consumers? ',
            '14. Ask Expert/CSE Visit', 'Price Premium', 'Demand'],
           dtype='object', name='Types of Compaigns')
```

```
[105]: cols = ['1. Wall painting / Shop painting / hoardings in the locality ',
              '2. Road shows/haat campaign/local public awareness campaigns',
              '3. Radio/TV/News paper advertisement',
              '4. Dealer Engagement programmes/Recommendation by retailer',
              '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
              '6. Consumer engagement programmes/ recommendation by family or friends',
              '7. Discounts provided at the time of purchase/cashback schemes, if any',
              '8. Online/Digital advertisement/Social media campaigns',
              '9. Email campaigns/Telephone calls/sms campaigns',
              '10. Company website/ease of online purchase/schemes in websites as applicab
              '11. Brand image built by the company (quality, reliability, trust, value)',
              '12. Sponsorship of local events like sports, Corporate social responsibilit
              '13. Consumer Loyalty programmes with direct benefit to consumers? ',
              '14. Ask Expert/CSE Visit'
              ]

X_train = data_train[cols]
X_test = data_test[cols]
Y_train = data_train['Sales']
Y_test = data_test['Sales']
```

```
[106]: data_train.columns
```

```
[106]: Index(['Month', 'Year', 'Sales',
```

```
[106]: Index(['Month', 'Year', 'Sales',
            '1. Wall painting / Shop painting / hoardings in the locality ',
            '2. Road shows/haat campaign/local public awareness campaigns',
            '3. Radio/TV/News paper advertisement',
            '4. Dealer Engagement programmes/Recommendation by retailer',
            '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
            '6. Consumer engagement programmes/ recommendation by family or friends',
            '7. Discounts provided at the time of purchase/cashback schemes, if any',
            '8. Online/Digital advertisement/Social media campaigns',
            '9. Email campaigns/Telephone calls/sms campaigns',
            '10. Company website/ease of online purchase/schemes in websites as applicab
            le',
            '11. Brand image built by the company (quality, reliability, trust, value)',
            '12. Sponsorship of local events like sports, Corporate social responsibilit
            y.',
            '13. Consumer Loyalty programmes with direct benefit to consumers? ',
            '14. Ask Expert/CSE Visit', 'Price Premium', 'Demand'],
            dtype='object', name='Types of Campaigns')
```

```
[107]: data_train[['Sales', '11. Brand image built by the company (quality, reliability, tr
```

```
[107]:
```

	Types of Campaigns	Sales	11. Brand image built by the company (quality, reliability, trust, value)
	Types of Campaigns		
	Sales	1.000000	0.587639
	11. Brand image built by the company (quality, reliability, trust, value)	0.587639	1.000000

```
[107]:
```

	Types of Campaigns	Sales	11. Brand image built by the company (quality, reliability, trust, value)
	Types of Campaigns		
	Sales	1.000000	0.587639
	11. Brand image built by the company (quality, reliability, trust, value)	0.587639	1.000000

```
[108]: data_train['14. Ask Expert/CSE Visit'].sum()
```

```
[108]: 15.0
```

```
[109]: data_train
```

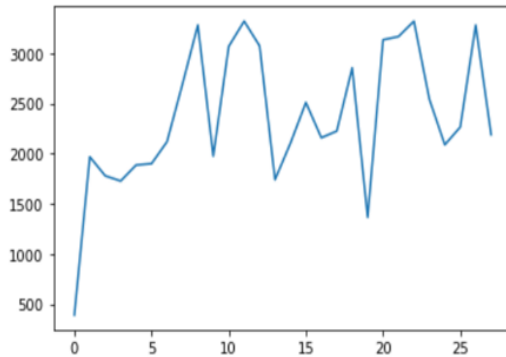
```
[109]:
```

Types of Campaigns	Month	Year	Sales	1. Wall painting / Shop painting / hoardings in the locality	2. Road shows/haat campaign/local public awareness campaigns	3. Radio/TV/News paper advertisement	4. Dealer Engagement programmes/Recommendation by retailer	mgrr misti
27	July-2022	FY23	2188.942	0.0	0.0	0.0	1.0	

26	June-2022	FY23	3280.477	0.0	0.0	0.0	0.0
25	May-2022	FY23	2264.800	0.0	0.0	0.0	0.0
24	April-2022	FY23	2088.220	0.0	0.0	0.0	0.0
23	March-2022	FY22	2541.450	0.0	0.0	0.0	0.0
22	February-2022	FY22	3319.620	0.0	0.0	0.0	0.0
21	January-2022	FY22	3166.930	0.0	0.0	0.0	1.0
20	December-2021	FY22	3134.140	0.0	0.0	0.0	0.0
19	November-2021	FY22	1365.770	0.0	0.0	0.0	0.0
18	October-2021	FY22	2854.520	0.0	0.0	0.0	0.0
17	September-2021	FY22	2224.590	0.0	0.0	0.0	1.0
16	August-2021	FY22	2158.242	0.0	0.0	0.0	0.0
15	July-2021	FY22	2509.500	0.0	0.0	0.0	1.0
14	June-2021	FY22	2104.460	0.0	0.0	0.0	0.0
13	May-2021	FY22	1740.800	0.0	0.0	0.0	1.0
12	April-2021	FY22	3073.617	0.0	0.0	0.0	0.0
11	March-2021	FY21	3320.000	0.0	0.0	0.0	0.0
10	February-2021	FY21	3068.000	0.0	0.0	0.0	1.0
9	January-2021	FY21	1975.000	0.0	0.0	0.0	0.0
8	December-2020	FY21	3281.000	0.0	0.0	0.0	0.0
7	November-2020	FY21	2690.000	0.0	0.0	0.0	0.0
6	October-2020	FY21	2118.000	0.0	0.0	0.0	0.0
5	September-2020	FY21	1900.000	0.0	0.0	0.0	1.0
4	August-2020	FY21	1886.000	0.0	0.0	0.0	0.0
3	July-2020	FY21	1727.000	0.0	0.0	0.0	0.0
2	June-2020	FY21	1779.000	0.0	0.0	0.0	0.0
1	May-2020	FY21	1968.000	0.0	0.0	0.0	0.0

```
[110]: data_train['Sales'].plot()
```

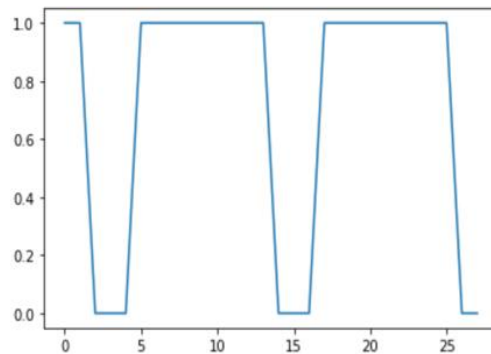
```
[110]: <AxesSubplot:>
```



```
[111]: data_train['5. Influencer mgmt/Recommendation by mistiry/architect/contractor'].plo
```

```
[111]: <AxesSubplot:>
```

```
[111]: <AxesSubplot:>
```



```
[112]: data_train[['Sales','1. Wall painting / Shop painting / hoardings in the locality  
'2. Road shows/haat campaign/local public awareness campaigns',  
'3. Radio/TV/News paper advertisement',  
'4. Dealer Engagement programmes/Recommendation by retailer',  
'5. Influencer mgmt/Recommendation by mistiry/architect/contractor',  
'6. Consumer engagement programmes/ recommendation by family or friends',  
'7. Discounts provided at the time of purchase/cashback schemes, if any',  
'8. Online/Digital advertisement/Social media campaigns',  
'9. Email campaigns/Telephone calls/sms campaigns',
```

'10. Company website/ease of online purchase/schemes in websites as applicab  
'11. Brand image built by the company (quality, reliability, trust, value)',  
'12. Sponsorship of local events like sports, Corporate social responsibility  
'13. Consumer Loyalty programmes with direct benefit to consumers? ',  
'14. Ask Expert/CSE Visit']].corr()

[112]:

Types of Compaigns	Sales	1. Wall painting / Shop painting / hoardings in the locality	2. Road shows/haat campaign/local public awareness campaigns	3. Radio/TV/News paper advertisement	4. Dealer Engagement programmes/Recommendation by retailer	mgmt
<b>Types of Compaigns</b>						
<b>Sales</b>	1.000000	NaN	NaN	NaN	3.225334e-02	
<b>1. Wall painting / Shop painting / hoardings in the locality</b>	NaN	NaN	NaN	NaN	NaN	
<b>2. Road shows/haat campaign/local public awareness campaigns</b>	NaN	NaN	NaN	NaN	NaN	
<b>3. Radio/TV/News paper advertisement</b>	NaN	NaN	NaN	NaN	NaN	
<b>4. Dealer Engagement programmes/Recommendation by retailer</b>	0.032253	NaN	NaN	NaN	1.000000e+00	
<b>5. Influencer mgmt/Recommendation by mistiry/architect/contractor</b>	0.144697	NaN	NaN	NaN	5.067452e-18	
<b>6. Consumer engagement programmes/ recommendation by family or friends</b>	0.769225	NaN	NaN	NaN	-4.134491e-02	
<b>7. Discounts provided at the time of purchase/cashback schemes, if any</b>	NaN	NaN	NaN	NaN	NaN	
<b>8. Online/Digital advertisement/Social media campaigns</b>	NaN	NaN	NaN	NaN	NaN	
<b>9. Email campaigns/Telephone calls/sms campaigns</b>	NaN	NaN	NaN	NaN	NaN	
<b>10. Company website/ease of online purchase/schemes in websites as applicable</b>	-0.252031	NaN	NaN	NaN	4.222003e-02	
<b>11. Brand image built by the company (quality, reliability, trust, value)</b>	0.587639	NaN	NaN	NaN	-8.606630e-02	



12. Sponsorship of local events like sports, Corporate social responsibility.	NaN	NaN	NaN	NaN	NaN
13. Consumer Loyalty programmes with direct benefit to consumers?	NaN	NaN	NaN	NaN	NaN
14. Ask Expert/CSE Visit	0.465380	NaN	NaN	NaN	-1.240347e-01

```
[113]: model = RandomForestRegressor(random_state=42)
        # fit the model
        model.fit(X_train, Y_train)
        y_pred_rf = model.predict(X_test)
        y_pred_rf
```

```
[113]: array([1774.04202937])
```

```
[114]: Y_test
```

```
[114]: 28    1927.46
        Name: Sales, dtype: float64
```

```
[115]: X_train.columns
```

```
[115]: Index(['1. Wall painting / Shop painting / hoardings in the locality ',
          '2. Road shows/haat campaign/local public awareness campaigns',
          '3. Radio/TV/News paper advertisement',
          '4. Dealer Engagement programmes/Recommendation by retailer',
          '5. Influencer mgmt/Recommendation by mistiry/architect/contractor',
          '6. Consumer engagement programmes/ recommendation by family or friends',
          '7. Discounts provided at the time of purchase/cashback schemes, if any',
          '8. Online/Digital advertisement/Social media campaigns',
          '9. Email campaigns/Telephone calls/sms campaigns',
          '10. Company website/ease of online purchase/schemes in websites as applicab
          le',
          '11. Brand image built by the company (quality, reliability, trust, value)',
          '12. Sponsorship of local events like sports, Corporate social responsibilit
          y. ',
          '13. Consumer Loyalty programmes with direct benefit to consumers? ',
          '14. Ask Expert/CSE Visit'],
          dtype='object', name='Types of Campaigns')
```

```
[116]: importance = model.feature_importances_
        df_imp = pd.concat([pd.DataFrame(X_train.columns), pd.DataFrame(model.feature_impor
        df_imp.columns = ['Variable_Name', 'Importance']
        df_imp = df_imp.sort_values(by = ['Importance'], ascending=False)
        df_imp
```

[116]:

	Variable_Name	Importance
5	6. Consumer engagement programmes/ recommendat...	0.678499
13	14. Ask Expert/CSE Visit	0.096845
9	10. Company website/ease of online purchase/sc...	0.089095
10	11. Brand image built by the company (quality,...	0.064513
3	4. Dealer Engagement programmes/Recommendation...	0.042359
4	5. Influencer mgmt/Recommendation by mistiry/a...	0.028689
0	1. Wall painting / Shop painting / hoardings ...	0.000000
1	2. Road shows/haat campaign/local public aware...	0.000000
2	3. Radio/TV/News paper advertisement	0.000000
6	7. Discounts provided at the time of purchase/...	0.000000
7	8. Online/Digital advertisement/Social media c...	0.000000
8	9. Email campaigns/Telephone calls/sms campaigns	0.000000
11	12. Sponsorship of local events like sports, C...	0.000000
12	13. Consumer Loyalty programmes with direct be...	0.000000

[117]: `df_imp.to_csv("RF_Variable_importance.csv")`

APPENDIX- F

(Illustrative random forest output- sensitivity score of initiatives done in the territory)

	Variable_Name	Importance
5	6. Consumer engage...	0.6784990150203843
13	14. Ask Expert/CSE V...	0.09684535329750601
9	10. Company website...	0.08909468726271794
10	11. Brand image built ...	0.0645125767605018
3	4. Dealer Engagemen...	0.0423591479074584
4	5. Influencer mgmt/R...	0.02868921975143144
0	1. Wall painting / Sho...	0.0
1	2. Road shows/haat c...	0.0
2	3. Radio/TV/News pa...	0.0
6	7. Discounts provided...	0.0
7	8. Online/Digital adve...	0.0
8	9. Email campaigns/T...	0.0
11	12. Sponsorship of lo...	0.0
12	13. Consumer Loyalty...	0.0

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[customer+assessment+of+the+service+experience%3A+lessons+from+marketing&btnG=](#)

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